THE CAPABILITY OF MOBILITY IN KIBERA 'SLUM',
KENYA: AN ETHNOGRAPHIC STUDY OF HOW
YOUNG PEOPLE USE AND APPROPRIATE NEW MEDIA
AND ICTs

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DEDICATION
To all the young people of Africa

Better to illuminate than merely to shine, to deliver to others contemplated truths than merely to contemplate.

Thomas Aquinas
ABSTRACT

The Capability of Mobility in Kibera 'Slum', Kenya: An Ethnographic Study of How Young People Use and Appropriate New Media and ICTs

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This multidisciplinary thesis explores the relationship between new media and young people in Kibera using ethnographic research methods. The research aim is to interrogate the optimism about the use of new media and ICTs for development by amplifying the rare voices of technology users in a marginalised context. The focus on young Kiberans is significant for emergent Global South media audience literature and the ICT4D (Information and Communication Technologies for Development) field. The communicative ecologies framework and the domestication of technologies approach facilitate the identification of dominant forms of local information and communication flows in the communicative environments of the young Kiberans. In light of the analysis of the empirical findings derived from 22 semi-structured interviews, participant observation, go-alongs and documentary evidence, the thesis argues that the mobile phone and the mobile Internet emerge as the most significant forms of new media and ICTs. Additionally, the local information flows of youth groups, youth forums, community radio (Pamoja FM), Church and school emerge as complementary to the use and appropriation of new media and ICT artefacts. Grounded in the philosophical paradigm of critical realism and drawing upon Amartya Sen’s Capabilities Approach, the social conversion factor of educational attainment is identified as a dominant factor in enabling the Kiberans to appropriate the mobile phone and the mobile Internet into the capability of mobility, a form of development. The mobile phone emerges as a socio-cultural artefact that facilitates the maintenance and extension of social ties. However, the environmental conversion factor of Kibera as the young people’s place of residence and their perceived lower class restricts their creation and extension of social ties in higher class Kenyan networks. Therefore, “the digital spaces created by new media and ICT use and appropriation are simply continuities of the offline” hierarchical social environment in which they exist (boyd, 2013: 204)
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# Table of Contents

DEDICATION ................................................................................................................................. ii
ABSTRACT ................................................................................................................................. iii
ACKNOWLEDGEMENTS ................................................................................................................ iv
Table of Contents .......................................................................................................................... v
List of Figures ............................................................................................................................... ix

Background to the Study: Research Problem ........................................................................... 10
The Research Aim and the Evolution of the Research Questions ........................................... 12
Research Questions ..................................................................................................................... 12
The Organisation of this Thesis .................................................................................................... 14

CHAPTER ONE: An Introduction to the Study ......................................................................... 17
  1.1 Definitions of New Media and ICTs ................................................................................... 18
  1.2 New Media and Communicative Ecologies Frameworks .................................................. 20
      1.2.1 The Ubiquitous Mobile Phone in Sub-Saharan Africa ........................................... 25
      1.2.2 The Evolution of the Ecologies Framework .......................................................... 27
  1.3 The Appropriation of New Media and ICTs ..................................................................... 31
      1.3.1 Limitations of Appropriation .................................................................................. 35
  1.4 Chapter Summary and Concluding Remarks .................................................................... 37

CHAPTER TWO: A Review of the Appropriation Studies Literature ......................................... 38
  2.1 The Socio-Cultural Affordances of New Media and ICT Appropriation ......................... 39
  2.2 Qualitative Studies of Mobile Phone use in Sub-Saharan Africa .................................... 44
  2.3 Towards an Analytical framework: Appropriation and Communicative Ecologies Framework ............................................................................................................................... 46
  2.4 Chapter Summary and Concluding Remarks .................................................................... 47

CHAPTER THREE: The Relationship between New Media and ICTs and Development ............. 49
  3.1 Questioning the Mobile Revolution in Sub-Saharan Africa .............................................. 50
  3.2 ICT use as Modernisation in Kenya .................................................................................... 56
      3.2.1 Kenya Vision 2030 National Development Plan ................................................... 56
      3.2.2 The Kenya National ICT Master Plan .................................................................. 60
  3.3 The History of New Media and ICT use in Kenya .............................................................. 62
      3.3.1 M-Pesa (Mobile Money) in Kenya ......................................................................... 63
      3.3.2 The Internet in Kenya ............................................................................................ 69
  3.4 Empirical Studies of How Kenyans Use New Media and ICTs ......................................... 71
      3.4.1 M-Education in Kenya ............................................................................................ 75
      3.4.2 M-Health Applications ........................................................................................... 78
      3.4.3 Mobile Phones for Disaster Response: Ushahidi ................................................. 79
  3.5 Chapter Summary and Concluding Remarks ..................................................................... 86
CHAPTER FOUR: A Review of the Mobiles for Development (M4D) Literature .................................................. 88
4.1 Mobiles for Social Networking and Mobility .................................................................................. 90
4.1.1 The Contextual Constraint of Social Class .......................................................................... 92
4.1.2 Facebook in Kenya .............................................................................................................. 94
4.2 Mobiles for Economic Development ............................................................................................. 95
4.3 Mobiles and Social Networking Sites for Political Activism ...................................................... 97
4.4 Mobiles and Youth Cultures .......................................................................................................... 99
4.5 Chapter Summary and Concluding Remarks ............................................................................... 103

CHAPTER FIVE: A Literature Review of Development ............................................................................. 105
5.1 Tracing Development in Kenya .................................................................................................... 105
5.1.2 Harambee and Ubuntu Philosophy ........................................................................................ 107
5.1.3 Pan Africanism in Development ............................................................................................ 110
5.2 Theorising Development: The Capabilities Approach ................................................................ 112
5.2.1 Nussbaum’s Conceptualisation of the Capabilities Approach ........................................... 114
5.2.2 Conversion Factors ................................................................................................................ 116
5.2.3 Criticisms of the Capabilities Approach .............................................................................. 119
5.3 The Philosophical Paradigm of Critical Realism .......................................................................... 121
5.3.1 Defining a Context in Critical Realism ................................................................................ 122
5.4 Towards a Theoretical and Evaluative Framework ....................................................................... 125
5.4.1 Why Research Kibera? .......................................................................................................... 131
5.5 Chapter Summary and Concluding Remarks ............................................................................... 132

CHAPTER SIX: Research Methods ........................................................................................................ 135
6.1 Methodological Considerations ..................................................................................................... 135
6.2 Qualitative Research to Study the Media Audience .................................................................... 136
6.3 Ethnography .................................................................................................................................. 137
6.3.1 Reflexive Moments ................................................................................................................ 139
6.3.2 Insider- Outsider Status in Research .................................................................................... 140
6.4 Participant Observation: Opportunities and Challenges ............................................................ 142
6.4.1 Negative Effects of Participant Observation .......................................................................... 143
6.5 The Go-along .................................................................................................................................. 146
6.5.1 Fieldnotes .................................................................................................................................. 147
6.5.2 Documentary Evidence: E-mails .............................................................................................. 149
6.5.3 Sampling Strategy .................................................................................................................. 151
6.6 Semi-structured Interviews ............................................................................................................ 152
6.6.1 Methodological Rationale for the Use of Semi-structured Interviews ................................. 153
6.7 Data Analysis .................................................................................................................................. 156
6.7.1 Validation of Data .................................................................................................................... 159
6.8 Chapter Summary and Concluding Remarks ............................................................................... 160

CHAPTER SEVEN: The Research Context ............................................................................................... 161
7.1 The Physical Structure of Kibera ..................................................................................................... 161
7.1.1 Kibera as Ghetto .................................................................................................................... 164
CHAPTER EIGHT: Discussion of Research Findings .............................................. 182
  8.1 The Appropriation of New Media and ICTs by the Young People of Kibera 182
  8.2 Face-to-Face Communication in Kibera ..................................................... 184
    8.2.1 Youth Groups in Kibera ................................................................. 185
    8.2.2 Kinship Networks .............................................................................. 188
  8.3 Youth Forums ............................................................................................. 192
  8.4 Church and School .................................................................................... 193
  8.5 Pamoja FM: Community Radio in Kibera .................................................. 195
    8.5.1 Cost and Convenience of New Media and ICTs ................................. 198
  8.6 Mobile Phone and Mobile Internet Access ................................................. 201
    8.6.1 Ownership .......................................................................................... 202
    8.6.2 Data Enabled Devices ........................................................................ 203
    8.6.3 The Co-ordination of Social Networking with the Mobile Phone ........ 204
  8.7 Communicative Ecologies of the Young Kiberans ....................................... 205
    8.7.1 Education as a Leveller ...................................................................... 210
  8.8 Chapter Summary and Concluding Remarks ............................................. 211

CHAPTER NINE: Evaluation of Development in Kibera ....................................... 212
  9.1 Education as a Social Conversion Factor in the Appropriation of New Media
    and ICTs ....................................................................................................... 214
  9.2 The Capability of Mobility ......................................................................... 215
    9.2.1 The Experience of Class .................................................................... 216
  9.3 The Paradox of Mobility ............................................................................ 217
    9.3.1 Residential Segregation in Kenya ...................................................... 219
  9.4 Social Networking: The Appropriation of Facebook ................................... 221
    9.4.1 Exclusion Based on Place of Residence ............................................. 222
  9.5 Chapter Summary and Concluding Remarks ............................................. 223

CHAPTER TEN: Conclusion .............................................................................. 225
  10.1 The Value of this Thesis .......................................................................... 226
  10.2 Main Findings and Implications ............................................................... 226
  10.3 Theoretical Contributions ........................................................................ 228
  10.4 Areas for Further Research ...................................................................... 229
    10.4.1 A Shift in ICT4D and M4D ............................................................... 230
  10.5 The Way Forward ..................................................................................... 231
  10.6 Personal Reflections and Limitations ....................................................... 232

REFERENCES ................................................................................................. 233
Appendix One: The Interview Topic Guide ...................................................... 278
Appendix Two: Sample Interview ................................................................. 281
List of Figures

Figure 1: Map of Kenya ........................................................................................................57
Figure 2: Photograph of M-Pesa store ..................................................................................64
Figure 3: Pay Bill Transaction ..............................................................................................65
Figure 4: Variety of data bundles offered by leading mobile data provider Safaricom ..............74
Figure 5: Methodological Principles to Guide Critical Realist Research ...............................124
Figure 6: Voice of Kibera Platform .....................................................................................126
Figure 7: Summary of How Voice of Kibera works .............................................................127
Figure 8: My Insider-Outsider Roles in the Field Work Phase (Jan 2013 - Dec 2013) ............141
Figure 9: Max Journal iPad Application: Short field notes ...............................................147
Figure 10: Field notes on Evernote Application ....................................................................148
Figure 11: E-mail Communication with Safaricom Staff ......................................................149
Figure 12: Demographic Profile of the Sample ...................................................................154
Figure 13: A Map of the Villages of Kibera .......................................................................165
Figure 14: Aerial Image of Kibera focused on Kianda Village ............................................180
Figure 15: Image of Youth Group in Kibera (Gatwekera Village) .........................................186
Figure 16: Summary: Significant Local Information Flows ....................................................199
Figure 17: Communicative Ecology: University Educated Francis (28) .................................206
Figure 18: Communicative Ecology: University Educated Liza (25) .....................................207
Figure 19: Communicative Ecology: Primary School Educated Norah (18) .........................208
Figure 20: Communicative Ecogy: Primary School Educated Tom (22) ...............................209
Background to the Study: Research Problem

Ubiquity is one of “the most obvious consequences of new media and ICTs as they affect everyone in the societies where they are employed even if not everyone has access to them” (Lievrouw and Livingstone, 2006: 25). Within the media literature and the related Information and Communication Technologies for Development (ICT4D) and Mobiles for Development (M4D) literature, it is argued that the “ubiquitous mobile phone in the hands of millions of Africans working as the primary tool for communication is fast becoming the core technology for supporting social change and the empowerment of citizens” (Ekine, 2009: 1). The mobile phone technology is of great significance to many Sub-Saharan Africans because their first encounter with an interactive communications device is the mobile phone. Access to landlines has been limited for years by poor infrastructure and corruption, so the region has one of the lowest fixed line (land line) penetration rates in the world (Porter et al., 2010: 147).

Despite the transformative potential of the mobile phone, there are limited empirical studies dedicated to exploring how and why Africans (particularly in Sub-Saharan Africa) use and appropriate new media and ICTs such as the mobile phone. The M4D body of knowledge is framed within the ICT4D field where “technologies can be designed and woven into social systems in order to bring about positive social change” (Tacchi et al., 2012: 530). ICT4D and M4D technology users are predominantly framed as “exotic and virtuous recipients” of new technologies who use technology for purposes such as seeking educational information and business pursuits (Arora and Rangaswamy, 2013: 901). Ganesh (2010: 3) argues that the ICT4D field generally ignores the “diverse ways in which the poor and the marginalised use media technologies in their everyday lives for social networking and entertainment”. In tandem with the scholars who argue for a shift in the direction of ICT4D and M4D research, this study explores the use and appropriation of the mobile phone and the mobile Internet from a critical, social viewpoint. This is achieved by focusing on the potential role of new media and ICTs in facilitating connectedness through the maintenance and expansion of social ties of young Kiberans.

This thesis also presents the communicative environments of the young Kiberans and potentially contributes one of the first empirical media audience studies to map the
communicative ecologies of young people in Kenyan society. In addition to media and communication studies, ICT4D and M4D, the multidisciplinary research findings have implications for Communications for Development (C4D) and the Information Systems (IS) literature.
The Research Aim and the Evolution of the Research Questions

The research aim of this thesis was to interrogate the optimism about the use of new media and ICTs for development by amplifying the voices of technology users. The purpose of this research was to establish if the media, donor driven and government optimism surrounding ICT4D was reflected in the research context of Kibera. I purposefully selected a research site that would elicit a great understanding of the research problem. The initial focus of this study was to investigate if the appropriation of Voice of Kibera (VOK) led to an expansion of the capability of voice, a form of development for the young Kiberans. The new media and ICT communication platform, VOK, is representative of the convergence of mapping software, mobile and Internet technology enabled by Ushahidi (Kiswahili word for testimony), a free and open source software. As discussed extensively in chapter three, Ushahidi is one of the mobile applications for disaster response in Kenya that enables crowdsourcing of information from SMS, Twitter and E-mail displayed as red dots on the digital and interactive map of Kibera.

The VOK operates as a Non-Governmental Organisation (NGO) in Karanja village, Kibera. It is embedded within the Map Kibera Trust founded by Erica Hagen and Mikel Maron in October 2009. The sum of my interactions in Kibera from January to April 2013 led me to reassess the purpose of the research and the sample because I failed to meet Kiberans outside the organisation’s context who knew what Voice of Kibera or Map Kibera were. As a result of my three-month field experience in April 2013, I decided to assess the engagement between the young Kiberans and new media technologies more broadly. The research questions were altered to the following.

Research Questions

RQ1. Do the young people appropriate new media and ICTs?
RQ2. What forms of new media and ICTs do the young people appropriate?
   (Sub question: Which one is the most significant to each individual?)
RQ3. How and why do they appropriate the new media technologies?
RQ4. Is there an expansion of capabilities for those who appropriate new media and ICTs?
   (Sub question: What possible form is the capability or capabilities?)
In order to make sense of the data that I collected based on the research questions above, the domestication of technologies version of appropriation was utilised in alignment with the communicative ecologies framework. The evaluative frameworks facilitated the identification and eventual description of the communicative environments of the young Kiberans. The two frameworks are discussed extensively in both chapter one and two. In addition to appropriation and communicative ecologies framework, Amartya Sen’s Capabilities Approach (CA) was utilised to probe the existence of capabilities (a form of development) in the research context. Additionally, I adopted the broad definition of development as the process of expanding the real freedoms that people have reason to value (Sen, 1999: 15). As reviewed extensively in chapter five, the words freedom and capabilities are used interchangeably by Sen. Therefore, my research objective was to probe the existence of potential capabilities, freedoms or opportunities for the young Kiberans that appropriate new media and ICTs in the context of their communicative environments.
The Organisation of this Thesis

Chapter one is an introduction chapter that discusses the important terms of new media and ICTs. The latter section of the chapter discusses communicative environments and explores the historical foundations of the communicative ecologies framework and the domestication of technology (appropriation) approach within the media and communication studies literature.

Chapter two presents an extensive review of empirical studies that have employed appropriation. The domestication of technology approach is the most dominant version of appropriation that is applied in the Sub-Saharan Africa empirical contexts. The literature review reveals that the users are appropriating the mobile phone and the Internet because of the “connectedness” that the mobile phone facilitates by allowing one to appropriate the artefact and be “telephonically present” in another place (Palen, 2002: 79). The chapter concludes by presenting the domestication of technologies approach and the communicative ecologies framework as analytical and evaluative frameworks for the analysis of the research findings in this thesis.

Chapter three explores the relationship between new media and ICTs and development. This is achieved by reviewing media reports, development reports and the empirical literature that captures the relationship. The goal of the chapter is to review the literature that emerges as significant in the field of ICT4D as well as the related field of M4D. The chapter questions the use of new media and ICTs for the pursuit of socio-economic development by presenting the optimistic media and policy literature and comparing it with the growing academic literature. The review highlights the discrepancy between technology optimists and scholars who seek critical answers to how and why new media and ICTs should be used for the pursuit of socio-economic development.

Chapter four extends the discussion in chapter three. It specifically focuses on the M4D literature. The chapter presents young people as central agents in the discussion of M4D because they are the most avid users of new media and ICTs such as the mobile phone, the mobile Internet and social networking sites. From the review of the literature, it emerges that there are very limited cases of successful usage of new media
and ICTs for economic development in the form of financial gains and profits. The four dominant themes within the M4D literature are explored as mobiles for social networking and mobility, mobiles for economic development, mobiles and social networking sites for political activism and mobiles and youth cultures. There is a clear gap for the further empirical exploration of the four themes in the Sub-Saharan African context.

In chapter five the discussion shifts to an extensive literature review of the broad term development. The extensive chapter strives to highlight the significant contrast between the indigenous pre-colonial and earlier forms of development thinking embraced in the Kenyan context with the current development as modernisation thinking embodied in the national development plan Kenya Vision 2030 as well as the national ICT master plan. The latter section of the chapter presents a review of dominant development theories that have been applied in Sub-Saharan Africa and the Global South context. Freire’s (1993) and Chambers’ (1995) development theories are compared with Sen’s influential Capabilities Approach (CA). The people centred CA is presented as a theoretical and evaluative framework that is used to make sense of some of the research findings in this thesis. The chapter concludes with a discussion of the Critical Realist (CR) philosophical paradigm that undergirds this thesis.

The research methods chapter six discusses the combination of participant observation, go-alongs, semi-structured interviews and collection of documents (E-mails) as the ethnographic research methods utilised to collect data in the context of Kibera. The chapter concludes with a discussion of how the corpus of data was analysed and validated.

Chapter seven presents a thick description of the research context of Kibera based on the critical realist philosophical paradigm that undergirds this paper. In alignment with Wynn and Williams (2012: 796) methodological principle of the explication of structure and context, the chapter explores the physical, socio-economic, political and governance structures that make up Kibera. The goal of the chapter is to “critically reflect on the research context” (Klein and Myers, 1999: 72).
Chapter eight is focused on the research findings elicited from the first two research questions that led this study. The communicative ecologies framework is explored in the chapter. Youth groups, youth forums, *Pamoja* FM, Church and school are presented as significant forms of local information flows in the lives of the young Kiberans. Cost and convenience are identified as key motivators for the young people to appropriate new media and ICTs. The convergence facilities of the mobile phone present it as a very attractive socio-cultural artefact that the youth appropriate into an *office* and a *personal secretary*.

Chapter nine addresses the last two research questions that led this study. The chapter discusses how and why the young people in Kibera appropriate the mobile phone and the mobile Internet. The chapter also discusses how the appropriation leads to a capability of mobility. The research findings reflect that educational status is a social conversion factor in the appropriation of new media and ICTs. This is because the highly educated young women and men reported that they had access to a vast array of traditional media artefacts, new media and ICTs as well as social ties. The latter section of the chapter explores the paradox of mobility. The environmental conversion factor of the young people’s place of residence as Kibera restricts their appropriation of the mobile phone for the creation and extension of social ties with higher class Kenyans from the upper income gated communities and middle income housing estates. Consequently, the contextual mobility that the phone facilitates so well by compressing distance, time and space is limited by the existence of the residential and social segregation.

Chapter ten brings together all the discussions explored in the research findings chapter eight and nine. Additionally, it presents the methodological, theoretical and policy contributions the thesis aims to contribute. Recommendations for future studies are articulated as well as personal reflections and limitations.
CHAPTER ONE: An Introduction to the Study

This chapter introduces the terms new media and ICTs (Information and Communication Technologies). The terms are drawn from the media studies literature and the United Nations Development Programme (UNDP) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) policy literature. The terms capture the evolving uses of such artefacts but new media and ICTs are predominantly defined based on their infrastructural components. In this chapter I argue that it is essential to define new media and ICTs by incorporating the context of use. This can comprise social, cultural and political context of use. In the context of this thesis, the socio-cultural context of use is discussed in chapter eight and nine because I consider what kind of artefact the mobile phone becomes in the context of Kibera. In the next section of this chapter, media and communications literature on communicative environments is reviewed. I discuss new media ecologies and well as communicative ecologies because the two frameworks capture the importance of mapping and evaluating communicative environments in a research context.

The two ecologies frameworks provide a pragmatic lens for researchers to evaluate the forms of new media and ICTs as well communication that are important in various social contexts. The bottom up analysis potentially provides a unique contribution to the ICT4D Sub-Saharan African literature where discussions of communicative environments are limited. Save for recent work from Okon (2015) in Nigeria, the literature is inundated with discussions of how different media are used in isolation. In the latter section of the chapter, the term appropriation is introduced and discussed. Appropriation is also described as the domestication of technology approach. This approach has the distinct purpose of facilitating a deeper analysis of how traditional media, new media and ICT artefacts are incorporated into the daily lives of users. The approach contrasts with two dominant paradigms in new media and ICT studies. One is technological determinism whilst the other is social shaping. The differences are explored extensively with the goal of presenting appropriation as a suitable lens to analyse users who foster unpredictable and evolving relationships with the various media in their lives.
1.1 Definitions of New Media and ICTs

There are numerous definitions of new media and ICTs. One definition derived from the United Nations and Development Programme (UNDP) policy literature reads that “ICTs are information handling tools, a varied set of goods, applications and services that are used to produce, store, process, distribute and exchange information. They include the old ICTs of radio, television, telephone and the new ICTs of computers, satellite, wireless technology and the Internet” (Reddi, 2004: 175). A related definition from UNESCO reads, “ICTs are a diverse set of technological tools and resources used to communicate, create, disseminate, store, and manage information” (Tinio, 2002: 4). Both definitions comprehensively capture the diversity of the numerous forms of ICTs that exist. However, they do not mention the context of use as a part of the definition of ICTs. They are more focused on ICTs as physical artefacts.

A definition from the media literature reads, “new media and ICTs are those digital media that are interactive, incorporate two-way communication and involve some form of computing” (Logan, 2010: 4-5). Like the first two definitions, the focus is on the physical aspects of the artefact and the context of use is not included. In the extensive literature, most definitions of media focus on the technical components of new media without a very strong emphasis on the social, political or cultural context of use (Durlak, 1987; Steuer, 1995). In addition to the omission of the context of use, the definitions are also broad in nature because new media and ICTs are constantly changing and evolving in terms of technologies, applications and usage. A more holistic definition that encompasses the context of use is presented in the media and communication studies literature. Lievrouw and Livingstone (2006) define “new media and ICTs as the artefacts or devices that enable and extend our abilities to communicate; the communication activities or practices we engage in to develop and use these devices; and the social arrangements or organizations that form around the devices and practices” (Lievrouw and Livingstone, 2006: 23).

In a separate text, Lievrouw defines new media as a “combination of material artefacts, people’s practices and the social and organisational arrangements in the process of human communication” (Lievrouw, 2011: 15). Her definition is very similar to the
preceding one because she argues that the social and organisational context of use must also be considered as a part of the technical infrastructure of new media. Lievrouw and Livingstone (2006: 23) as well as Lievrouw (2011: 15) include the social arrangements that form around the new media and ICTs as part of the definition. This is of key importance because new media and ICT use is a contextual practice in which existing “structural conditions, infrastructures of place and technologies are all dynamically interrelated” (Ito et al., 2009: 31). In the context of this thesis, I adopt Lievrouw and Livingstone’s (2006) definition of new media and ICT use as part of the contextual conditions such as the social arrangements and pattern of organisation. I argue new media and ICT use and appropriation are very much a part of the socio-cultural context they are embedded in.

Much of the ICT literature within Information Systems (IS) tradition employs the word ICT whereas media scholars used the term new media more frequently. However, I do not draw a distinction between the two terms of new media and ICTs. This is because the term new is not just a descriptive term that defines media as newer or more recent in terms of the introduction into the society. New is adopted because there is now a shift from traditional forms of communication such as the older forms of television to newer ones that are more “interactive” enough to facilitate an exchange of communication between users (Lister et al., 2009: 12; Lievrouw, 2011: 15). Why is it important to focus on the social or cultural arrangements that form around the use of a form of media? The acknowledgement of the importance of social and cultural context for understanding media use is reinforced in the extensive literature review presented in in the next few chapters. In most of the empirical examples that are discussed and analysed in the chapters, it is evident that media use is an extension of the offline societal conditions.

There is a sense in which the offline social context in which people live and interact is a part of how people use and incorporate new media and ICT artefacts into their lives (Miller and Slater, 2000: 5). In relation to this thesis, chapter eight and nine are focused on how the social structures of the young Kiberans that were studied are replicated in their new media and ICT use and appropriation. There are many theories and analytical frameworks in the media literature that adequately capture that media use is a part of social contextual conditions. However, there are two notable frameworks that have
been quite dominant in more recent ethnographic media and ICT studies. They are the new media ecologies framework and the communicative ecologies analytical framework.

1.2 New Media and Communicative Ecologies Frameworks

In some of the earliest work on the media ecology, Postman (1970) and McLuhan (1964) argue, “media and technological environments shape societies and human affairs” (Madianou and Miller, 2012: 172). Postman (1970) argues a “medium is a technology within which a culture grows and gives form to a culture’s politics, social organization and habitual ways of thinking”. He proposes that media gives culture its character and determines how people live their lives (Postman, 2000: 10-11). As a result of his arguments, Postman (1985, 1998, 2000) was labelled a technological determinist alongside Innis (1972) and McLuhan (1964) who argues, “the medium is the message” (Scolari, 2012: 219). The scholars were described as technological determinists by some communications scholars because their arguments suggest that media has an all-powerful and deterministic influence on society’s norms and habits. Therefore, the implication is that the audience is passive and has little or no control over the influential information they receive from media such as the radio and the television.

In more recent times, discussions of media ecology have moved away from a “linear and deterministic position of human-technology relationships” to a more contextual analysis of the different ways media are used in various contexts (Madianou and Miller, 2012: 172). The concept of the media ecology has been simplified to the basic statement; “communication technologies (from writing to digital media) create environments that affect the people who use them” (Scolari, 2012: 207). In their definition of media ecologies, Ito et al., (2009: xv) are focused on newer forms of media such as the Internet and social media. The scholars define new media as a media ecology where more “traditional media such as books, television and radio are converging with digital media, specifically interactive media, online networks, and media for social communication” (Ito et al., 2008: 8). In a three year ethnographic research of the new media practices of youth in the USA, the scholars evaluated media ecologies and discovered that the “everyday practices of youth, existing structural
conditions, infrastructures of place and technologies are all dynamically interrelated” (Ito et al., 2010: 5). The scholars’ focus on convergence leads them to highlight how users drive the process of media use as opposed to the new media technologies driving or influencing the process. This contrasts with technological determinism. Such a user driven research focus is resonant with Jenkins’s (2006) past work on the convergence culture. Jenkins (2006: 3) argues “convergence occurs within the brains of individual consumers and through their social interactions with others”.

In addition to a departure from technological determinism, the new media ecologists propose that the offline lives of the youth such as hanging out with friends are interrelated with the social media they choose to use. Any form of new media they use is incorporated into an existent communicative environment (Ito et al., 2010). The personal and intentional selection of new media and communication technologies in the context of a communicative and media environment is a research issue that has always been important in the media and communications literature. This is particularly notable in the Global North literature but very rare in the Global South literature. In the past few years, scholars such as Madianou and Miller (2011, 2012, 2013) and Gershon (2010) have explored the selective and personalised usage of media based on emotional and social reasons. Madianou and Miller (2011, 2012, 2013) draw upon elements of the media ecologies framework to propose their theory of Polymedia. Like Ito et al., (2010), they amplify the concept of technology convergence and argue that communication technologies are utilised in an integrated structure.

Based on extensive ethnographic work in the Philippines, Madianou and Miller (2012: 171) argue, “the profound transformation in the usage of increasingly converged communication technologies has implications for the ways interpersonal communication is enacted and experienced”. Therefore, they propose the theory of polymedia as an “emerging environment of proliferating communication opportunities that functions as an integrated structure in which the preconditions to be met are access, availability, affordability, and media literacy” (Madianou and Miller, 2012: 171). The scholars acknowledge that their focus on emotional concerns rather than the cost of using new media is not plausible in most parts on the world. In the context of this thesis, chapter eight and nine reveal that the cost of purchase and access of new media and ICTs is particularly significant to young Kiberans. As much as they meet the
polymedia precondition of media literacy they do not necessarily choose emotional concerns over financial ones in order to appropriate new media.

Like Ito et al.’s (2009: xv) work on ecologies, Madianou and Miller (2012) strive to bridge technology and their respondents’ practices together by researching how specific “new media practices are embedded in existing (and evolving) social structures and cultural categories”. Furthermore, both sets of scholars apply Lievrouw and Livingstone’s (2006) recommendations to analyse the practice of media use in the political, cultural and social context. In Gershon’s (2010) discussion of media switching and media ideologies, she also amplifies the selection of media and communicative environments based on social and emotional concerns. As a result of her research of college students in the USA, she discovered that the respondents morally selected some forms of communication over others for the delicate act of ending an on-going romantic relationship. Those she interviewed “were articulate about how different media affect communication, with varied and nuanced analyses of their daily conversations. They often discussed the ways a medium affected messages with their friends and family” (Gershon, 2010: 391).

This thesis was not focused on communication in context of intimate or emotional relationships but future work can provide some insights on media switching and ideologies within such contexts as well as professional ones. It would certainly be more pragmatic to analyse such switching and ideologies in the context of the relationships that young people form with each other in their peer groups or those that they interact with outside Kibera. It is also a possibility that some respondents do not often give too much thought as to what forms of media to use based on their emotional and moral concerns. In the literature I have just reviewed, it is clear that the focus on media or communicative environments is well established in the media studies literature. However, in the broader ICT4D field that encompasses Information Systems (IS) literature and development studies, there is very limited work on media or communicative environments. The existent literature is from scholars who utilise the communicative ecologies framework in their studies of contexts such as Nigeria, Australia and Sri Lanka (Okon, 2015; Lennie and Tacchi, 2014; Hearn et al., 2009; Skuse et al., 2007; Hearn and Foth, 2007). In more recent times, scholars and practitioners are starting to appreciate that it is important to analyse ICT4D projects in
the context of a communicative environment. This is because many donor funded ICT4D projects have experienced failure when they are not firmly embedded in the existent communicative environments of the society or institution they are introduced into (Heeks, 2012; Tarus et al., 2015).

Consequently, the related and very similar analytical framework of communicative ecologies has gained prominence within the ICT4D literature. Both the new media ecologies and communicative ecologies frameworks facilitate the mapping of the physical and social structure of media use. It is also possible to map out the political economy or cultural structure of the context of media use. For example, Ito’s (2010) conceptualisation of the new media ecologies framework was focused on mapping the contours of the varied social, technical, and cultural contexts that structure youth media engagement whilst the communicative ecologies framework is often used to identify and evaluate all the forms of communication that are significant in the context (Ito et al., 2010; Lennie and Tacchi; 2014). Both frameworks also argue that a new ICT or form of communication will be used more effectively or adopted faster if it fits in the existent communicative environment in a society or organisation.

The communicative ecologies framework is well documented in development practice projects such as UNESCO’s “Finding a Voice” and has been applied in many organisational ICT4D projects (Skuse et al., 2007). In one of the studies, research was undertaken in Jhuwani community library, Nepal. The researcher identified significant differences between the communicative ecologies of men compared to women. The men had greater access to new media (mobile phones, computers, the Internet and fax facilities) and were able to spend the family income on their new media choices. In contrast, the women lacked access to family income and therefore could not spend money on items outside of the necessities of food and clothes (Skuse et al., 2007: 20). The research established a clear link between the offline socio-cultural differences between men and women and how ICTs were used. In addition to illustrating the communicative ecologies framework, the example also illustrates the new media ecologies framework because the researcher maps the “cultural and social contours” of how people are engaging with newer forms of media in that context (Ito et al., 2009, 2010).
In the highly patriarchal society, men were more likely to reap the benefits of ICT use than their female counterparts. It is also interesting that ICT use does not permeate social barriers and instead amplifies the fact that there is a socio-cultural distinction between men and women. As a result of all these very rich yet similar findings within the literature on communicative ecologies, there is a consensus amongst scholars and researchers that in order to “understand the potential and real impacts of individual media technologies in any given situation, you need to place this experience within a broader understanding of the whole structure of communication and information in people’s everyday lives” (Hearn et al., 2009: 31). The line between academia and practice in ICT4D as well as C4D is not distinct. Academia and practice are often blurred because of the practical ability of new media and ICTs to touch many aspects of our lives. Thus, the communicative ecologies framework is also promoted as one that can be used and applied in various ICT4D field projects. The new media ecologies framework has been used in Global North research contexts such as Japan and USA (Ito et al., 2009, 2010). However, the communicative ecologies framework is dominant in Global South literature in places such as India, Nepal and Nigeria (Skuse et al., 2007; Okon, 2015).

In recent years, the new media ecology framework has been advanced extensively by Hoskins in his work on radicalisation and terrorism (Hoskins et al., 2011). In contrast to the playful engagement that Ito et al., (2009, 2010) capture in their study of youthful media engagement, Al-Lami, Hoskins and O’Loughlin (2012) have utilised the new media ecology framework to illustrate “how political groups harness the new media ecology to mobilise and justify acts of violence to public audiences and to supporters” (Al-Lami, Hoskins and O’Loughlin, 2012: 237). Their work displays the evolution of the new media ecology into one that can rapidly transmit very brutal digital messages to the public and effectively promote acts of terrorism. Building on McLuhan (1964,) Postman (1970) and Fuller (2007) they argue, “today’s new media ecology proliferates digital technologies so that more of life matter is recorded, disseminated and debated on near-instantaneous and de-territorialised scales” (Al-Lami, Hoskins and O’Loughlin, 2012: 238). Their acknowledgment of the de-territorialised nature of the new media ecology is one that describes how influential new technologies can be within a context because they are portable and mobile. The technologies are no longer constrained to a small space in a home or an office.
The flexibility and availability of the mobile phone and the Internet resonate with one of the characteristics of new media: Ubiquity. Lievrouw and Livingstone (2006) describe ubiquity as one of “the most obvious consequences of new media and ICTs as they affect everyone in the societies where they are employed even if not everyone has access to them” (Lievrouw and Livingstone, 2006: 25). In a separate paper, Lievrouw clarifies that the ubiquity is either perceived or real as the new media and ICTs in that society are viewed as affecting everyone in the society directly or indirectly (Lievrouw, 2002: 9). Etzo and Collender (2010: 659) observe that in Africa, “the ubiquity of mobiles is matched only by the ingenuity of their users. From shantytowns to remote villages, mobile phones are being used to transfer money, monitor elections, and deliver public health messages.” More recently, Douah and Kacker (2015: 11) have also indicated that, “the ubiquity of mobile phones gives users the chance to be connected and become part of a larger network.” Similarly, Butt highlights, “the ubiquity of mobile phones in rural livestock communities is thought to transform or revolutionize the way different social groups interact as they manage social, political and environmental challenges to their livelihood strategies” (Butt, 2015: 1).

### 1.2.1 The Ubiquitous Mobile Phone in Sub-Saharan Africa

The core reason why there are numerous claims of the ubiquity of the mobile phone in the literature is because the communications sectors in the Sub-Saharan African countries of Africa have experienced tremendous growth. This is largely because of the recent introduction and adoption of the mobile phone within the continent. The percentage of “Africa’s population living within range of a GSM (Global System for Mobile Communications) signal rose from five percent in 1999 to 57 percent in 2006. Over the same period more than 100 million Africans became mobile telephone subscribers” (World Bank, 2013: 1). The mobile subscriber base in Sub-Saharan Africa is the fastest growing region globally and as of June 2014 there were 329 million unique mobile phone subscribers (a mobile penetration of 38 percent) in a region with approximately 800 million people (GSMA, 2014b: 2). In contrast, “developed markets are growing more slowly as penetration rates approach levels close to saturation. For example, in Europe and North America, unique subscriber growth was below 1% in
2014 and the average penetration rate was 79% at the end of 2014. It is projected that the penetration rate will climb only modestly to around 81% by the end of the decade” (GSMA, 2015: 6-7). Therefore, investment focus has shifted to the developing economies.

In Sub-Saharan Africa, mobile network operators have “invested more than US$45 billion (£29 billion pounds) in the past few years (2008 to 2013) to expand coverage and increase network capacity” and the six largest markets of “Nigeria, South Africa, Ethiopia, Kenya, Democratic Republic of Congo and Tanzania account for over half of the region’s unique mobile subscriber base” (GSMA, 2014a: 1). Growth of ICTs has even exceeded access to piped water and electricity in some of the countries (Nique, 2013: 2). The mobile phone technology is of great significance because for many Africans, their first encounter with an interactive communications device is the mobile phone. This is because the region has one of the lowest fixed line (landlines) penetration rates in the world as access to landlines has been limited for years by poor infrastructure and corruption (Versi, 2010 in Porter et al., 2010: 147). Organisations such as the World Bank (2012, 2013), GSMA (2014a, 2014b), and the International Telecommunication Union (ITU) (2013) have published numerous reports on the notable growth of the African ICT and mobile phone sector. They have all projected that the sector will continue to grow.

In contrast to the policy literature comprised of enthusiastic projections about the Sub-Saharan African mobile sector, empirical literature on how the mobile phone is used and appropriated in everyday life remains limited. In the next few sections I discuss the few studies that have employed appropriation and empirical studies of new media and ICT use in Kenya. In chapter four, the discussion expands to include other studies that have explored the interaction between mobile phones and development. I discuss and position Kenya as a suitable research context to explore the ubiquity of the mobile phone as well as assess the optimism of ICT4D in the continent. The next section discusses the evolution of the ecologies framework and its suitability to evaluate new media and ICT use and appropriation in diverse contexts.
1.2.2 The Evolution of the Ecologies Framework

The communicative ecologies framework is built upon a focus on McLuhan’s notion that media shapes environments (McLuhan, 1964). In later work, Altheide (1994: 666) proposed the concept of communicative ecologies to broaden McLuhan’s focus and to address the logic and principles of technologically informed communication. In his conceptualisation, he evaluates how communication processes central to social interaction are shaped by information technology, logic and formats in everyday life (Altheide, 1994). Hearn and Foth (2007) also extend Altheide’s socio-cultural and technological propositions. Very much like Altheide (1994), they conceptualised the communicative ecology in a framework with three different layers. They propose that the communicative ecology is made up of a technological layer of devices and connecting media, a social layer of people and social modes of organising those people and a discursive layer, which is the content of communication (Hearn and Foth, 2007: 749). In tandem with the conceptualisation of the new media ecologies, there is an explicit focus on the range of new media and ICTs as well as more traditional forms of communication in the context of a communicative environment.

The core implication of the ecologies framework is that communication use is best analysed in the context of a communicative environment which includes a range of non-media, older media and technology. Hearn and Foth’s (2007) scope of analysis is extensive and is inclusive of traditional print, broadcast, telecommunication media, social networking applications for peer to peer modes of communication and transport infrastructure that enables face-to-face interaction, as well as public and private places where people meet, chat, and gossip. The broad concept encompasses the use and interaction with media and ICT in the wider context of people’s social and cultural structure. The scholars provide a rich analytical framework that can be applied in diverse contexts. Their choice to analyse media and communication in technological, discursive and social layers is particularly suitable for the Sub-Saharan African context where most countries are differentiated and stratified into ethnic groups, social classes and cultures (Levine and Easterly, 1997; Collier, 1998).

It is already well established in the literature that it is important to locate new media and ICT access and use within cultural and social frames because such access and use
inevitably articulates with existing communication processes, practices and interactions (Nair et al., 2006). Additionally, access and use of ICTs is sometimes subject to a range of motivations or constraints that inevitably reflect local power dynamics existent in class, caste, ethnic and gender hierarchies (Skuse et al., 2007: 18). The social groups that individuals participate in are also possible factors that promote the access and use of ICTs. This is a particularly significant element of this thesis because the results of the PhD research reveal that education is a social conversion factor that facilitates the young people’s access and use of new media ICTs as well as the membership of groups. I expound on education more fully in chapter eight and nine.

A good example of the application of the communicative ecologies framework in Sub-Saharan Africa is Okon’s (2015) research on ICT use in the communities of the Niger Delta. She applied Hearn and Foth’s (2007) communicative ecology framework to a research project that explored how ICTs may contribute to sustainable development of rural communities’ development in Nigeria. She discovered that social life in Niger Delta communities is shaped by “face-to-face interactions, the peoples’ interest in participating in communal issues, and the channels for information exchange” (Okon, 2015: 300). Okon’s (2015) findings resonate with past work on communicative ecologies in Sri Lanka (Lennie and Tacchi, 2013; Slater et al., 2002). In 2002, Lennie and Tacchi spent one month in Sri Lanka researching the UNESCO pilot community multimedia Kothmale centre. Using ethnographic methods, they discovered that local communicative environments are complex because different people within a place have divergent communicative opportunities and experiences based on factors such as the availability of technological and social networks, age, gender, class, education, economic situation and so on (Lennie and Tacchi, 2013: 649). One of their research findings was very similar to Okon’s (2015) discovery of a very strong social fabric within the communities as they discovered that “local information and communication flows were dominated by face-to-face communications. However, the ICT usage was highly differentiated by gender, ethnicity and income” (Slater et al., 2002: 13).

In contrast to Okon (2015) and Slater et al., (2002) who note the importance of face-to-face interactions and tight knit social fabrics in their Global South contexts of study, a qualitative study of the communicative ecologies of residents in three Australian inner-city apartment buildings discovered the theoretical concept of networked individualism
(Hearn and Foth, 2007). The researchers discovered that residents seamlessly traverse between online and offline communication and that they follow a dual approach which allows them to switch between collective and networked interaction depending on purpose and context (Hearn and Foth, 2007: 749). Unlike the previous two studies where interflows of communication were collective and communally centered, the Australian student residents maintained social networks that were selective and very guarded. In contrast, Okon (2015: 300) discovered that communal activities provided a platform for uninhibited information and knowledge exchange.

One notable element in all the communicative ecologies studies I have reviewed in this chapter is that ICT use is an extension of offline practices. In the Sri Lankan case, people valued face-to-face communication but their ICT usage was highly differentiated as to both ethnicity and income like their physical structure (Slater et al., 2002: 13). Similarly, the Australian students practiced their highly selective social networking practice of networked individualism in offline face-to-face interactions as well as in online spaces. In fact, the new media and ICT enhanced the control of their networks and privacy more efficiently (Hearn and Foth, 2007: 763). Okon (2015) reports that information and communication use is characterised in the existent social fabric where almost everybody knows everybody else. Therefore, the studies all reflect the idea that the spaces created by new media and ICT use can be treated as continuities of the offline (Wallis, 2011; Miller and Slater, 2000: 5; boyd, 2013). This is a very important point that I revisit and discuss extensively in the latter discussion chapters. The communicative ecologies framework promotes an in-depth and contextual analysis of the use of ICTs. This is because it is a bottom-up and people centered framework that facilitates the concept that people and communities will vary in how they interact with ICTs. The flexible framework also promotes the discovery of qualitative forms of data by relying on the respondents or community members viewpoints combined with observation in the research context. This encourages the researcher to approach the field site with an open mind.
1.2.2.1 Limitations of Communicative Ecologies Framework

One of the greatest challenges of the communicative ecologies is also its strength. The framework entails a researcher rigorously mapping out what forms of communication are significant in each individual’s life within the research context. Therefore, respondents can have vast amounts of communicative practices that are significant. Such respondents will require a lot of time to research. In some village contexts this will entail a researcher travelling to remote places and spending a lot of time being granted access to a community. There are also times a researcher may have to crosscheck the data generated with other data from complementary observational methods.

1.2.2.2 Communicative Ecologies in Practice

In this thesis, I adopt the communicative ecologies framework in order to make sense of some of the data I collected. At the end of the literature review chapter, I present the research questions that emerged from the extensive literature review. The research questions directed the fieldwork phase of this study and the communicative ecologies framework was used to make sense of the interview data generated to address the first research question that will be presented. Consequently, the discussion in chapter eight is a presentation of the existent communicative ecologies of the young Kiberans researched. As will be discussed extensively in the research methods chapter, the reason why I used the communicative ecologies framework to explain some of the findings in this study is because I adopted an “inductive conception of ethnographic research where the ethnographer uses their sociological knowledge, in combination with local knowledge gained from the site” (Anderson, 2002: 1536). In the next section, I present and discuss appropriation as a complementary approach to the communicative ecologies framework. I argue that it provides a formidable lens to assess how each individual embeds new media and ICTs in the context of their daily lives. It goes beyond mundane use of technology to capture the process of how technology gets incorporated and embedded in a context, home or society. Appropriation is also open to the idea that some users may reject and abandon technology and media artefacts in the process of use. This provides a pragmatic approach to assessing unpredictable users and field sites.
1.3 The Appropriation of New Media and ICTs

One of the versions of technology appropriation that is widely discussed and applied in the media and communications studies literature is commonly referred to as the domestication of technology approach. The approach is founded upon previous studies of the processes of mass consumption from the work of “Jean Baudrillard, Michel de Certeau and Daniel Miller” (Baudrillard, 1988; de Certeau, 1984; Miller, 1984 in Silverstone, 2006: 232). It encompasses the “local practices of use which develop around a new object (or medium) anchoring it within particular temporal, spatial and social relations” (Livingstone, 2002: 35). The perspective was further developed by Roger Silverstone and his colleagues and later extended “to analyze the complex process by which ICTs enter and subsequently find a place within household routines and practices” (Silverstone, 1994: 20). Regardless of the meaning of the word domestic, the term is applicable to other areas of everyday life (Hynes and Rommes, 2006: 126). The domestication or appropriation of technology is described in six major stages of consumption by Silverstone (Silverstone, 1994; Ward, 2005: 151).

- The production of the product or artefact.
- A consumer enters the phase of imagination where advertising fuels desire for the artefact just before they make a purchase.
- The artefact is purchased in the stage of appropriation.
- The artefact is objectified and actively shaped to merge with the physicality of the household.
- It is then incorporated and ascribed meaning within household rituals and rules.
- The final stage of conversion is when the artefact carries symbolic meaning in the outside world.

One of the most important features about domestication is that “there is an awareness that domestication is not always successful” and it is not always a linear and straightforward process because some users may reject or abandon the technologies (Ling and Donner, 2009: 18). The process of appropriation or domesticating of “an unfamiliar object by incorporating it into pre-existing social practices occurs on several time scales, from the days or weeks in which the initial thrill of newness leads the user
to rearrange domestic time and space to experiment with the new toy, to that of generations” (Livingstone, 1999: 3). It is underpinned by the acknowledgment that media and technology use is a process and it contrasts with the technological deterministic concept that ICT access eventually leads to use. Domestication contrasts with the influential diffusion of technology theory, which implies that there is an inevitable recurring s-curve of expansion of technology (Rogers, 1983).

Domestication theorists are open to personal differences in technology appropriation and they do not accept that it is always inevitable that people will adopt technology like diffusion theorists. In the context of the latter theory, the late adopters of technology are labelled as “laggards” rather than as non-users who have a right to use or reject technology (Rogers and Beal, 1958: 331). Additionally, the analysis of domestication does not stop with the purchase of the artefact like in the diffusion of innovations theory because it “follows the process of placing the object or the service into the broader context of the daily lives of media and technology users” (Ling and Donner, 2009: 18). Domestication complements the previous literature on media and communicative ecologies because it provides a richer understanding of how individuals choose to relate with media and ICT artefacts structurally and contextually. It is also divergent from the communicative and media ecologies approach because it provides step-by-step phases to evaluate the process of how the various communication and information flows are appropriated. This is useful because one can explain how each and every media and ICT artefact has been appropriated after they have been successfully mapped and identified in the research context using the ecologies framework.

Within the Information Systems (IS) literature, Bar, Pisani and Weber’s (2007) theory of technology appropriation is more prominent than the domestication approach. Bar, Pisani and Weber (2007) define appropriation as the process through which mobile users go beyond adoption to make the technology their own and to embed it within social, economic and political practices. Their version was conceptualised to inform an in-depth study of the social, economic and political impact of mobile phones in Latin America. The scholars argue that, “the appropriation process is fundamentally political: it is a battle for power over the configuration of a technological system as users re-invent the technology while they try out its features, tweak devices and applications so
they better answer their needs, come up with different ways to use services, and develop new social, economic and political practices around the possibilities opened by new technological systems” (Bar, Pisani and Weber, 2007: 2). Additionally, they argue that Latin American users have appropriated the mobile phone technology the same way they eagerly appropriated cultural objects, people and ideas from abroad. The latter process described is known as the act of cultural appropriation. In the anthropological literature and mass consumption literature, it is an act that is often linked to the quest for the establishment and expression of identity (Miller, 1987, 1988; Miller and Slater, 2000).

Bar, Pisani and Weber (2007: 3) draw out a similarity between their version of appropriation and cultural appropriation but they emphasise their version is unique to the context that they studied and they do not explicitly draw upon any of the influential cultural appropriation works of Baudrillard (1988), de Certeau (1984), Miller (1987, 1988) or Silverstone (2006). In the introduction to this chapter I have noted that the domestication of technologies approach draws upon vast work on mass consumption from the scholars above. Cultural appropriation is embedded and often related to the vast literature on mass consumption. Anthropologist Miller has been particularly influential in extending appropriation to various contexts. In a seminal article on the nature of consumption in a London Council Estate, Miller discussed the “striking differences in the ability of the tenants to appropriate facilities provided by the council industrial housing estate in relation to gender, ethnicity and other factors” (Miller, 1988: 360). Miller has also extended his work on appropriation to Jamaica and Trinidad and Tobago (Horst and Miller, 2007; Miller and Slater, 2000).

In the next chapter I review the latter works alongside other notable works on appropriation. They are particularly significant in the context of this thesis because they are focused on the mobile phone and the Internet. From the review of the literature thus far, it is evident that the two versions of appropriation have some similarities. One similarity is that both acknowledge that technology use is a process. Another similarity is the influence of cultural appropriation in both theories. The only slight difference is that Bar, Pisani and Weber (2007) emphasise that technology users are powerful shapers of technology use and their process of technology appropriation is best summarised in three main cyclical steps (Bar, Pisani and Weber, 2007: 24)
• The cycle begins when users decide to adopt a new technology and employ it to support their social or business activities.
• After adoption, users start to appropriate the technology and experiment, test it out, try out its possibilities and modify its features to better adapt the tool to their needs and desires.
• The users re-configure the technology when they run into limits imposed either by the architecture of technology itself or by its providers. A new cycle then begins as users adopt this new technology, then experiment with it, ultimately prompting further re-configuration, and so on (Bar, 1990).

Unlike the Bar, Pisani and Weber (2007) version of appropriation discussed, the domestication of technologies does not explicitly suggest that users are capable of reconfiguring technology. However, it is not against such a possibility. In domestication, the fourth step is that an artefact or technology is “incorporated and ascribed meaning within household rituals and rules” in the context of daily life (Ward, 2005: 151). In technology appropriation by Bar, Pisani and Weber (2007), the users re-configure the technology when they run into limits imposed either by the architecture of technology itself or by its providers. In addition to the Latin American context where the scholars developed their approach, Bar, Pisani and Weber (2007) review various contexts where some aspects of their version of appropriation are likely to be applicable. One example is drawn from anecdotes of East African mobile phone usage. They describe the practice of beeping or flashing as a form of appropriation as the users reprogrammed the technology (Bar, Pisani and Weber, 2007). The act of beeping or flashing is described as a “nearly free messaging system” invented by mobile phone users in the Global South (South Asia, Kenya, Ghana and India) (Heeks, 2010b: 23; Donner, 2007).

Flashing or beeping is conducted by placing a call and letting it ring for a few beeps or flashes. The call is disconnected just before the intended recipient picks up the call and the caller identity and mobile number are programmed into the recipients mobile. It is described as “nearly free” because a beeper or flasher needs very little phone credit to call, beep or flash (Donner, 2007: 1). In order to capitalise on the user invented and
driven practice, Facebook introduced an advertising project of the same nature in India. Their particular configuration of the nearly free messaging system facilitates missed calls on advertisements and it enables mobile phone users to click a button that calls the brand advertiser and then the call is disconnected immediately. In the return call, the mobile phone user will receive branded content like ringtones, music, cricket scores and celebrity messages from the advertisers for free (Chowdhry, 2014: 1). In the context of Information Systems (IS) literature, Caroll et al., (2003) create a technology appropriation model and they define it as the way that users evaluate and adopt, adapt and integrate a technology into their everyday practices.

Caroll et al., (2003) examined how young Australian mobile phone users related with the user interface, the mobile phone network and the Wireless Application Protocol (WAP) of the mobile phones they were given for free. The scholars argue the process of appropriation takes place in three levels. The first level has to do with the users’ first encounter with a new technology. They discovered that fashion, style and cost were the drivers that led the young users to adopt the technology and level 2 reflects a deeper evaluation where users take possession of the capabilities or reject or disappropriate the technology. The last level is the long-term process whereby technology is appropriated and integrated into users’ everyday practices (Caroll et al., 2003: 38-41). Their model of appropriation is very similar to the previous discussion of technology appropriation whereby in the second stage, “users start to appropriate the technology and experiment, test it out, try out its possibilities and modify its features to better adapt the tool to their needs and desires” (Bar, Pisani and Weber, 2007: 2). Similarly, it is resonant with the fifth stage in the domestication of technologies approach whereby an artefact is incorporated into a home or a space (Ward, 2005). The explicit mention of the word everyday practices is important because that is what most appropriation studies set out to investigate. However useful and rich, the three versions of appropriation I have reviewed have some limitations.

1.3.1 Limitations of Appropriation

The domestication of technologies approach is systematic and clear but it leaves out structural factors that may affect how people interact with technology. Social
contextual factors such as place of residence and origin or social class are not explicitly mentioned because the assumption is that individuals have sufficient personal agency to control their media use and communicative environments. In contrast, Bar, Pisani and Weber’s (2007) version of appropriation explicitly mentions that technology consumption is a political and socio-cultural process. However, their version places an enormous amount of emphasis on the agency of people to reconfigure, subvert and change technologies. The last version of appropriation reviewed (Carroll et al., 2003) is very pragmatic and very similar to domestication. However, it also does not acknowledge that there are contextual factors that affect how people interact with technology. In the next chapter I discuss empirical literature that illustrates the vast ways that the lens of appropriation is applied to various contexts within Sub-Saharan Africa. The studies reveal that contextual and structural factors are important in the appropriation of new media.

At the end of the chapter two, I present the domestication of technologies framework and the communicative ecologies framework as suitable analytical frameworks for the analysis of the semi structured-interview data that I eventually collected in Kibera. In the context of this thesis, educational status, place of residence and perceived social class emerge as important. The full discussion is presented in chapter eight and it is resonant with much of Miller’s earlier work on mass consumption (Miller, 1988). I examine individual appropriation of the mobile phone and the mobile Internet but I also discover a pattern as to how all the Kiberans appropriate their technologies in their environment. The pattern serves to illustrate that the young people’s offline lives are also replicated in how they use and appropriate new media and ICT. Their offline class anxieties and experiences of a hierarchical Kenya form a very significant part of how they appropriate technologies.
1.4 Chapter Summary and Concluding Remarks

In this chapter I have analysed and discussed various definitions of new media and ICTs. I adopt the working definition of new media and ICTs as the “artefacts or devices that enable and extend our abilities to communicate; the communication activities or practices we engage in to develop and use these devices; and the social arrangements or organizations that form around the devices and practices” (Lievrouw and Livingstone, 2006: 23). I have also discussed the new media ecologies and communicative ecologies frameworks that facilitate the analysis of media use in the context of a communicative environment. I conclude the chapter by promoting the complementary use of appropriation as a lens as to how individuals interact with media and technology in diverse contexts. ‘Slum’ areas such as Kibera generate quite a lot of academic, policy and media interest. Therefore, a media study in such a context must go beyond the documentation of media uses and analyse the contextual nature of media use. This is because such data provides a necessary glimpse into how such populations function and thrive. The next few chapters of this thesis will clarify how important the data is to the ICT4D field and related literature, because there is a lot of academic and practitioner interest in establishing how and why populations such as the young Kiberans use and appropriate new media and ICTs. Consequently, this thesis is not just about exploring ICT use; it is also focused on contributing to the development debates that grapple with whether ICT use leads to development.
CHAPTER TWO: A Review of the Appropriation Studies Literature

The studies I review in this chapter reveal that most users appropriate the mobile phone as a socio-cultural artefact that facilitates connectedness. Hahn and Kibora’s study is the only study that reveals that the appropriation of the mobile phone has led to economic empowerment through the sale of mobile phone top-ups (Hahn and Kibora, 2008: 96). The more recent Sub-Saharan African studies within the media and communication studies literature reviewed here reveal some more social uses of the mobile phone and the Internet. This is a good indicator that there is a shift in awareness that even people from resource constrained contexts will use and appropriate the mobile phone for social connections and for the “performance of identities in the context of cosmopolitanism” even when they have pressing economic challenges (Ong, 2009: 251). However, there is a need for more empirical literature that captures how young people and other members of the society appropriate various forms of new media. In the broader African media and communications literature that is beyond the scope of this thesis, the medium of radio is well researched (Mano, 2012). Most of the discussions are focused on harnessing the power of radio for some development socio-economic ends such as community participation, good governance and meaningful engagement (Mhagama, 2015; Manyozo, 2009; Asiedu, 2012; Gilberds and Myers, 2012; Gagliardone, 2015).

Empirical studies of how new media and ICTs are used and appropriated for social uses such as romantic relationships, social networking and even leisure or entertainment remain limited. It is imperative to fill the gap and offer a holistic glimpse into African society where all the facets of people’s daily interactions with traditional media, new media and ICTs are captured in the empirical landscape. Towards the conclusion of this chapter, I review some qualitative studies that do not utilise the appropriation framework. They are reviewed because they explore the socio-cultural affordances of new media and ICT use and that topic is of relevance to this thesis. The studies provide a diverse picture of the ways Sub-Saharan Africans are using technology. They also highlight the societal contradictions such as broken relationships that sometimes occur when the mobile phone is used to pursue development goals like financial gain. I conclude the chapter by presenting why the communicative ecologies framework and
the domestication of technology approach (appropriation) are utilised to make sense of the research findings in this thesis.

2.1 The Socio-Cultural Affordances of New Media and ICT Appropriation

The literature in this section reveals that the users are appropriating the mobile phone and the Internet because of socio-cultural and technical affordances. The key affordance is the “connectedness” that the mobile phone presents to people allowing them to appropriate the mobile phone artefact and be “telephonically present” in another place (Palen, 2002: 79). Additionally, there are examples of how the mobile phone facilitates the performance of identity in everyday life, which is linked to socio-cultural management of people’s lives. In the first study I review, the mobile phone presents the users with the ability to foster connectedness in the process of migration. The mobile phone collapses distance, space and time to facilitate connection for a community that would have been marginalised in the absence of ICT. The study spans South Africa, the Netherlands and villages in the grass fields of Bamenda in Cameroon. Nyamnjoh’s (2013a: 2) research on ICT appropriation in relation to people’s mobility articulates how “mobile communities crisscross the globe virtually or in person to create linkages with the home country and wider migrant communities mediated by the Internet”. Nyamnjoh (2013a: 16) concludes that infiltration of ICTs in the users daily lives has created a “convivial relationship where ICT is shaping the lives of the users and by the same token the users are equally shaping and adapting ICTs in their lives.”

Nyamnjoh’s (2013a) work is resonant with the extensive literature that overlaps cosmopolitanism with conviviality (Mills, 2008; Freitag, 2014). This is because her work amplifies “that cosmopolitanism is an identity that is lived and performed in everyday life” (Ong, 2009: 451). Thus, conviviality is manifest when the mobile phone is appropriated to manage the “agency and aspirations of the individuals involved” (Hay, 2014: 4). Nyamnjoh’s argument that ICT serves old motives and pent up desires is very similar to the findings elicited from Miller and Slater’s ethnography of the Internet in Trinidad (Miller and Slater, 2000). As indicated in the previous chapter, Miller and Slater’s work on cultural appropriation is significant in the context of this thesis. In the course of their research, one of the questions they investigated was
pertinent to the fourth step in the process of domestication of technology: Objectification. As a result of their study, they discovered that the Internet naturally fitted the Trinis “intensely diasporic personal relations and it would help them in expansive realisation to become what they wanted to be, partly in the face of the more global environment they are exposed to by the Internet” (Miller and Slater, 2000: 85). They also argue that E-mail allows the kind of “mundane, constant and taken-for-granted daily contact that enables Trinidadians to live in families they see as natural despite the diasporic conditions of physical separation” (Miller and Slater, 2000: 7). Within their discussions, there are some elements of cosmopolitanism because ICTs are facilitating the performative action of an “identity that is lived in everyday life” (Ong, 2009: 451). A review of the text reveals that their work is inspired by Miller’s previous work on material cultures and consumption; work that has been instrumental in the theoretical thought around domestication and appropriation (Miller, 1987).

Miller and Slater’s (2000) explicit focus on new media in daily life experiences is of great importance because they validate the importance of viewing media use and appropriation as a process that is contextual rather than as a one time event. In a similar thread, the anthology Mobile Margins and the Dynamics of Communication in Africa contains accounts of how the mobile phone and the societies that have embraced it are mutually shaping each other. The empirical cases in the text are grounded in MacKenzie and Wajcman’s (1999) influential theory of the social shaping of technology (SST). In SST, it is proposed that technology is affected by the social context in which it develops. MacKenzie and Wajcman essentially argue that society shapes technology and they critique technological determinism for the implication that, “technological change is often seen as something that follows its own logic - something we may welcome, or about which we may protest, but which we are unable to alter fundamentally” (MacKenzie and Wajcman, 1999: 2). The theorists admit that technological determinism is partially true because of the transformative potential of technology and how readily societies accept new technologies. However, they resist that media audiences are passive consumers and users of technology.

In the anthology, the scholars’ reason from the notion of appropriation by adopting a contextual approach that views technologies as one part of the range of tools, practices and ideas that exist in communities (de Bruijn et al., 2013: 4). One interesting study
contained in the anthology is Lamoureaux’s (2013) study of Sudanese students, which focuses on how the mobile phone is a site for new spaces of interaction. Through the “use of reference terms and other evidence it is suggested that some marginalized Nuba student migrants living in the urban capital of Khartoum use the mobile phone to create a place of belonging” (Lamoureaux, 2013: 178). This case is resonant with the ideas of cosmopolitanism explored on the previous page. Miller and Slater’s (2000) conceptualisation of objectification is also evident because the new media spaces created by the students have enabled the youth to forge unique identities. They can re-enact their identities and can also choose to distance themselves from one identity and adopt another one much closer to their original home.

Another study that reflects how the mobile phone facilitates socio-cultural relations and the performance of identity is Nyamnjoh’s (2013b: 159, 160) study of how Senegalese boat migrants in Spain use ICT effectively to stay in touch with their home country to transform the lives of family left behind as well as protecting the socio-cultural values of their home society. Because boat migration is considered illegal in Senegal and Spain, she argues that the phone is the “umbilical cord” that joins mothers and families with their migrant family members (Palen et al., 2001 in Geser 2004: 12). She concludes that critical to understanding the migrants’ use of ICT is the inextricable link to the margins, which is the perfect space for migrants to thrive (Nyamnjoh, 2013b). The migrants have formed new spaces that have enabled them to perform legal and valid tasks yet they as people are meant to be illegal immigrants. It is an interesting study because new media and ICT use transforms their experiences of migration. Without the appropriation of new media and ICT to facilitate the communication with their loved ones, it is likely that their experiences would have been very difficult. The optimistic studies reviewed thus far develop a clear link between appropriation and agency and they provide evidence that new media and ICTs facilitate affordances that create positive social and cultural outcomes for users.

More optimism about new media is documented by Hahn and Kibora (2008) who discuss the domestication and almost seamless embedding of the mobile phone in Burkina Faso. They argue that the gadget has been socially integrated into the society in both urban and rural areas. Additionally, the introduction of the mobile phone has led to economic benefits due to the sale of top-ups and the formation of a mobile phone
repairs mini-industry (Hahn and Kibora, 2008: 96). Despite the vast optimism about the mobile phone technology, Hahn and Kibora clarify that the positivity around the mobile phone is not unbridled; it is more of a resignation amongst many of them that new technologies will eventually permeate all parts of the country because of the forces of globalisation. More optimism about the mobile phone is discovered in an ethnographic study of the appropriation of the mobile phone in Kariokoo, Tanzania and Zanzibar. Pfaff (2010: 352) established that the mobile phone is a sign of individual expression and identification that facilitates social relations regardless of distance. The mobile phone is also perceived as a tool that can facilitate ease of trading and entrepreneurial activity.

In a South African study of University of Cape Town students, Chuma argues that the mobile phone has become a “key pivot around which youth culture is organised” as they appropriate it creatively to address their varying interests (Chuma, 2014: 398). Similarly, an ethnographic study of how women appropriate the mobile phone in Westbank low-income community in South Africa reveals an optimistic attitude to the technology. Velghe discovered that the mobile phone has intensified literacy interests, enthusiasm and an interest to learn amongst literate, low literate as well as illiterate people. She argues that SMS writing is a form of everyday literacy in South Africa (Velghe, 2013: 123). In a mixed method study exploring mobile use in Ghana, Sey (2011: 382) discovers that the respondents appropriate their mobile phone for the connectivity it affords them with personal and professional contacts but it is not an overt means of poverty reduction. She also noted that even in resource constrained regions where the mobile phone use was expected to be for business purposes; the users appropriated the phone for social and personal connections with friends and family (Sey, 2011: 382). The appropriation studies reviewed largely focus on how users appropriate the mobile phone for the facilitation of connectedness. This is because of the socio-cultural affordances of the mobile phone and the Internet that are articulated.

Hahn and Kibora’s study is the only appropriation study that provides some evidence that the mobile phone has led to economic empowerment through the sale of mobile phone top-ups (Hahn and Kibora, 2008: 96). Like most ICT4D studies, Sey’s study of Ghana set out to investigate the possibility of a reduction in poverty thanks to the appropriation of the mobile phone. However, she discovered the phone was a tool for
fostering social connectedness with friends and family (Sey, 2011: 382). The studies reviewed here reflect emergent discussions on how the mobile phone facilitates social, personal, communal and cultural connections. There is clear shift in the focus on Sub-Saharan Africans as fortunate recipients of technologies that can save their lives and improve economic circumstances. As will be explored in greater depth in chapter four of Mobiles for Development, the “diverse ways in which the poor and the marginalised use media technologies in their everyday lives for social networking, entertainment, to produce and participate in intimate and erotic economies, and to express and experience, relationships, pleasure and intimacy” is also worth studying (Ganesh, 2010: 3). More voices are arguing that the Global South users from resource-constrained circumstances often use technology for leisurely pursuits just like users from wealthier countries (Rangaswamy and Cuttrell, 2012; Arora and Rangaswamy, 2013; Tully and Ekdale, 2014).

Technology users are not always after economic affordances such as financial or business gains. These developments will be explored in the next few chapters as this thesis is also a timely contribution to calls for the reframing of the ICT4D and M4D discussions. In addition to the appropriation studies, there are some notable qualitative studies that have elicited findings relevant to those in the appropriation literature. One significant element of all the studies is that they are keen on exploring the socio-cultural affordances of new media and ICT use for positive outcomes. Secondly, they are also focused on investigating the interaction between new media and ICT appropriation with socio-economic development. Thirdly, the studies amplify the significant role the mobile phone plays in all the societies investigated. The three issues are all very significant to this thesis.
2.2 Qualitative Studies of Mobile Phone use in Sub-Saharan Africa

In one of the first anthologies of mobile communication in Africa, mobile phones are described as the new talking drums of everyday Africa (de Bruijn et al., 2009). The text contains accounts of the relationship between society and technology in Sub-Saharan Africa. Contained in text is Molony’s ethnography of the use of mobile phones among workers in neighbouring Tanzania’s domestic tomato and potato trade in Kariakoo municipal market. He concludes that mobile phones play a minor role in sustaining a working relationship between farmers and wholesale buyers and that the most successful interactions are conducted face-to-face (Molony, 2009: 93). His conclusions are somewhat similar to Overà’s (2008) findings in a study of the uptake of mobile phones amongst traders in Ghana. She established that the usage of a mobile phone improves the number of customers and led to improved sales and services but cultural values and institutional constraints in the Ghanaian market require travelling to conduct face-to-face communication (Overà, 2008: 53).

In contrast to the optimistic descriptions of the mobile phone that have been discussed in the previous section, Molony (2008: 347) described the phone as a “non-developmental gadget” because of data he generated from multiple interviews in Dar es Salaam. He arrived at his conclusion because he perceived that, “although there are times when individuals use ICT in ways that aid personal or collective development, in much of Africa mobile phones are more commonly put to a non-developmental use such as the engagement of young women in transactional sex with men for the opportunity to own a mobile phone or for the men to pay their phone bills” (Molony, 2008: 347). Molony’s reference to the whole of Africa as a place where mobile phones are commonly put to a non-developmental use is a broad generalisation as he researched one very small context. Tanzania alone is composed of one of the most culturally diverse communities of over one hundred and twenty ethnic groups. Generalisation aside, Molony presents a formidable account of the nuanced usage of ICTs in the Tanzanian context. Although his study is now 13 years old (fieldwork was conducted in 2002 and 2003), his points about the discrepant nature of ICT usage remain potentially valid.
Molony argues that “whilst donors and NGOs were championing the use of ICTs for constructive purposes such as the farmers online search for market prices and health information the poor, most of them were actually in the cafés searching for information on American artiste Curtis 50 Cent or the goal tally of Chelsea’s soccer team’s most recent signing” (Molony, 2008: 340). His words effectively capture one the most significant questions that the ICT4D and M4D literature grapples with: Can ICTs be effectively used for economic development purposes? What forms of development? The literature related to the questions is unpacked within the next three chapters. An ethnographic study of Freiburg (Germany) and Buea (Cameroon) by Tazanu reveals more paradoxical findings. The studies’ findings depart from the previous studies that indicate, “the mobile phone strengthens transnational and diasporic communication” (Nyamnjoh, 2013a, 2013b; Miller and Slater, 2000).

Tazanu (2012) argues that it is mainly migrants who maintain or are expected to maintain ties with non-migrants back in Cameroon through calls and material support. His study reveals that the mobile phone and the Internet have increased discontent, grudges, insults, fights, avoidance, arguments and estrangement of relationships much more than they have contributed to binding friends or families through direct mediation because of high expectations and sometimes contradictory motives for instant virtual interaction (Tazanu, 2012 in de Bruijn et al., 2013: 3). From the literature reviewed in this section, it is evident that the consideration of the political, social and cultural context of new media use and appropriation is of great importance. It is also apparent that like the Global North decades ago, Sub-Saharan Africa is in “a state of wonder at the rapid and extraordinary shifts in the dimensions of the world and human relationships as a result of new forms of communication” (Marvin, 1988: 3). There is a sense in which the perceived ubiquity of new media artefacts such as the mobile phone has generated a lot of optimism yet some societal contradictions such as relational estrangement emerge when technologies such as the mobile phone are used for good purposes like instant interactions. The use of appropriation as an analytical framework in all the studies I have reviewed in this chapter has provided rich research findings. The findings are central to guiding the academic discussions on the unpredictable ways that technology is integrated into daily life. Particularly interesting is the evidence reviewed that indicates various societies have objectified the mobile phone to artefacts such as “umbilical cord” for the Senegalese migrants (Nyamnjoh 2013b: 160).
2.3 Towards an Analytical Framework: Appropriation and Communicative Ecologies Framework

The dominant form of appropriation in the Sub-Saharan African literature reviewed in the previous section is the domestication of technologies. Bar, Pisani and Weber’s (2007) version is only dominant within the Latin American context and has been applied to studies of the favelas of Rio de Janeiro (de Souza e Silva et al., 2011). The technology appropriation model by Caroll et al., (2003) is dominant in studies of young people in the context of Australia. In order to make sense of the data that I collected in this thesis I adopt the domestication of technologies version of appropriation. Domestication complements the previous literature on media and communicative ecologies because it provides a richer understanding of how individuals choose to relate with media and ICT artefacts structurally and contextually. It is also divergent from the communicative and media ecologies approach because it provides step-by-step phases to evaluate the process of how the various communication and information flows are appropriated. This is useful because one can explain how each and every media and ICT artefact has been appropriated after they have been successfully mapped and identified in the research context using the ecologies framework. The domestication of technologies approach is particularly useful when complemented with the communicative ecologies framework because the two facilitate an individual approach to analysis of how young Kiberans use and appropriate new media and ICTs in the physical, social and economic structure of their environment of residence.

Domestication and communicative ecologies are also open enough to allow divergent views in many technology users. They are also undergirded by the idea that communication takes place in a communicative environment. In communicative ecologies, the process of communication varies from context to context as well as person to person whilst the domestication of technologies is firmly rooted on how each and every individual appropriates technology in their everyday life. Additionally, communicative ecologies and domestication of technologies (appropriation) also complements the Capabilities Approach that this thesis adopts to make sense of the data collected from the final research question. The development theory of the Capabilities Approach will be introduced in chapter five after an extensive discussion of the relationship between new media, ICTs and development as well as a review of M4D
and development literatures. The research objectives and questions that led this study are presented and discussed at the end of the extensive literature review that is divided into the next three chapters. This is because these chapters provide extensive discussions of the media studies, ICT4D and M4D literature that this multidisciplinary thesis contributes to. Secondly, the research questions and objectives were generated from the review of the literature. Even the topic guide that is discussed in the research methods chapter is firmly rooted in the literature.

2.4 Chapter Summary and Concluding Remarks

This chapter presents an extensive review of empirical studies that have employed the appropriation theory. The domestication of technology approach is the most dominant version of appropriation that is applied in the Sub-Saharan African empirical context. Special emphasis is paid to Sub-Saharan Africa because of the perceived ubiquity of the mobile phone in the region. Particularly notable is the influence of cultural appropriation, which denotes the eager adoption of cultural objects in the context of mass consumption literature (Miller, 1987, 1988; Miller and Slater, 2000). As explored in the previous chapter, cultural appropriation forms the foundation of both the domestication of technologies theory as well Bar, Pisani and Weber’s (2007) version of technology appropriation. Influenced by cultural appropriation, most of the studies evaluate what contexts become because of the use of new media and ICT and what the new media and ICT become in the diverse contexts.

In the various contexts reviewed, it is evident that most users appropriate the mobile phone and the Internet because of affordances that lead to positive socio-cultural outcomes. The key affordance is the “connectedness” that the mobile phone presents to people allowing them to appropriate the mobile phone artefact and to be “telephonically present” in another place (Palen, 2002: 79). Additionally, there are examples of how the mobile phone facilitates the performance of identity in everyday life which is linked to socio-cultural management of people’s lives. Hahn and Kibora’s study is the only study that reveals the appropriation of the mobile phone has led to economic empowerment through the sale of mobile phone top-ups (Hahn and Kibora, 2008: 96). Studies of why and how people are using new media and ICTs like the mobile phone are very
necessary to contribute to the demand for knowledge on the global digital inclusion agenda. Many of the studies reviewed indicate the importance of acknowledging that the use and appropriation of new media and ICTs is a process.

The chapter also presents the emergent voices within ICT4D and M4D who argue for a reframing of the whole field to include leisurely pursuits of new media and ICTs even in resource constrained contexts such as Sub-Saharan Africa. This thesis is a contribution to the emerging literatures and the next chapter explores these discussions even further. In the last section of the chapter, the domestication of technologies version of appropriation and communicative ecologies are presented as analytical and evaluative frameworks used to make sense of some of the data collected in the research context of Kibera. Domestication complements the previous literature on media and communicative ecologies because it provides a richer understanding of how individuals choose to relate with media and ICT artefacts structurally and contextually. It is also divergent from the communicative and media ecologies approach because it provides step-by-step phases to evaluate the process of how the various communication and information flows are appropriated. The domestication of technologies approach is particularly useful when complemented with the communicative ecologies framework because the two facilitate an individual approach to analysis of how young Kiberans use and appropriate new media and ICTs in the physical, social and economic structure of a slum.
CHAPTER THREE: The Relationship between New Media and ICTs and Development

In this chapter I explore the relationship between new media and ICTs and development. This is achieved by reviewing media reports, development reports and the empirical literature that captures the relationship. The goal of this chapter is to review the literature that emerges as significant in the field of ICT4D as well as the related field of M4D. The multidisciplinary nature of the literature has implications for media and communication studies, development studies, C4D as well as IS literature. As indicated in the introduction, ICT4D is a growing field that encompasses practitioner perspectives and a diverse range of academic voices. The literature I review in this section is concerned with the use of new technologies such as the mobile phone and the Internet in the pursuit of socio-economic development. I question the use of new media and ICTs for the pursuit of socio-economic development. The review highlights the discrepancy between technology optimists and scholars who seek critical answers as to how and why new media and ICTs should be used for the pursuit of socio-economic development.

Development is a broad subject. Therefore, in this chapter I simply introduce the development discussion that will be explored extensively in chapter three. This chapter serves as a significant backdrop as to why this thesis is necessary in the first place. The thesis is focused on interrogating the optimism that surrounds the use of newly introduced technologies such as the mobile phone and the Internet to Sub-Saharan Africa. This chapter will also position the research context of Kenya as a significant country in the “mobile revolution” that is taking place in the Sub-Saharan African country (Etzo and Collender, 2010: 659).
3.1 Questioning the Mobile Revolution in Sub-Saharan Africa

In chapter one, I explored the ubiquitous mobile phone in Sub-Saharan Africa. The adoption and proliferation of the mobile phone in the continent is described as a “parallel ICT revolution because Africa is the fastest growing mobile market in the world” (Kleine and Unwin 2009: 1047). In tandem with the avid usage of mobile phones, the number of print and news media reports focused on ICTs as a ‘revolution’ of sorts has been growing steadily. Consider the following illustrative articles:

The following is derived from the UK edition of The Guardian. It is an article on Africa’s mobile economic revolution:

Mobile phones carry huge economic potential in undeveloped parts of Africa. A 2005 London Business School study found that for every additional 10 mobile phones per 100 people in a developing country, GDP rises by 0.5%. As well as enabling communication and the movement of money, mobile networks can also be used to spread vital information about farming and healthcare to isolated rural areas vulnerable to the effects of drought and disease (Fox, 2011).

The next one is derived from The Economist:

Once the toys of rich yuppies, mobile phones have evolved in a few short years to become tools of economic empowerment for the world's poorest people. These phones compensate for inadequate infrastructure, such as bad roads and slow postal services, allowing information to move more freely, making markets more efficient and unleashing entrepreneurship. All this has a direct impact on economic growth: an extra ten phones per 100 people in a typical developing country boosts GDP growth by 0.8 percentage points (The Economist, 2009).

Like some of the literature reviewed in the previous chapter, the articles convey great optimism about the usage of the mobile phone. The first article actually proposes that the economic potential of the mobile phone can remedy the undeveloped parts of the continent. It is not clear from the article what exactly ‘undeveloped parts’ means but it
certainly implies that the mobile phone has great potential in areas that have limited infrastructure. Africa’s largest “infrastructure deficit is in the power sector because it only delivers a fraction of the service found elsewhere in the developing world. The 48 countries of Sub-Saharan Africa generate roughly the same amount of power as Spain” (World Bank, 2013: 1). It is tenuous to imply that a mobile phone can compensate or substitute for the lack of critical power infrastructure. The second Economist article also implies that a saviour in the form of a mobile phone will compensate for inadequate infrastructure. In Sub-Saharan Africa, one critical need is road infrastructure because “only one-third of Africans living in rural areas are within two kilometers of an all-season road” (World Bank, 2013: 1). Therefore, the mobile phone cannot possibly be suited to substitute the road infrastructure.

The articles clearly stipulate that the use of the mobile phone can lead to growth of economic development in the form of a rise in Gross Domestic Product (GDP). However, economists have argued for years that the GDP is a good measure to gauge a country’s progress but it is not an indicator of the personal human flourishing or well-being of every individual in that society (Alkire and Deneulin, 2010: 25). The optimism and enthusiasm about the use of ICTs as a solution to the numerous development challenges in the Global South has been critiqued extensively by Pieterse (2005a, 2005b, 2010). He argues that there is an intentional “boosterism of the use of ICTs in the Global South and that it is a cycle that has been witnessed before with the invention and introduction of railroads, electricity, chemical industries, automobiles and telecommunications” (Pieterse, 2005b: 2). The articles reflect the long-standing agenda that ICTs (Information and Communication Technologies) can be utilised as instruments for enormous economic and social gain in the Global South. This is an agenda that has been promoted since the mid-1990s by major international development agencies such as the World Bank and the United Nations Development Programme (Heeks, 2014: 7).

The ICT4D agenda is clearly represented in the millennium goals for development (UN, 2015). The eighth millennium development goal, to establish a global partnership for development, highlights the same promotion of new media technologies as instruments of economic and social gains. Target 8F reads, “in co-operation with the
private sector, make available benefits of new technologies, especially information and communications” (UN, 2015):

- Two-thirds of the world’s Internet users are in developing regions, where the number of Internet users doubled between 2009 and 2014.
- In 2014, Internet use penetration in developing countries grew by 8.7 per cent, twice as fast as in the developed world where its usage rose by 3.3 per cent.
- In Africa, almost 20 per cent of the population is online, up from 10 per cent in 2010. 30 per cent of the world’s youth are digital natives, active online for at least five years.
- More than four billion people do not use the Internet, and 90 per cent of them are from the developing world.

As indicated, the United Nations explicitly focuses on the promotion of new technologies and ICTs within Africa. Heeks attributes this to the fact that the goals were drafted in the latter half of the 1990s when there was a “wave of hope around the new technologies after the first mass diffusion of the Internet into Western organisations and society” (Heeks, 2014: 17). The international development agencies were also concerned about the digital divide or the “gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard both to their opportunities to access ICTs and to their use of the Internet for a wide variety of activities” (OECD, 2001: 5). In 1999, the United Nations Human Development Report laid emphasis on the need to connect everyone to the Internet and ensure that all people had access to new communication technologies. It highlighted the potential of global communications but warned against greater marginalisation of those left out of the communications loop (HDR, 1999: 63). There was a particular urgency to connect Africa because it was the continent considered to be the most marginalised and excluded region in the world (Fuchs and Horak, 2008: 100).

Consequently, the rhetoric around the digital divide shifted to focus on Africa. The past UN secretary General Kofi Annan encapsulates the thinking around the digital divide in a speech he made at the opening of an International Telecommunication Union (ITU) opening ceremony:
“Three days from now, the world’s population will pass the six billion mark. Five out of those six billion live in developing countries. For many of them, the great scientific and technical achievements of our era might as well be taking place on another planet... The capacity to receive, download and share information through electronic networks, the freedom to communicate freely across national boundaries – these must become realities for all people... These people lack many things: Jobs, shelter, food, healthcare and drinkable water. Today, being cut off from basic telecommunications services is a hardship almost as acute as these other deprivations, and may indeed reduce the chances of finding remedies to them” (Annan, 1999).

Annan expresses concern about people who have myriad challenges like limited job opportunities, poor shelter and healthcare. He perceives the access to telecommunication services, of which new media and ICTs are a part of, to be as important as drinkable water and food. In the last line of the speech he implies that the technologies are the solutions to some structural problems in Africa. His speech is another form of “ICT boosterism”, very similar to the rhetoric in the media articles I have reviewed at the commencement of this chapter (Pieterse, 2005b: 2). This is evidenced where he attempts to equate the lack of access to ICTs to the lack of a job, water and food. Since the delivery of his speech in 1999, the issue of the global divide is one that has elicited vast scholarly and media attention. It has become apparent that the digital divide is not a simplistic phenomenon and that it is not unique to the African context (Van Dijk and Hacker, 2003; Qureshi, 2014). Scholars like Van Dijk and Hacker (2003: 316) have previously critiqued the assumption that the divide is easily bridged when everyone has access to a computer and a mobile phone. Van Dijk (1999) observes that the digital divide is about barriers to four successive kinds of access: Lack of elementary digital experience caused by lack of interest, computer anxiety, unattractiveness of the new technology (mental access), no possession of computers and network connections (material access), lack of digital skills caused by insufficient user-friendliness and inadequate education or social support (skills access) and a lack of significant usage opportunities (usage access) (Van Dijk and Hacker, 2003: 315).

In tandem with the above, Selwyn (2004) also argues it is important to distinguish between access to ICT and the use of ICT. He challenges the assumption that access to
ICT inevitably leads to use and posits the goal to bridge the digital divide by providing access to ICTs is not sufficient “because use of ICT does not necessarily entail meaningful use of ICT or engagement which leads to a meaning, significance and utility for the individual concerned” (Selwyn, 2004: 349). In the recent past, other scholars have critiqued the efforts of development agencies and donors to bridge the digital divide in the Global South (Wade, 2002; Luyt, 2004; Pieterse, 2010). For example, Wade critiques the campaign to bridge the digital divide in developing countries because of the proposal that “ICT has some inherent quality to leapfrog institutional obstacles such as skill and resource deficiencies on the ground” (Wade, 2002: 445). He expresses concern that the developing countries of the Global South are at a disadvantage in the processes setting of international technology standards which could affect the costs of access and power dynamics. Additionally, he laments that the donor communities emphasis on ICT use overshadows other important investments and priorities such as improving crop varieties in Africa yet there is no evidence “of the benefits of investment in ICT infrastructure compared to education, health, roads, dams and industrial parks” (Wade, 2002: 450).

In tandem with Wade, Luyt (2004) relays concern about the benefits of ICT use for the supposed technology beneficiaries from Global South. He argues that that there are four groups that have an interest in the promotion of the digital divide issue in the Global South. They are “information capitalists who want new markets for their products, an educated workforce capable of producing the products, the state in the south benefits through the legitimation conferred through programs designed to combat the divide and the development industry also benefits as another gap has been opened up that requires their expertise”. Luyt’s (2004) assertions about the development industry are resonant with those of Pieterse (2005a, 2005b). He is critical of the development agencies such as the World Bank, G8 and the UNDP who have invested heavily in bridging the digital divide. Like Wade (2002), Pieterse also argues that the means of bridging the digital divide may have the effect of locking developing countries into a new form of dependency on the Western world because the international standards governing ICT are designed by developed country entities for developed country conditions (Pieterse, 2005a: 14).
The concern the scholars relay about ICT standards is a point that is very important. The interplay of global and local ICT standards is an issue that Kenyan ICT policy makers are in the process of trying to streamline. This is because “complex ICT systems have layers of components and - compatibility can take years to achieve at a huge cost, by which time incompatibilities may have arisen” (Wade, 2002: 448). Avgerou and Madon (2005) argue that the discourse surrounding the need to bridge the global digital divide for development resonates with the bias of development as economic growth in earlier modernisation literature. A bias rooted in the need for developing countries to “catch up” with the economic growth indices of the developed world (Avgerou and Madon, 2005: 7). Leye (2009: 33) adds that the argument that developing countries can catch up by “skipping industrialisation and leapfrog into the information age is problematic because it presupposes that there is only one valid model of development”.

Modernisation is a broad term that encompasses both organisational and national progress and change. In the preceding case, the scholars draw a parallel between the digital divide discourse and modernisation as national development or progress. Faik and Walsham (2013: 354) also argue that modernisation as national development is “closely associated with the Western experience of post-industrialisation, economic growth, the expansion of markets, urbanisation, globalisation and the acceleration of scientific and technological development”. The quest for modernisation is apparent in the documents I have reviewed in this section and there are traces of “ICT boosterism” in the United Nations millennium development goals as well as former Secretary General of the UN Annan’s ITU speech (Pieterse, 2005b: 2). From the review of the literature, it is also evident there is a discrepancy between the media rhetoric, the United Nations millennium development report, Kofi Annan’s International Telecommunication Union speech and the more tempered academic scholarship on the pursuit of the use of ICTs for development. The quest for modernisation is also evident in the national documents such as the Kenya Vision 2030 and the National Kenyan ICT Masterplan. They are reviewed in the next section.
3.2 ICT use as Modernisation in Kenya

In the East African region of Sub-Saharan Africa, the growth of Kenya’s ICT sector has been significant. Kenya is one of the most culturally diverse countries on the African continent and it is home to people drawn from 42 ethnic groups with 70 linguistic variations classified into the three linguistic groups of Bantu, Nilotes and Cushites. There are also a large number of non-indigenous residents drawn from neighbouring African countries such as Somalia and Sudan. They account for approximately 15 percent of the population whilst Indians, Arabs and Europeans account for another one percent of the population (Kenya Yearbook, 2012: 47). The Kenyan mobile phone sector has experienced steady growth over the past decade. Mobile phones were first introduced in Kenya in 1992 and the cost of handset ownership was too high for many (Waema and Miroro, 2014: 104). Seven years later in 1999, “less than 1 in 1000 Kenyan adults owned a mobile phone. However, by mid-2010 there were 21 million active mobile phone numbers, equivalent to one per adult” (World Bank, 2010: v). The most recent audit of mobile phone use indicates that the mobile phone penetration rate is 82.6 percent (out of approximately 40 million Kenyans), which is significantly higher than the Sub-Saharan Africa regional average of 38 percent (GSMA, 2014; CA, 2014).

3.2.1 Kenya Vision 2030 National Development Plan

The Kenya Vision 2030 National Development Plan comprises of economic, social and political pillars. The economic pillar is “for Kenya to achieve an economic growth rate of 10 per cent per annum. The social pillar seeks to engender just, cohesive and equitable social development in a clean and secure environment, while the political pillar aims to realise an issue-based, people-centred, result-oriented and accountable democratic system” (Ndung’u, et al., 2011: 1). Vision 2030 is a macro-oriented plan and is central to guiding government practice on a broad scale. The development plan aims at “transforming Kenya into a newly industrialising, middle income country providing a high quality of life to all its citizens in a clean and secure environment” (Kenya Vision 2030: vii). The planners of the vision were influenced by the success stories of the East Asian models as they “admire the level of modernity that countries
such as Singapore and Malaysia have been able to attain since independence” (Fourie, 2014: 557).

**Figure 1: Map of Kenya**

![Map of Kenya](http://www.mapsofworld.com/kenya/maps/kenya-political-map.jp)
In the Kenya Vision 2030 development plan, it is stipulated that Kenya aims to become the top off-shoring destination in Africa so that Business Process Outsourcing (BPO) becomes the sector of choice for employment for youth and young professionals. This is to be achieved by “attracting at least five major leading information technology (IT) suppliers, at least ten large multinational companies and global BPO players to the country; and strengthening at least five local players to become local champions through stand-alone operations or joint ventures” (Kenya Vision 2030: x-xi). The most recent assessment of the BPO sector indicates that it “employs only about 4,000 people and accounts for less than 0.01% of GDP. Despite the low numbers, Vision 2030 argues that the country should reduce its dependence on traditional agricultural commodities and focus more intently on the export of services” (Graham and Mann, 2013: 18). As noted, the plan articulates the government goal to attract major international ICT firms to the Kenyan sector. The last point also states that the government will “strengthen five local players to become local champions through stand-alone operations” (Kenya Vision 2030: xi). However, I believe that the government elites are more interested in multinational investment rather than the growth of a local and thriving ICT industry. This is because of my experiences of attending two local national ICT conferences in 2013 and 2014.

It is beyond the scope of my thesis to interrogate the whole Kenyan ICT ecosystem and sector but my experiences of attending the conferences on May 27-29, 2013 and a latter one from April 14 to 17, 2014 provided a lens on the power structures that control the Kenyan ICT sector. The local national ICT conferences (Connected Kenya) are annual networking events that bring practitioners in Kenya's ICT industry together. The events are organised by the Kenya ICT Authority (previously the ICT board) that is tasked with “enforcing ICT standards in the government and enhancing the supervision of its electronic communication” (ICTA, 2014). In those conferences, there was a lot of focus on the role that multinational companies (such as IBM and Oracle) could potentially play in the development of the communications sector. There were numerous presentations from the multinational companies that were clearly focused as development solutions for sectors such as Kenya’s health sector. All of them were presented in the same optimistic and persuasive language that characterises the ICT4D policy literature from organisations such as UNESCO and the United Nations Millennium development goals and GSMA reports.
The 2013 conference was of great interest to me because it was themed: County Citizen Served. However, I observed that during the conference there was very little emphasis and discussion about the vast diversity of Kenyan citizen ICT users. With such a theme it would have been prudent to showcase some case studies of how Kenyans perceive or use ICTs, but the conference was heavily focused on ICT infrastructure and innovative platforms that every county must procure. A few local innovators and companies were given opportunities to show case their inventions and some of them were awarded cash grants. However, a closer analysis of the power structures that influence the organisation and sponsorship of the conference reveals that the conference is a marketplace for large ICT firms and multinationals (who also happen to sponsor the annual event) to persuade government technocrats to procure their software and hardware systems. The local innovators who showcase their inventions gain some encouragement from the small amounts of cash grants they sometimes win but they face a very difficult challenge to compete with the powerful multinationals in the ICT marketplace. They also have to deal with the challenge of sustainability and generation of funds for their small to medium sized businesses while the multinationals do not. My experiences of the conferences resonated with Pieterse’s (2005a, 2005b, 2010) critique of ICT4D and the digital divide discourse. From the overly techno-optimistic rhetoric in the conferences it was evident that, “ICT4D is a strategic part of ICT expansion: ICT4D is digital capitalism looking South. It is about market expansion and converting unused capacity into business assets on the premise that new technology is the gateway to hope” (Pieterse, 2005b: 2). Whilst the ICT innovations have the capacity to transform some sectors and create jobs there is a distinct danger that the ICT based developments may benefit the “transnational corporations disproportionately” (Leye, 2007: 973). The focus on multinationals yields the possibility of distracting the government elites from focusing on building local innovation companies, ensuring that citizens are engaging with ICTs meaningfully and the overall creation of a thriving ICT sector.
3.2.2 The Kenya National ICT Master Plan

The Kenya National ICT Master Plan document was launched at the second Connected Kenya conference I attended in April 2014. The document is slightly more citizen and people focused than the infrastructure focused Kenyan Vision 2030. The drafters (local university professors and ICT professionals) clarified some points about the ICT sector in the new document. For example, the local innovation hubs that have proliferated in Kenya from around 2009 (Nailab, i-Hub, University of Nairobi’s C4Dlab and infoDev’s mLabs) are included as contributors to the ICT sector (ICT Masterplan 2014: 34). The innovation hubs headquartered in Nairobi provide spaces for technology entrepreneurs to create and incubate their applications as they seek out investors. The document also maps out the local ICT sector and references some dated studies that indicate that the sector does not have sufficient high-end ICT skills. Additionally, the document also critiques the government for an overwhelming focus on infrastructure rather than human resources or citizens. It is indicated that, there has been “little investment in the human resources required to design, develop and operate the infrastructure and the associated e-applications” (National ICT Masterplan 2014: 35).

In contrast to the Vision 2030 which lays more emphasis on the role of multinationals in the sector, the Master plan argues that local capacity must be harnessed and a thriving ICT sector needs to be developed. However, the document also resonates strongly with the theme of ICT use as modernisation thinking.

The vision of the ambitious plan is summarised as:

The first pillar of the Master Plan is e-Government services which aims at ensuring provision of e-Government information and services as key to improving productivity, efficiency, effectiveness and governance in all key sectors. The second pillar is ICT as a driver of industry which aims at transforming key Vision 2030 2nd MTP economic sectors to significantly enhance productivity, global competitiveness and growth; and the third pillar is developing ICT businesses that can produce and or provide exportable quality products and services that are comparable to the best in the world (National ICT Masterplan 2014: 35).
There is clear emphasis that the goal of ICT is to drive industry and economic growth. This is resonant with the modernisation thinking that, “national development is closely associated with the Western experience of post-industrialisation, economic growth, the expansion of markets, urbanisation, globalisation and the acceleration of scientific and technological development” (Faik and Walsham, 2013: 354). The document implies that Kenya does not want to be left behind and needs to catch up with more advanced economies. The focus on ICT infrastructure as opposed to citizens is not unique to the Kenyan case. It is a theme that is well established in the ICT4D literature. Avgerou and Madon previously argued that, “the information society in developing countries is perceived mainly in technical terms as the construction of telecommunications infrastructures” (Avgerou and Madon, 2009: 5).

It is clear that the government’s goal for the ICT sector is driven by the quest for economic development and an “emulation of the East Asian Tigers development success story” (Fourie, 2014: 540). It is also clear that the government’s view of development in the Vision 2030 is a top down and generic approach. I use the term generic because Kenya is a complex society. As noted, there are 42 ethnic groups and they are very diverse in their conceptualisations of progress. For example, some communities still value pastoralism and do not highly prioritise technological advancement, formal education or even land ownership. The economic progress that the government is tasked with generating is a clear and pragmatic goal. However, it is fruitful to ask how the Kenyan people view development and if at all they view their progress as linked to the usage and appropriation of new media technologies. Escobar (2012: 46-47) has long argued that development is a top down ethnocentric and technocratic approach that treats people and cultures as abstract concepts, statistical figures to be moved up and down the charts of progress. He describes development as an ever-expanding business and field of intervention where knowledge produced about the Third World is utilised and circulated by international organisations through applied programs, conferences and international consultant services. Escobar (2012: 47) views the whole business of making the economic systems of third world countries effective as patronising and ineffective. Development is a very contested term; in Kenyan society it is even more complex because of the indigenous view of development that must be conceptualised alongside the government view of development that I have just reviewed as modernisation.
In chapter five these matters are revisited as I review the extensive development literature. The next section traces the history of new media and ICT use in Kenya.

### 3.3 The History of New Media and ICT use in Kenya

There are some important historical events that have shaped the steady rise of mobile phone penetration and the general growth of the Kenyan ICT sector. One significant event was parliament’s enactment of the Kenya Communications Act (KCA) in 1998. The legislation was very important because it ended the government’s monopoly in the communications sector. The Kenya Postal and Telecommunications Corporation (KPTC) previously operated as the sole service provider and regulator of telecommunications services in Kenya. When parliament passed the KCA 1998 Act it “facilitated the unbundling of the KPTC” into the five listed entities below (Munyua and Mureithi, 2007: 164)

- The Communications Commission of Kenya (now Communications Authority of Kenya).
- The National Communications Secretariat (NCS), which serves as the policy advisory arm of the government on all matters pertaining to the information and communications sector.
- The fixed-line operator, Telkom Kenya.
- The Postal Corporation of Kenya (POSTA).
- A communications appeals tribunal.

The Communications Authority of Kenya (CA) is the body responsible for licensing all systems and services in the communications sector. The vital policy amendments in the 1998 Act made provisions for the liberalisation of the sector abolishing the previous government monopoly and stipulating effective competition in the provision of telecommunication services (Institute of Economic Affairs, 2002: 8; KCA, 1998: 214). The “liberalization of the sector and the establishment of sound regulatory frameworks have allowed private investors into the market and driven the expansion of telecommunications networks” and the favourable business environment created by the liberalisation of the sector led to a higher supply of mobile phone services in the market (Kimura et al., 2010: 339).
Kenya’s leading mobile network operator “Safaricom and competitor Airtel (then KenCell) invested greatly in network expansion resulting in many more Kenyans being able to afford a mobile phone” (Waema and Miroro, 2014: 104). In addition to this rapid expansion of mobile technology, a particular and significant innovation was the invention of mobile phone money transfer service *M-Pesa* (a concatenation of M for Mobile and *Pesa* the Swahili word for money). The mobile money system has attracted significant media attention and academic interest to Kenya’s communication and ICT sector since its introduction to Kenya in 2007. In the next section of this chapter, I describe what *M-Pesa* is and discuss some of the limited empirical articles on *M-Pesa* from the academic community. Some of the media descriptions are also explored.

### 3.3.1 M-Pesa (Mobile Money) in Kenya

The mobile money transfer service *M-Pesa* was launched by the mobile network operator, Safaricom in March 2007. Within eight months of its launch, over “1.1 million out of 41 million Kenyans had registered to use *M-Pesa*, and over US$87 million (£57,524,654.91) had been transferred over the system. By September 2009, the number of registered users rose to slightly over 8.5 million and US$3.7 billion (approximately £2.43 billion pounds) had been transferred over the system” (Mbiti and Weil, 2011: 1). A recent evaluation of *M-Pesa* usage established “the service has 13.9 million active users” (Macharia, 2015). Mugambi et al., (2014: 18) argue that the service has been growing steadily in usage because “mobile phones are very easy to use and it is relatively cheap to transfer money using *M-Pesa* compared to most commercial banks” (Mugambi et al., 2014: 18). In order to register to use the mobile money service, a customer must visit a licensed and authorised *M-Pesa* agent (as shown overleaf in figure 2). The customer must then present the *M-Pesa* agent with a copy of their national identification card or passport for registration. Once the registration is complete, both the agent and the customer receive an SMS confirming that the registration has been successful. Safaricom issues *M-Pesa* agents with a commodity known as e-float (electronic money) measured in the same units as money. The “e-float is held under the agent’s name but is operated and managed by Safaricom” (Jack and Suri, 2011: 6). Therefore, if a customer wants to deposit money, all they have
to do is go to a kiosk like the one in figure 2 below and deposit their cash with the agent.

**Figure 2: Photograph of M-Pesa store**

Cash deposits at an *M-Pesa* agent are free whilst money withdrawal transactions range from as low as 1 Kenya Shilling to 110 Kenya Shillings. The rates are all considerably lower than one £1GB. Once a customer deposits money they are able to exchange the cash for the electronic money or e-flot. *M-Pesa* “relies on a system of intermediaries between agents and banks so exchanging cash for e-flot means visiting a bank or financial institution affiliated with Safaricom” (The Economist, 2010). According to Mbiti and Weil (2011: 3), “all *M-Pesa* e-flot is backed 100% by deposits held at three commercial banks in Kenya”. In addition to the intermediary role, some banks, savings and micro-finance institutions now operate as *M-Pesa* agents. For instance, in my local
savings and credit co-operative (SACCO) in Kenya I can transfer my monthly savings directly to my bank account with *M-Pesa*. All I need to do is find the widely available *M-Pesa* agents and deposit my money with them. Afterwards, I can send the money to my SACCO account.

Some of the common uses of *M-Pesa* are for the payment and transfer of school fees as well as pocket money for students from their guardians, payment of drinks in pubs, payment for both electricity and water bills and public transport (Jack and Suri, 2011: 1; Omwansa, 2009: 114-115). In order to facilitate the transactions, *M-Pesa* includes a complementary service that is branded as *Lipa na M-Pesa* (pay with *M-Pesa* in Swahili). Businesses or traders can register for a till number by providing a tax payment PIN certificate (documented proof that they pay taxes), identification card and trading license (Safaricom, 2015). In most hotels, pubs and supermarkets the *Lipa na M-Pesa* till number is displayed so that when the customer is at the till they can remove their phones and click on their *M-Pesa* icon or application and key in the till number. Once a customer has paid for the goods, they receive an SMS such as the one below.

**Figure 3: Pay Bill Transaction**

JDP1AQ23M3 Confirmed. Ksh4, 878.00 paid to Uchumi Supermarket Sarit 2 on 25/4/15 at 5: 28 PM. New M-PESA balance is Ksh925.00.  
28/04/2015 06: 54  
*Image retrieved from author’s mobile phone*

Safaricom’s last evaluation indicates that the *Lipa na M-Pesa* service had “49,413 merchants active on a 30 day basis and they received KSh11.6Billion (£111,335,336.00) of payments” (Macharia, 2015). It is evident that *M-Pesa* facilitates many beneficial transactions for the customers and it also creates employment opportunities for *M-Pesa* agents. The most recent statistics from the Communications Authority of Kenya and Safaricom indicate that there are 85,756 Safaricom *M-Pesa* mobile money agents out of a total of 114,988 agents including other mobile network providers such as Airtel and Orange (CA, 2014: 11). *M-Pesa* business is perceived to be lucrative because of the steadily rising profits that Safaricom posts annually. In 2015, “*M-Pesa* revenue rose by 15 percent from the previous year of 2014 to KSH 32.6Billion (£221312924.000)” (Macharia, 2015: 1). There are numerous media articles
on *M-Pesa*’s profitability and the business opportunities the service presents (Fox, 2011; The Economist, 2009; Mumo, 2014). However, there are very few empirical studies on the *M-Pesa* agents who facilitate the transactions.

One example of an empirical study is a quantitative and qualitative study of 30 *M-Pesa* agents in Central Kenya, Nyeri. In contrast to the statistics of the profitability of Safaricom I have explored above, the researchers discovered that the agents are affected by numerous challenges in the running of *M-Pesa* shops. Some of the challenges included, “lack of currency regulation by the Central Bank of Kenya, problems with consumer identification and impersonation of Safaricom staff by fraudsters” (Okoth et al., 2015: 37). The first challenge concerned with the regulation of mobile money is one that has been explored extensively by scholars in the Kenyan financial sector over the years. One of the biggest debates that the scholars engaged in was whether *M-Pesa* was a mobile application of a telecommunications company or was it a bank. As a result of the debates, the government of Kenya eventually implemented a legal framework to govern mobile payments. On 15 August 2014, the Cabinet Secretary for the National Treasury issued a legal notice to enforce national payment systems regulations (Muthiora, 2014).

The latter security challenges articulated by Okoth et al. (2015: 44) illuminate the volatile business climate that some of the *M-Pesa* agents must contend with. They provide good recommendations to solve the security challenges but it may not be feasible for small-scale *M-Pesa* agents to have sufficient capital to invest in security apparatus such as Biometric or thumb print identification technology. Additionally, some of the *M-Pesa* shops are located in environments with infrastructural challenges such as infrequent electricity or poor roads. There are some more empirical studies on the users of *M-Pesa* but they are relatively dated. A noteworthy ethnographic study of how poor people use *M-Pesa* was conducted by Morawczynski and Pickens (2009) in Kibera slum and rural Bukura in western Kenya. The researchers conducted a fourteen-month ethnographic study that they concluded in November 2008. As a result of interviews with three hundred and fifty people as well as twenty-one focus groups they discovered that the majority of the customers in Kibera were young men. The

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*See Muthiora (2015), Kimenyi (2014) and Kimenyi and Ndung’u (2009) for an extensive historical background of regulation of mobile payments*
researchers do not indicate the percentage of men that were using M-Pesa. However, they discovered that most of the men were depositing money in order to transfer it to their rural relatives. In contrast, the majority of M-Pesa customers in Bukura were women and retirees who were using the service to withdraw money sent to them by relatives in the city.

Morawczynski and Pickens (2009: 4) discovered that the most common reason for a lump sum transfer was to pay school fees and one of the greatest impacts of M-Pesa was that the mobile phone is a “powerful tool for mobilizing remittances because rural women do not have to travel to the city; it is also easier for them to solicit cash from other contacts when their husbands refuse to make the transfers”. They argue that an interesting and unintended consequence of M-Pesa is the effect on savings behaviour as a good number of their respondents were using the service as a storage mechanism yet the service is not designed as a savings account (Morawczynski and Pickens, 2009: 3-4). In September 2008, Jack and Suri (2011) undertook a survey of 3,000 randomly selected households across Kenya and a follow up survey of 2,016 households in 2009. Like Morawczynski and Pickens (2009) they also discovered that individuals were able to accumulate savings on their M-Pesa accounts because they did not need to withdraw or send balances immediately. They also argue “M-Pesa had been adopted by an ever-broadening cross-section of the population with a wide range of economic, demographic, and educational characteristics” (Jack and Suri, 2011: 29).

In contrast to Jack and Suri (2011), Mbiti and Weil discovered that, “M-Pesa users are more likely to be younger, wealthier, better educated, banked, employed in non-farm sectors, to own cell phones, and to reside in urban areas”. They examined how M-Pesa was being used in Kenya by combining data from a “micro-level survey data (FinAccess surveys), transaction data from M-Pesa agents, price data from money transfer companies, and aggregate data from Safaricom and the Central Bank of Kenya” (Mbiti and Weil, 2011: 2, 10). In contrast to the other studies reviewed, they dispute that M-Pesa is used as a storage mechanism (Jack and Suri, 2011; Morawczynski and Pickens, 2009). They argue that their evidence strongly suggests that, “M-Pesa is only rarely used for storing value for any significant period of time because such storage is of relatively small amounts of money or for relatively short periods of time” (Mbiti and Weil, 2011: 2, 10). They conclude that, M-Pesa use
“increases frequency of sending transfers, decreases use of informal saving mechanisms and increases the probability of being banked” (Mbiti and Weil, 2011: 26). Thus, *M-Pesa* is complementary to banks and increases the demand for banking products.

The studies reviewed reveal that *M-Pesa* is very useful for consumers. However, they also highlight that the usage and success of the technology is dependent on the context. For instance, Morawczynski and Pickens’ (2009) ethnographic study yielded very positive findings and it was evident that there were many people who adopted the technology. However, Mbiti and Weil (2011), discovered that *M-Pesa* was more like an extension of the banking industry and complementary to it. Unlike the former, they did not discover any significant evidence that the technology was banking the unbanked or helping low-income people to save money. These disparate empirical findings are very significant because they highlight that the relationship between technology and users is not one that is seamless or easy to predict. Even in cases where a technology is ubiquitous there are bound to be paradoxes or discrepancies based on the political, social, cultural and economic context. These same issues are central to the discussion on media ecologies and appropriation that I have presented in the previous chapters. Once again it is evident that the social context of technology use is of great importance in the analysis of the use and appropriation of new media technologies.

More recently, Johnson (2014) critiques The Economist, Financial Times, GSMA and the World Bank for citing hyped figures about *M-Pesa’s* implications on Kenyan Gross Domestic Product (GDP) without proper contextualisation. She argues that in order to “make a really robust comparison of the extent to which mobile money is making an impression on the payments landscape it is necessary to compare this volume of payments made through mobile money with a figure which represents all the payments and transfers made in the whole economy” (Johnson, 2014: 1). In the past CNN has described the service as a “banking revolution that saves lives” (Curnow, 2010: 1). BBC also described *M-Pesa* as “Kenya’s mobile wallet revolution” (Graham, 2010: 1). Publications like The Economist had also dedicated a lot of attention to the technology (The Economist, 2013). However, economists Jack and Suri (2011: 5) cautioned against exaggerating the volume of financial transactions mediated through the service. They argued, “the average mobile transaction is about a hundred times smaller than the
average cheque transaction (Automated Clearing House, or ACH), and even just half the size of the average Automatic Teller Machine (ATM) transaction.”

A recent report by the GSMA claims that the mobile phone sector contributes to over 6 percent of the GDP in Sub-Saharan Africa and will rise to over 8 percent of regional GDP by 2020 (GSMA, 2013: 4). The statistics are drawn from macro level studies focused on “observation and measurement, classification and statistical analysis. The results of such studies are intended to confirm or falsify pre-specified hypotheses about an objectively observable, independent reality” (Mingers, 2002: 297). More qualitative studies like the extensive ethnographic study of Morawczynski and Pickens (2009) are likely to yield some contextual findings that give a clearer picture of variations and contradictions within contexts of use. As noted, Kenya is a very socially, economically and culturally diverse country so it is prudent to complement and compare any aggregate statistics on technologies such as **M-Pesa** with qualitative context and site-specific measures. In addition to the facilitation of the adoption and growth of **M-Pesa**, the liberalisation of the telecommunications sector in Kenya and the 1998 Kenya Communications Act also facilitated the licensing of Service Providers (ISPs) who implemented infrastructural developments in the ICT sector (Waema and Miroro, 2013: 105). The next section details the growth of Kenya’s Internet sector.

### 3.3.2 The Internet in Kenya

Amendments to the Kenya Communications Act in 2008 and 2010 led to the implementation of new regulations to deal with dispute resolution, tariff regulations and compliance monitoring. The on-going amendments to Kenya’s policies continue to “encourage private investment and the incremental growth of the ICT sector” (Waema and Miroro, 2014: 108). As a result of the favorable regulatory environment that was created and implemented by the government for the Kenyan communication and ICT sector, “in between mid-2009 and mid-2012, terrestrial fibre networks were laid at the Kenyan coast. Consequently, they have supported faster and cheaper connectivity” (Miroro and Aderaa, 2014: 71). Kenya has more “undersea cables than the rest of the East African region” (Wangalwa, 2015: 1). As a result of incremental investments in the ICT infrastructure by private investors and favourable government regulatory
frameworks, the country now has the “highest bandwidth per person on the continent, the fastest speeds and some of the lowest costs” (CIO, 2014: 1).

In addition to the undersea cables that were laid at the Kenyan coast, the localization of connections through the Kenya Internet Exchange Point (KIXP) has also been critical to Kenya’s growing Internet leadership as it allows local users to interconnect locally without traffic being pointed back to the US or Europe (CIO, 2014). The most recent Communications Authority of Kenya annual report indicates that there are approximately “26 million Internet users and the population with access to the Internet grew significantly to 64.3 per 100 inhabitants up from 57.1 per 100 inhabitants in 2013” (CA, 2014: 22). In the same CA report it is documented that a large number of people access the Internet through their mobile phones. Safaricom recorded the highest number of mobile data subscriptions (11.8 million) whilst Airtel and Orange Kenya posted 2.4 million and 2.2 million subscriptions respectively. Mobile broadband subscriptions also recorded a “significant growth of 37.9 percent to stand at 4.07 million up from 2.95 million subscriptions” (CA, 2014: 23-25). The statistics relay a very general and broad view of the Kenyan ICT landscape and they do not offer site and context specific breakdowns. Therefore, as a researcher focused on collecting data in one context, I had to negotiate for over a year to get context specific ICT statistics on Internet enabled phones in Kibera. I detail the full process in the research methodology chapter. The reports reviewed relay the evidence that connectivity and use of the mobile phone is ubiquitous but the interrogation of how and why people use ICTs in Kenya’s very diverse social and cultural contexts is limited. In the next section, I review the literature that is available and it will be evident that there is very little empirical evidence of how Kenyans actually use and appropriate new media and ICTs. As indicated in chapter one, there is a very clear gap in the literature on how Kenyans and Africans in general embed the new technologies that are perceived to be ubiquitous in their lives.
3.4 Empirical Studies of How Kenyans Use New Media and ICTs

In 2009, the government initiated a telecentre project countrywide so as to ensure that Kenyans in remote and rural areas had access to the Internet. Telecentres are those “entities that exist primarily to provide the general public access to computing or the Internet” (Toyama and Keniston, 2008: 1). Telecentres have been researched extensively in the Information Systems (IS) and development literature and the “studies repeatedly show that telecentres fail to sustain themselves or to demonstrate cost effective development impact” (Toyama, 2010: 1). In a similar thread, a case study of the telecentres in Kenya established that most of the users were 18-25 year old university students and that they were not very accessible to those in very remote areas with low literacy levels (Hallberg et al., 2011: 271). The centres were founded on a social enterprise model that functioned as a partnership between the government and local entrepreneurs. According to Kamau (2013: 1), the entrepreneurs received funds ranging from Ksh 850,000 to Ksh 2million (GB£5,950 to GB£14,000) to establish the centres and were to repay the loans after profits. However, the projects have experienced challenges such as “high licensing fees, low bandwidth speeds and poor management. Consequently, many have been unable to repay the loans or make any profits” (Kamau, 2013: 1).

A dated Research ICT Africa (2007-2008) quantitative and qualitative study of 400 low-income households in rural and urban Kenya established that the level of education and formal employment of household members positively influenced ICT access and use. Majority of the sample comprised men and women under the age of 30 and only one of the urban areas in the study was a slum. The researchers concluded that ICTs contribute to poverty reduction which they define as “increase in income, participation in governance, enhanced voice, increased access to public goods and services, reduced vulnerability or increase in risk preparedness; and increased capacity to cope with, or prepare for and adapt to, natural or economic shocks” (Waema and Miroro, 2014: 113). The researchers argue that ICT use has improved governance and “voice” but they do not define what they mean by the term that has been explored by numerous scholars within the cultural studies and media literature (Appadurai, 2004; Couldry, 2010; Tacchi et al., 2009; Tacchi, 2010).
Waema and Miroro (2014: 113) identify radio as the most popular ICT as many residents listen to phone-in programs in order to critique the economic, political, and social issues of the time. They discovered that the mobile phone was useful in vulnerability reduction for seeking assistance from family, friends and authorities during emergencies. It also aids the residents (especially casual labourers who depend on wages) to seek and receive job opportunities. However, some respondents opine that the mobile phone enables criminal activity by helping the criminals to communicate and co-ordinate their activities. The researchers conclude that use of ICTs as a tool for poverty reduction is limited by high cost of initial purchase and maintenance of ICT equipment (Waema and Miroro, 2014: 126). In a related National ICT survey of the Kenyan ICT sector conducted in May and June 2010, one of the key findings discovered was “access to Internet services was limited throughout Kenya. Only 3.2 percent of the sample reported daily use of the Internet whilst 1.8 percent reported having used the Internet at least once every week. The males who reported using the Internet were 7.5 percent whilst the females were 5.2 percent” (CA, 2010: 22).

Like the Research ICT Africa study reviewed on the previous page, frequency of ICT use was much higher in those with higher levels of education and they also discovered that radio is the most popular ICT in Kenya (CA, 2010: 30). The researchers also discovered a notable “inequality in access to ICT facilities between the rural and urban population because 66.1 percent and 21 percent of the urban population reported access to television and computers respectively compared to 29.2 percent and 4.3 percent of the rural population” (CA, 2010: 22). The CA (2010: 22) researchers also discovered that the top five uses of the Internet in the urban areas were communicating via e-mail, research, getting information about goods and services, reading or downloading books, newspapers or magazines and getting information about government organisations or public institutions from their websites.

In the rural areas they discovered that the top five uses of the Internet were communicating via e-mail, research, playing or downloading computer games, reading or downloading books, newspapers or magazines and getting information about government organizations. The notable difference between the urban and rural areas in ICT use is that the rural dwellers prioritized playing and downloading computer games.
more than the urban dwellers (CA, 2010: 73). Both studies present interesting findings and they can be enhanced further by some theoretical and qualitative analysis. In the mixed method Research ICT Africa study there is need to enhance the theoretical findings on voice and vulnerability reduction with some literature as they are very important findings. In the latter National ICT survey it would be of great interest to know why the desire for play and downloading games is more pronounced in the rural setting. In the broader Sub-Saharan African literature, Internetworldstats (2014) indicates that the Internet penetration rate in the region is 26.5 percent and there are 297,885,898 users. Towards the end of 2013 there were almost 150 million individuals using mobile devices to access the Internet in Sub-Saharan Africa. That figure is equivalent to an overall mobile penetration rate of only 17 percent of the total population compared to a global average figure of just over 30 percent (GSMA, 2014b: 3).

Scholars like Castells et al. (2007: 245) forecast that the mobile phone is the “technology of choice for developing countries in order to reduce their connectivity gap.” However, despite the vast potential that the mobile yields, there is very little empirical literature focused on the technology. One of the few examples of mobile usage is a corporate study on the mobile conducted by Ericsson, a communication and technology company. The Ericsson’s mobility report indicates that the African market is still dominated by 2G devices or handsets that are not Internet enabled. They speculate, “the increase in affordable smartphones in Sub-Saharan Africa’s mobile market will contribute to a rise in 3G and 4G technologies and a subsequent increase in Internet subscriptions” (Ericsson, 2014: 7). As noted in the previous section, mobile Internet usage in Kenya is high as there are approximately 16.4 million mobile data users (CA, 2014: 7). The key driver of mobile subscriptions is the availability of a “variety of data bundles that accommodate diverse income groups” (Ndung’u and Waema, 2013: 1).
As evidenced in the image above, a variety of data bundles are available in the Kenyan ICT market and there are numerous promotions whereby the mobile service providers double the data bundle package upon purchase. The growing adoption of the mobile phone and steadily rising mobile data subscriptions have also encouraged the innovation of mobile phone based applications in Kenya. The IBM Tech Trend Survey predicted that development of mobile software applications in the world for devices such as iPhone and Android will surpass applications developed on other traditional platforms (Levitan, 2010). Kenya was noted to be one of the fastest mobile applications markets in Africa (Mutegi, 2011: 1). As of 2010, numerous mobile phone based applications were invented and promoted within the agriculture, health, education, emergency response and governance sectors (Aker and Mbiti, 2010a: 22). In the next section of this chapter I discuss three mobile applications sectors that have gained dominance over the years. They are M-Education, M-Health and the use of the mobile phone for disaster response.
3.4.1 M-Education in Kenya

There is a robust group of development practitioners who are focused on what they define as M-Education (mobiles for education) in Sub-Saharan Africa. Their ambitious goal is to “mediate education through social networking and help reduce the significant numbers of school-age African children who do not receive formal education” (Ogunlesi and Busari, 2012). Bloome of USAID documents how UNESCO has invested heavily in ICT for education projects and programs in the region (Bloome, 2012). According to the ICT for education organisational web page, “UNESCO has been working to provide advice and guidance to governments and other stakeholders seeking to leverage increasingly ubiquitous and affordable mobile technologies for learning” (UNESCO, 2015). M-education is also described as mobile learning; the provision of educational material through the mobile phone. Various agencies such as UNESCO sponsor various projects that entail the delivery of school material on SMS. These forms of technology interventions are mostly aimed at Sub-Saharan African children who live in rural and remote areas. In a paper on mobile learning, Keskin and Metcalf (2011) describe the various mobile learning applications and systems that have been trialled in the Sub-Saharan African context.

3.4.1.1 The Educational System in Kenya

In Kenya, formal education is perceived to be a transformative tool that can provide access to knowledge and information that is useful for economic improvement and personal wellbeing. The education system is labelled as the 8-4-4 curriculum based on eight years of primary education, four years of secondary education and four years of university education. At the end of the eighth year there is a competitive Kenya Certificate of Primary Education (KCPE) examination that determines the high school one will get admission to whilst at the end of the four year, there is the Kenya Certificate of Secondary Education (KCSE). The KCSE scores are very instrumental in the academic programme pupils will get admission to in the various local public or private universities. University selection is a competitive process with the consequence that failure to attain a required pass mark results in students not being allocated courses of their choice or even the subject they have applied to. For example, a student may fill out the course selection form with Bachelor of Science engineering and receive an
admission letter for a Bachelor of Science mathematics based on their exam scores and provincial quotas.

The pursuit and desire for formal education is very high in Kenyan society. Government surveys from 2009 indicate that enrolment for both women and men in primary, secondary and university education has been rising steadily (KNBS, 2014: 11). A 2015 investigation by Nation Newsplex in conjunction with the Institute of Economic Affairs argues that, “given current trends, female student numbers are set to overtake those of boys in secondary school by the end of this year and at university in the next few years” (Sigei, 2015: 1). Educational attainment presents opportunities for many to acquire occupational attainment in the form of a well-paying and secure job in the private or public sector. Many desire to climb up the social ladder and secure social mobility and improve their life conditions. Social mobility is often measured as a “significant rise in real income and occupational attainment. It is often measured intergenerationally to compare how one group has done in comparison to the past generation” (Riddell, 2013: 23).

The “link between social mobility and social class with education” is widely explored in the Global North literature whilst the Kenya and African literature is limited (Deary et al., 2005; Lindley and Machin, 2012). Earlier studies such as Deary et al., (2005: 11) established that people in “West Scotland experienced upward mobility characterised as moving to a higher social class than their father’s social class through educational attainment”. Later studies relay a more nuanced picture. In a broader study of the UK, Lindley and Machin (2012: 14) argue, “it is very clear that the individuals who have done better in terms of wages are those people who have acquired higher education qualifications. In turn, the acquisition of higher qualifications has become more skewed towards people from more wealthy backgrounds. Thus, the labour market earning trends have not only raised earnings inequality within generations, but have also hampered social mobility”. In a similar thread, Riddell (2013: 24) argues that the UK does not compare well in facilitating social mobility through the provision of education for children from deprived backgrounds. He argues that the country has better rates of mobility than the USA but is behind West Germany, Finland, Canada, Denmark, Sweden and Norway.
In the limited Kenyan literature, it is argued that those born into certain ethnic groups such as the dominant Kikuyu tribe have more opportunities for educational attainment and social mobility than others (Alwy and Schech, 2004). There are no recent studies that explore whether ethnicity is still a dominant factor in educational attainment in Kenya. In a study of low income communities that included two slum areas, Oketch et al., (2012: 772) established that parents of diverse ethnic groups desire that their children acquire education and “parents in the slums have not despaired because of their deplorable slum conditions, as they seem to aspire that their children should acquire more education than themselves”. In a research paper of educational attainment on employment outcomes in Kenya, Wambugu (2011: 101) argues that, higher education levels across “tribal and ethnic groups increase chances of entering wage employment. For both males and females, education raises the probability of public sector employment. All education levels raise the chances of females to enter private sector employment. But for males, secondary education and above reduces the probability of private sector employment.”

The studies indicate that education presents the educated with opportunities for the attainment of occupational success which in turn leads to social mobility. However, there is recent extensive literature that indicates that youth unemployment is a grave challenge in Kenya and Africa in general (Gachugia et al., 2014; Hilson and Osei, 2014). A UNDP youth unemployment report indicates that, “the largest number of unemployed youth are between 18 and 25 years and there are more than 125,000 unemployed people in each one-year age cohort. The real possibility of having a formal job only comes with secondary or tertiary education, but neither of them grants access to a formal job” (UNDP, 2013: 15, 27). Therefore, formal educational attainment is not always a guarantee to social mobility. However, it remains a significant pursuit within the Kenyan context. As will be revisited in the research context chapter, it is a pursuit that many Kiberans have a “reverence” for (Kihato, 2013: 29).

In addition to the focus on mobiles for education, there is a field dedicated to exploring the adoption and effectiveness of mobile applications within the Global South health sector (M-health). Like education, many Kenyans desire good health. The Kenyan health sector is plagued by challenges such as an inadequate public health system, low patient to doctor ratio, insufficient facilities in remote areas and “policies aimed at
promoting equity and addressing the needs of the poor and vulnerable have not been successful. The majority of the population cannot afford to pay for healthcare, the poor are less likely to utilise health services when they are ill, and wide disparities in utilization exist between geographical regions and between urban and rural areas” (Chuma and Okungu, 2011: 2). In an effort to remedy the health systems in Kenya, technology experts, medical practitioners and organisations such as the World Bank have funded the use of mobile phone technology in the health sector. The applications are explored in the next section.

3.4.2 M-Health Applications

M-Ganga was invented by the Google Anita Borg award winner computer scientist Shikoh Gitau. The application “promotes the use of traditional medicine by recording and cataloguing traditional knowledge, submitted via mobile phones, in a web-based database” (Erasmus, 2010: 1). Another M-Health application is WelTel’s SMS-based messaging to monitor and support antiretroviral (ARV) therapy in Kenya. WelTel’s SMS communications are estimated to have “raised ARV patients adherence to their treatment regimens by a quarter and this increased adherence and associated viral load suppression lowered health system costs by 1-7 percent” (Qiang et al., 2011: 5). Patients who received SMS support had significantly improved ARV adherence and rates of viral suppression compared with the control group individuals. Therefore, as a result of the evaluation of the SMS based messaging monitor, the researchers concluded that mobile phones might be effective tools to improve patient outcome in resource-limited settings.

There is a lot of literature focused on the use of text messages in disease control in Kenya. Aside from the two examples above, another example is “a randomised controlled trial designed to test whether text message reminders sent to health workers’ mobile phones could improve and maintain their adherence to national guidelines for the management of outpatient pediatric malaria” (Zurovac et al., 2011: 795). The researchers concluded that, “in resource-limited settings, malaria control programmes should consider use of text messaging to improve health workers' case-management practices” (Zurovac et al., 2011: 801). Just like mobile money M-Pesa and M-education, there is a lot of optimism about the mobile phone based interventions in the
health sector. However, Tomlinson et al., (2013: 1) have critiqued the focus of the health sector on mobile technology interventions. They argue that the “industry's increasing role in pushing for M-Health scale up is a cause for concern because many of the industry representatives calling for the scale or expansion of M-Health initiatives across low and middle income countries are keen on growing market share rather than improved health outcomes”. The arguments presented by Tomlinson et al., (2013: 3) are resonant with Pieterse’s (2005b) critique of the ICT4D quest for market share and profits reviewed in chapter three. In addition to mobile money, M-education and M-health, another strand of mobile phone use that has been promoted is the use of the mobile phone for emergency response and governance or peacekeeping services.

3.4.3 Mobile Phones for Disaster Response: Ushahidi

One example of the use of mobile phones for emergency response or peacekeeping services is the crowdsourcing platform Ushahidi. The platform converges mapping and mobile technology as it “leverages Web 2.0 technologies to integrate or crowd source data from multiple sources such as mobile phones, web applications, e-mail, and social media sites such as Twitter and Facebook” (Gao et al., 2011: 12). Ushahidi is a mash up, which blends two applications to relay information in a visually compelling way. The Ushahidi design team combined Google Maps which allows users to zoom in and view satellite images of Kenya with a tool for users, via mobile phone or browser, to add photos, video, and written content that is geo-located (Goldstein and Rotich, 2008: 6). The platform was invented by Kenyan web writers “Ory Okolloh, Erik Hersman, Juliana Rotich and David Kobia after Kenya’s disputed elections in 2007” (Tully, 2011: 155). The application or platform is founded on the premise that technology can save lives and the events that led to the formation of the platform by the Kenyans above (some of whom were part of the Kenyan diaspora community in the United States) were as follows:

On January 1, 2008, as word spread throughout Kenya that incumbent presidential candidate Mwai Kibaki had rigged the recent presidential election. Text messages urging violence spread across the country and tribal and politically motivated attacks were perpetrated throughout Kenya. By January 9, as the violence escalated out of control in the Kibera slums in Nairobi and the towns of Kisumu, Kakamega, Eldoret, and Naivasha in the Rift Valley, a group
of Kenyans in Nairobi and the diaspora launched *Ushahidi*, an online campaign to draw local and global attention to the violence taking place in their country (Goldstein and Rotich, 2008: 3)

In the excerpt above, Goldstein and Rotich (2008) attempt to describe the outbreak of the post-election violence in Kenya. In relation to the above, Ruteere (2011: 14) also indicates that, “following the 30th December declaration by the Electoral Commission that the incumbent, Mwai Kibaki, had won the presidential elections, the opposition Orange Democratic Movement (ODM) led by Raila Odinga immediately rejected the results, citing widespread irregularities. Soon after, violence broke out in both urban and rural areas around the country, spreading to six of the eight provinces: Rift Valley, Western, Nyanza, Coast, Central and Nairobi provinces” (Ruteere, 2011: 14). When the violence broke out and continued to escalate, the Kenyan government imposed a media blackout on December 30, 2007. The blackout was characterised by an “indefinite ban on live news broadcasts and the minister for information at the time attributed the government decision to the interest of public safety and tranquility” (IFEX, 2008: 1). The media ban was eventually lifted on February 4, 2008 and the spate of violence was eventually subdued by the police and some paramilitary (General Service Unit) security forces. Peace seeking negotiations were conducted for approximately two months and they culminated in an African Union negotiated power sharing agreement that retained Mwai Kibaki as President and made his rival, Raila Odinga, Prime Minister in a coalition government.

The post-election violence resulted in over 1,300 casualties and more than half a million internally displaced people (Lang and Sakdapolrak, 2015: 1). In the absence of live news updates, “social media tools such as wiki’s, weblogs, Facebook, Flickr, YouTube, Twitter, and mash ups like *Ushahidi* were increasingly used to organise and share information about the 2008 post-election violence in Kenya” (Mäkinen and Kuira, 2008: 329-331). Goldstein and Rotich (2008: 3) argue that that within weeks *Ushahidi* had documented “hundreds of incidents of violence that would have otherwise gone unreported and received hundreds of thousands of site visits from around the world, sparking increased global media attention.” The incidents of violence were aggregated visually into a particular metric related to location which meant that they would appear on the digital map as a group of distinct symbols such as many red
dots on an “anonymous geo-located interface” (Sutko and de Souza e Silva, 2011: 810). This simply means that the identity of the users was not indicated on the visually compelling crisis map interface.

Okolloh (2009) argues that there was an information vacuum in Kenya so her blog and Ushahidi were two of the main sources of information about the volatile environment. She indicates that over 250 people began to use the new platform as a means of sharing information and some radio stations even started using the website as an information source (Okolloh, 2009: 65-66). However, she does not indicate where the people were from or what radio stations used Ushahidi as a source of information. Could it be that many of the users were not drawn from Kenya? In the literature on the Ushahidi platform within Kenya there is a very strong focus on the innovators and founders of the organisation. Much of the literature is authored by the founders or organisations and people affiliated with the Ushahidi organisation (Goldstein and Rotich, 2008; Okolloh, 2009; Banks and Hersman, 2009). The literature about the use of Ushahidi during the post-election violence invokes the well-established media trope of Africa as the “suffering dark continent” (Hawk, 1992; Ojo, 2014; Miller et al., 2013). However, in this particular case, the Ushahidi founders present technology as a solution to the end the post-election suffering.

The words “media blackout” and “information vacuum” that are noted in the articles reviewed in the previous paragraph imply that Kenya was totally devoid of information (IFEX, 2008: 1; Okolloh 2009: 66). However, British journalist Somerville confirms that, “the post-election violence in Kenya in December 2007 through to April 2008 was reported extensively but erratically in the British media” (Somerville, 2008: 526). He argues that, while “BBC News Online, the Guardian, Telegraph and Independent gave regular coverage with online updates on their websites, other mass circulation media like Sky, the Daily Mirror and Daily Mail were more sparing in their coverage. A common factor to all these reports was a tendency to rely on all-encompassing descriptive and analytical language to frame the reporting of the conflict focusing on tribal and ethnic issues” (Somerville, 2009: 526). Similarly, Tully (2010: 159) argues that the “mainstream international news coverage lacked the depth necessary for understanding the complex situation. Instead of situating the violence in its larger
historical context, many news accounts focused on the immediate violence, reporting the graphic details of machete killings and church burnings.”

As a Kenyan who was in the country at the time, I can attest to the fact that we were inundated with very violent news reports from numerous international broadcasters. Mudibo who was working at the local Nation TV station also lamented that “the slant of the Western media coverage was appalling because they disproportionately made everyone think the whole country was aflame” (Kabukuru, 2008: 33). In contrast to the international media reporting, Onyebadi and Oyejedi’s (2011: 225) content analysis of select local print media in the period before and after the post-election violence in Kenya revealed that the local newspapers “Daily Nation and The Standard newspapers did commendable jobs in peace journalism”. They argue that the print media engaged in balanced and ethical news reporting and conclude that their study provides an “alternative to the orthodox view that the stereotypical characterization of the media in African conflicts is that of being sectarian advocates of mayhem, and as being institutions which hardly play any constructive role in crisis control and management” (Onyebadi and Oyejedi, 2011: 227). In an article about how Ushahidi was used during the post-election violence, Tully (2011: 165) argues that the innovative convergence of Internet and mobile technology that Ushahidi employs is unique because it has never been used in human rights before.

Information is delivered in near real time because, Ushahidi facilitates the users’ ability to zoom in and view satellite images of Kenya on Google maps, and offers them the “opportunity to report incidents of violence on the map, add photos, video, and written content that document where and when violence occurs” using the mobile phone or the web browser (Goldstein and Rotich, 2008: 3). The end result of such a crisis map is that is provides humanitarian actors or partners on the ground an overview of the situation for them to act on the feedback. However, there is some information that is often left out of articles about the workings of Ushahidi. Who was saved and assisted by the use of Ushahidi? Did their technology really provide information that the Kenyan security forces did not have? Was the deployment of their technology more advantageous than the more traditional forms of media such as the television and newspaper accounts of violence discussed? How were the incidents of violence that were reported on the crisis map verified? Were they accurate? Anyone was allowed to
post anything on Ushahidi and although the founders worked tirelessly to filter the messages they received, it was possible for an individual who was not affected or even in the vicinity of the violence to post messages of false alarm.

A great risk of crowdsourcing messages and the solicitation of messages from members of the public on such an online space is that the “truth is not guaranteed” unless mappers rigorously verify the reports (Okolloh, 2009: 67). It is highly unlikely that the Ushahidi volunteers had enough support to verify the validity of each and every SMS, E-mail, message or video that was posted on their map since they admit that they were a “group of adhoc volunteers” (Ushahidi, 2015; Jeffrey, 2011). In the long excerpt about how Ushahidi was created in the introduction, a very powerful claim is made about incidents of violence that would have been undocumented if the technology was not used (Goldstein and Rotich, 2008: 3). However, there is insufficient evidence within the literature that such events were undocumented by other forms of media or mechanisms. It is also quite telling that Ushahidi’s documented incidents were not referred to even in any minor form as evidence in subsequent post election human rights violation cases that were filed within the court system (including the International Criminal Court at the Hague).

In defence of the use of Ushahidi during Kenya’s post-election violence, one of the founders Okolloh blogged that, “we believe that the number of deaths being reported by the government, police, and media is grossly understated. The reports that all of us have heard from family and friends living in affected areas, suggests that things are much worse than what we have heard in the media” (Okolloh in Jeffery, 2011). Okolloh’s alarming claims that the post-election violence was greater than government or official estimations are yet to be substantiated with evidence. From the evaluation of the literature on Ushahidi usage it is apparent that those who are eager to discuss and promote the technology are the founders and some technology enthusiasts. Indeed, after the “successful” deployment of Ushahidi in Kenya, the once “ad hoc group of technologists and bloggers” decided to start a non-profit organisation which is now headquartered in Nairobi (Jeffery, 2011). In May 2008, the co-founders of the technology Hersman and Kobia won a $25,000 (£15940; KSH, 2,409,975.000) prize for Ushahidi at a tech competition in San Francisco and this additional funding allowed the team to start working on the project full-time (McConnell, 2013). They
also re-designed the software so that others could download the now open source platform and deploy it in contexts of their choice.

Ushahidi has been deployed in Mexico, Afghanistan, Haiti and Mumbai. The deployment of Ushahidi in Haiti after the January 12, 2010 earthquake in Port Au Prince captured a lot of media attention. The platform was set up just hours after the earthquake and “it was launched by Patrick Meier and David Kobia from Ushahidi at around 8:00 PM” (Meier and Munro, 2010: 95). Two independent evaluations of the use of the technology in that context highlighted that it was able to make a significant impact on relief efforts by facilitating the geo-location of urgent messages like “I am buried under the rubble but I am still alive, and simply publishing relatively less immediately actionable messages such as our community has run out of water” (Zook et al., 2010: 23). Morrow et al., (2011: 4) argue that the use of Ushahidi in Haiti represents “impressive proof of the application of crisis mapping and crowdsourcing to large scale catastrophes and a novel approach to the rapidly evolving field of crisis informatics”. However, when they evaluated the impact of the Ushahidi project and asked the question to what extent did the technology benefit the people affected by the earthquake? Morrow et al., (2011: 6) admit that they could not gather enough evidence linking Ushahidi to beneficiary outcomes. In the Haitian case, Ushahidi had fostered great partnerships with other humanitarian organisations and security forces so there was a collaborative effort in place to save lives. Therefore, the technology served as a good enabler, facilitator or intermediary in the process of saving lives. The idea of ICT functioning as an enabler is a concept that is well established in the information systems (IS) and ICT for development (ICT4D) literature (Thompson and Walsham, 2010; Thompson, 2008). In the Ushahidi Kenyan case, the technology creators and users could not possibly substitute the role of the security forces in Kenya. However, the technology potentially eased the efforts of the security forces and helped them to identify the hot spots of violence. It is very unclear from the extant literature on Ushahidi as to whether the police, military and local humanitarian organisations were even aware of the platform’s existence. It is also unclear as to whether a large number of Kenyans were reliant on Ushahidi for information on the crisis since there are no independent empirical evaluations of the technology use during that period.
Save for numerous articles that exemplify the global media attention the founders have harnessed, there are no research articles that detail how the ordinary Kenyan used *Ushahidi* and if at all the technology is capable of saving lives through the exchange of information that it facilitates so effectively. It is the contradictions within the literature reviewed that partly motivated the research this thesis discusses. Voices of technology users in Kenya and the greater Sub-Saharan Africa region are rare yet they are very necessary. If at all technology is substantially changing lives in sectors such as the ones illustrated in the previous discussion then it is necessary to capture how it is doing so.

Kenya emerges as significant in the larger ICT4D and M4D literature because of the significant rise in mobile phone and Internet adoption I have discussed. Therefore, it is very important that the optimism around the growing new media and ICT sector is interrogated with empirical research. Evident in this chapter is that “ICT has been promoted as the silver bullet that will solve persistent development problems in the Global South” (Heeks, 2010c: 629). However, despite the optimistic claims of the usage of ICTs and the great investments in ICT infrastructure, the voices of the supposed beneficiaries of the technologies are often absent from the discussion (Han, 2012: 2059).

An empirical review of how Kenyans use new media and ICT in this chapter reveals that the dominant paradigm has been positivist with an emphasis on surveys as the main method of analysis and data collection. The positivist lens has been useful in highlighting the general uses of ICTs in Kenya but it does not provide an in-depth picture on the variations in the process of ICT use and appropriation within diverse contexts. There are still very few qualitative studies that explore the relationship between people and technology at the micro level. I review them in the next chapter as I explore the extensive literature on the use of mobiles for development.
3.5 Chapter Summary and Concluding Remarks

This chapter is foundational in introducing the literature that this thesis contributes to. The ICT4D and M4D field interrogates how the new technologies such as the mobile phone and the Internet effect bring about socio-economic development. In this chapter I identify the concept of the mobile phone revolution and review literature that questions the existence of such a revolution in the context of Sub-Saharan Africa. This is related to the discussion of the ubiquitous mobile phone in chapter one. It is evident that there is a discrepancy between the optimistic media ICT4D and M4D rhetoric, the enthusiastic reference to the potential power of ICTs from the United Nations millennium development report, Kofi Annan’s International Telecommunication Union speech and the more tempered academic scholarship on the pursuit of the use of ICTs for development. Additionally, it is clear that there is an explicit focus on the use of ICTs for modernisation from the latter policy literature.

This same theme is evident in national development documents: Kenya Vision 2030 and the National ICT Masterplan. The quest for technological and scientific progress is at the core of modernisation thinking in development and these ideas are explored in relation to the Kenyan ICT sector. In the next section of the chapter, the history of new media and ICTs in Kenya is discussed. The liberalisation of the communications sector is paramount to the steady growth of the mobile phone sector as well as the Internet infrastructure development. The few empirical studies that explore how Kenyans use new media and ICTs are reviewed. They are reviewed to provide a lens as to what Kenyans use the new media and ICTs for. The two largest scale studies reviewed both establish that the level of education positively influenced ICT access and use (Waema and Miroro, 2014: 113; CA, 2010: 3). The studies fall short of theoretical analyses and provide a general view of what Kenyans use the new media and ICTs for. General uses include playing games and looking for information online.

Waema and Miroro’s 2007-2008 quantitative and qualitative study of 400 low-income households in rural and urban Kenya is the only study reviewed that discovered ICTs contribute to poverty reduction defined as “increase in income, participation in governance, enhanced voice, increased access to public goods and services, reduced vulnerability or increase in risk preparedness; and increased capacity to cope with, or
prepare for and adapt to, natural or economic shocks” (Waema and Miroro, 2014: 113). The researchers do not define what they mean by the term “voice” yet it is a term that has been explored by numerous scholars within the cultural studies and media literature (Appadurai, 2004; Couldry, 2010; Tacchi et al., 2009; Tacchi, 2010).

In the latter section of the chapter, the M-Education, M-Health and mobile phone use for disaster response strands are presented and critiqued. Evident within the literature is the explicit technology optimist goal for people from the Global South and particularly Sub-Saharan Africa to make profitable use of the mobile phone to change their lives. However, there is very little empirical research that gives users a chance to contribute to the discussion as to how and why these technologies are useful. In the next chapter I continue the discussion in the chapter by presenting a review of the emerging M4D field that presents possibilities as well as contradictions of the transformative power of technology.
In this chapter I review the M4D literature that this thesis contributes to. The M4D field is framed by ideas of the “mobile phone as an enabler of choice. From this perspective, some uses may lead to positive development outcomes. M4D is framed within (ICT4D) where technologies can be designed and woven into social systems in order to bring about positive social change” (Tacchi et al., 2012: 530). The use of technology or science has been at the “heart of most of the dominant practices and discourses that have been concerned with development from the industrial revolution of the nineteenth Century to the green revolution of the mid twentieth Century” (Unwin, 2009: 9). All technological innovations from the “optical telegraph over underwater cable to radio and television, have in their times been celebrated because of their promise of delivering more development, universal concord, decentralized democracy, social justice and general prosperity” (Mattelart, 2003: 23).

In the case of using new media and ICTs such as the mobile phone and the Internet for and development goals it evident that that technology and ideology are intertwined and “much of the high-profile ICT4D rhetoric has championed initiatives that view development in ways that are in line with the understanding of key international donors, governments and technology companies”. (Kleine and Unwin, 2009: 1,049). This is evidenced in the millennium development goals, Annan’s ITU speech, the Kenyan national development plan and ICT master plan reviewed in the previous chapter. The growing mobile phone adoption in Africa is described as a “parallel ICT revolution because Africa is the fastest growing mobile market in the world” (Kleine and Unwin 2009: 1,047). However, economists Aker and Mbiti critique the potential use of mobile phones for development arguing that they can never be the silver bullet for development and that their impacts may be both positive and negative (Aker and Mbiti, 2010b: 226). Suri and Jack (2012: 1) also affirm that the mobile phone is a transformational tool but unlikely to be a “panacea for the complex myriad of development challenges that persist in Africa.”
The empirical literature on new media and ICT use in the Global North is focused on the “reconfiguration of youth and children’s lives, leisurely usage and the embeddedness of the mobile phone in everyday life” (Ling and Yttri, 1999; Livingstone and Bovill, 1999, 2013; Matsuda, 2005; Okabe et al., 2005; Goggin, 2012). However, the Global South new media and ICT use literature is more focused on the mobile phone as a tool for development goals such as the eradication of poverty or the facilitation of business opportunities (Donner, 2004; Diva 2007; Sife et al., 2010; Waema and Miroro, 2014). This very noble and pragmatic focus on the mobile phone as a tool for economic and social development is also the greatest limitation of the ICT4D and M4D literature. This is because such a focus leaves out contextual issues such as how the mobile phone is reshaping society and culture or how people are reshaping the mobile phone to suit their context. The predominant focus on socio-economic development ends also leaves out the contradictions in various contexts. For example, there are often people who reject technologies and abandon them after some time even if they are beneficial. Usually, a social or cultural reason could be the reason for such a rejection.

Some of the literature reviewed in the appropriation studies chapter one reveals that academics from the Global South are now seriously engaging with the socio-cultural elements of mobile phone and Internet use (Nyamnjoh, 2013a, 2013b). The recent and emergent literature is also more focused on variations within the context of use (Okon, 2015). Like Arora and Rangaswamy (2013: 901) I concur that “if we are to genuinely examine what people in the Global South are doing with ICTs, we need to look at them as typical users and not the exotic and virtuous recipients of new technologies they are often made out to be”. Arora and Rangaswamy (2013) argue for a leisure based focus on the use of the ICTs for development in the Global South. Leisurely uses include games, watching of videos and entertainment material. Ganesh (2010: 3) also argues that ICT4D generally ignores the “diverse ways in which the poor and the marginalised use media technologies in their everyday lives for social networking, entertainment, to produce and participate in intimate and erotic economies, to express and experience their sexuality, relationships, pleasure and intimacy in ways that could also be considered empowering”. From the review of the literature in this section, their observations are being heeded. More scholars are reflecting on the nuanced and dual effects of technology as socio-economic tools and as facilitators of relationships and
social ties. Social networking has emerged as an important and growing theme. In the context of this thesis, it is one of the major themes I also explore within the research findings. The first theme of mobiles for social networking and mobility is explored in the next section.

4.1 **Mobiles for Social Networking and Mobility**

In an ethnographic study of low income youth in Mozambique, Archambault (2012) discovered that the “mobile phone bridges distances for the low-income youth of Mozambique by opening up a space for global imagined identities and it has the potential to shift, albeit in contested and imperfect ways, the interface between daydreams and reality” (Archambault, 2012: 394). However, the mobile phone also “betrays the difficulty of the social mobility the youth anticipate in highly unequal Southern Mozambique where ease of communication and networking do not always facilitate social mobility” (Archambault, 2012: 393). In a similar thread, Horst argues that the ownership of mobile phones may have “collapsed the distance between rural Jamaicans and migrants but it does not change the dynamics of power within these transnational social fields as rural Jamaicans are still dependent on those outside Jamaica” (Horst 2006: 155). A qualitative study of young people in Ghana, Malawi and South Africa established that they view the mobile phone as an object of desire and a symbol of success. Additionally, “the virtual mobility of the mobile phone promotes young people’s inclusion in existing social networks. However, it is also a likely indicator of sexual liaisons with sugar daddies and the increase of inter-generational tensions” (Porter et al., 2012: 156-159).

In the Global North context, sex for mobiles is also discussed by Kingston when he discovered high school students in Japan use their “discretionary income from compensated dates of prostitution on expensive designer clothes and to pay their mobile phone bills in Japan” (Kingston, 2004: 26-27). Additionally, a past ethnographic study of the Japanese youth discovered the use of mobile messaging to overcome adult controlled power structures that govern their lives (Ito and Okabe, 2005: 127). Similarly, a study of the youth in Dakar reveals “the mobile phone offers young people remarkable opportunities to leapfrog physical mobility constraints and
the power relations with which they are bound. Sending text messages on mobile phones opens up new corridors of communication between youth, transgressing gender barriers meticulously guarded by parents and other gerontocratic custodians” (Christiansen, Utas and Vigh, 2006: 20 in Porter et al., 2012: 146).

All the studies reviewed reveal that the mobile phone is not a neutral technology that facilitates the collapse of distance, space and time uniformly. The mobility studies also contrast with some of the notable studies I reviewed in the appropriation literature. For example, the study of Senegalese boat migrants in Spain and how they use ICT effectively to stay in touch with their home country to transform the lives of family left behind as well as protecting the socio-cultural values of their home society indicates that the phone is the “umbilical cord” that joins mothers and family with their migrant family members (Nyamnjoh, 2013b: 160). In Kariokoo, Tanzania and Zanzibar, Pfaff established that the mobile phone is a sign of individual expression and identification that facilitates social relations regardless of distance (Pfaff, 2010: 352). Evidently, the mobile phone is a technology with both positive and negative socio-cultural outcomes. Technology use and appropriation and eventual embedding of technology is a process that varies. The concept of mobility is best analysed contextually because “ICTs influence the contextuality of interaction in various ways because they afford one diversified modalities of interaction” (Kakihara and Sørensen, 2002: 3).

In a description of contextual mobility defined above, the scholars argue that computer mediated communication can serve as a catalyst for mobilizing weakly tied social networks; ICT applications and mediated communication technologies help people to interact easily without contextual constraints (Kakihara and Sørensen, 2002: 4). Their observations correlate with the survey data collected in Kenya, Nairobi where results from pooled survey data from Nairobi professionals and entrepreneurs in 2002 and 2007 as well as qualitative interviews from 2007 to 2009 show virtual saturation in the “diffusion of phones during the period. The researchers also discovered that increased technological access to existing networks in a context of resource scarcity leads to a strengthening of weak ties and the enhancement of core networks among Kenyans” (Shrum et al., 2011: 614). However, their observation that “ICT applications and mediated communication technologies help people to interact easily without contextual
constraints” (Kakihara and Sørensen, 2002: 4) contradicts some of the notable qualitative studies on mobility and social networking.

4.1.1 The Contextual Constraint of Social Class

In the broader ICT4D literature, one contextual constraint that hinders the mobility of ICTs and mobile phones is social class or social differentiation. However, discussion on the interaction of social class with the use and appropriation of new media and ICTs within the Sub-Saharan Africa literature is absent. As I have discussed in the previous section as well as chapter one and two, this is because the literature is only just beginning to include socio-cultural affordances and the embeddedness of new media and ICT in the daily lives of people. Most scholars reviewed adopt a realist stance on the definition of class and argue that it is “social differentiation based on cultural, economic and social capital” (Bourdieu, 1987: 4). Some notable studies explore class and differentiation in the use of new media and ICT in China, India and the USA. In a study of mobility in China, Wallis (2013: 103) discovered mobile phones enable migrant women to expand their social networks by increasing their strong and weak ties but they do not necessarily help them to build connections with those in higher social classes than themselves due to the “customary manner in which guanxi networks are built and the rigid class and place-based distinctions that characterize contemporary Chinese society” (Wallis, 2011: 478).

In resonance with Wallis, Qiu (2009) argues that usage of the new media and ICT technologies does not always lead to cultural or political empowerment for the working class in a highly stratified China because of factors such as gender, education, age, ethnicity and places of origin (Qiu, 2009: 239-243). In the Indian context, Tacchi et al., (2012) explored the relationship between development, gender and technology through a focus on mobile phones and their everyday use by women in rural India. They discovered that “mobile phones can be considered to be contributing in important ways to transforming lives but gender and caste combine to produce formidable constraints” (Tacchi et al., 2012: 535). In the USA context, boyd (2013) researched teen’s meaningful engagement with social media MySpace and Facebook. She discovered that white middle class teens were migrating from MySpace to Facebook because they associated the former with being more ghetto. The white students from affluent
backgrounds favoured Facebook so the teens chose to self-segregate themselves in the two digital sites the same way they do in their physical environment of school. The digital social media sites were an extension of the socially reproduced segregated spaces that they lived and school in (boyd, 2013: 204).

What is apparent in the three contexts discussed is that, the mobile phone facilitates social ties and connections (McIntosh, 2010; Porter et al., 2010, 2012). However, it can also serve to reify one’s position in society even further (Wallis, 2013: 182). In the Kenyan context, discussions of social class or cultural differences in the interaction between technology and users are absent. The optimism generated by the avid usage and success of technologies such as M-Pesa has overshadowed discussions on the critical relationship between technology and the very diverse and stratified multicultural society. Kenya is a society that is also urbanising at a very fast rate and one in which approximately 71% of the urban population lives in slums whilst the rest of the population dwells in middle to upper class residential gated communities and estates (Mutisya and Yarime, 2011: 201).

Another important factor that affects mobility is cultural norms. A good empirical example of how cultural norms affect mobility is an ethnographic study of the mobile phone use by the Giriama in the coastal town of Malindi, Kenya. McIntosh (2010) explores the use of the local dialect Kigiriama in text messaging. She discovers that the phone has been very useful in facilitating social coordination due to the prevalence of phones among those 40 and younger. Family members and friends living in Malindi and the hinterland can “quickly coordinate everything from social events, rituals, medical emergencies and flirtation” (McIntosh, 2010: 341). However, the same mobile phones are viewed as suspicious tools because of their foreign origin. They are also perceived as fostering some of the sexual promiscuity that contributes to social disintegration” (McIntosh, 2010, p.348). Therefore, in one sense they are perceived to foster social cohesion in the exchange of localised messages but the usage of the phone is an anxious experience as it is a new technology that is associated with the former British colonialists and Western values. In the area, witchcraft is still practiced and feared so some of the youth and elders perceive the mobile phone to be saturated “with a kind of witchcraft that threatens Giriama identity and detracts from the prestige of elders” (McIntosh, 2010: 339, 348). In summary, the mobility that new media and
ICTs facilitate is not seamless. In Sub-Saharan Africa it is even more important to interrogate the micro level relationships between technology and society because, "communication technology is constitutive of culture and is neither value neutral nor an autonomous determining force ” (Wallis, 2013: 5). Other studies that are relevant to the mobility discussions reviewed are those that highlight the growing prevalence of social networking sites such as Facebook.

4.1.2 Facebook in Kenya

The empirical data available on the use of social networking sites in Kenya is focused on Cyber Café access. A study of select Internet cafés in rural Kenya established that Facebook offers people additional ways to sustain relationships by sharing photos (Wyche et al., 2013a). In another study of the usage of the networking site amongst 28 young adults from Viwandani informal settlement, the researchers discovered that participants connected with old friends, sought employment and remittances from friends and family abroad. Like numerous studies of Facebook use in the Global North, the site is used for connection and maintenance of existing offline relationships (Ellison et al., 2007 in boyd and Ellison, 200: 221). However, just like the Kenyan ICT studies discussed in chapter three, the cost of using the Internet as well as limited access to ICT equipment such as computers was identified as a hindrance to widespread usage (Wyche et al., 2013b: 2824).

Facebook is one of the most popular sites in Kenya with 3,800,000 users (iHub 2012; Digital Rand, 2014). It is very popular amongst the youth who are 18 to 34 (Njonjo, 2010: 162). A Pew research study also discovered that 88 per cent of Facebook users in Kenya are young people (Lafferty, 2015: 1). In contrast to the use of mobiles for leisure or social networking such as Facebooking, media articles and policy literature from international development agencies have actively promoted the use of mobiles for economic empowerment or progress. As discussed extensively, the theme is firmly rooted in the donor driven ICT4D agenda that is promoted in the Global South by development agencies. However, in contrast to the optimistic policy literature and media articles on the potential of mobile phones for economic development, the empirical literature is very limited and contains very few successful cases of the use of
mobile phones for economic gains. The empirical cases are discussed in the next section.

4.2 Mobiles for Economic Development

One of the first Global South ethnographic studies to explore the link between the mobile phone with economic development and poverty alleviation was Horst and Miller’s (2006) research of the mobile phone in select low-income communities in Jamaica. In their study, they discovered a few cases where people such as taxi drivers benefitted economically from using the mobile phone. However, they concluded that, “very few Jamaicans made the significant switch into seeing their phones as effective mobile offices that allowed them to turn into fully fledged entrepreneurs. The cell phone did not appear to radically transform employment and entrepreneurial opportunities” (Horst and Miller, 2006: 103, 164). They also discovered that low income Jamaicans use friendship, kinship and other ties as a coping strategy. They argue that the difference between being poor and not poor is having friends or family that you can call upon in times of need. What the poorest people lack is not so much food, but critical social networks (Horst and Miller, 2006: 111).

In contrast to Horst and Miller (2006), Dunn (2009: 53) draws upon data from an extensive survey of Latin America and the Caribbean (Jamaica, Trinidad and Tobago) to argue that the economically marginalized in those countries are already using their mobile phones to engage in business and work-related transactions to enhance their economic survival. The studies show that the three leading forms of mobile economic engagements include a strengthening of financial support networks, social bonds and the consolidation of trust between family members and friends using the mobile phone. He concludes that people are beginning to make the transition from a social and conversational usage of their cell phones to more business-oriented and economically driven engagements (Dunn, 2007; Mallalieu and Cambridge 2007; Dunn 2008; Dunn and Dunn, 2007 in Dunn, 2009: 59). In the case of Ghana, Slater and Kwami’s (2005) ethnographic study of the use of the Internet and the mobile phone as poverty reduction strategies in Ghana presents an interesting argument that reflects the unpredictable nature of users in their appropriation of new media and ICT technologies. The youthful Ghanaians use their mobile phone to maintain their existing kinship, friendship and
business networks at home but they use the Internet in a “fantasy mode in order to seek out advantageous relationships with unknown and random foreigners” (Slater and Kwami, 2005: 1). The goal of using the Internet for profitable romantic liaisons is explored in greater detail in Burrell’s Invisible Users that discusses the manipulative exploits of young Ghanaian Cyber Café users seeking advantageous foreign social ties in digital spaces (Burrell, 2012).

There is a dearth of qualitative research that explores the link between the mobile phone and economic development in Kenya. From the literature presented and discussed it is evident that the potential of the mobile phone for economic development is plausible. However, just like the previous section’s discussion of contextual constraints to mobility and social networking, there are contextual factors that play a role in the use of technologies for the pursuit of economic development or development of any sort. For example, in Horst and Miller’s (2006) study, what matters more than anything is the access to crucial social networks. Their finding corresponds with much of the broader literature on ICTs and social networks that indicates that most people use ICTs to strengthen weak ties and extend their offline communication (Ellison et al., 2007; boyd and Ellison, 2007). In essence digital spaces and environments are organised just the same way the physical social environments are. They are a reproduction of the context in which they are embedded (boyd, 2013: 204).

One of the few studies that successfully links mobile phone use to economic development in the form of financial gains is a study of Latin America and the Caribbean (Jamaica, Trinidad and Tobago) by Dunn (2009). The mobile phone is discovered to be important for strengthening of financial support networks, social bonds and the consolidation of trust between family members and friends (Dunn, 2009). The studies highlight yet again that, technology is not value neutral and can have both negative and positive consequences. I also believe that the use of the mobile phone as a tool for economic progress is best applied and studied in the social context of use. It is important to map out the intricate details of what makes up a context as well as the personal characteristics of the users rather than to make strong evaluative judgments on the basis of access or use of mobile technology. As discussed in chapter one, people and communities will vary in how they interact with ICTs. This is because ICT use and appropriation is a much deeper issue when it is embedded in the day-to-
day lives of people. Alongside the popularity of mobiles for development, the theme of the use of the mobile for political mobilisation or activism is also prominent within the North African literature. I review the literature because when the use of the mobile phone for activism in the region was taking place in 2010 there were numerous projections that the Sub-Saharan African region would also use the mobile phone for the same purpose (Gasinska et al., 2013).

4.3 **Mobiles and Social Networking Sites for Political Activism**

The Middle East and North African (MENA) literature is dominated by research on the use of social networking sites for political mobilization, freedom and democracy. This is because of the vast attention that was dedicated to the Arab Spring from 2010 to 2011 in Tunisia, Egypt, Yemen, Libya and Syria (Shirazi, 2013; Howard and Hussain, 2013). In the Sub-Saharan African region, the only form of ICT activism that gained prominence on social media was humanitarian activism. One example of such activism was the Kony March 2012 online campaign. American NGO Invisible Children released a campaign video agitating for the arrest of Ugandan warlord Joseph Kony for torture, mass rape, and the enslavement of children. The campaign also requested donations and within the first 6 days of its release, the 30-min clip was accessed more than 100 million times through Twitter, Facebook and YouTube (von Engelhardt and Jansz, 2014: 1). The Kony campaign fuelled much debate on the use of new media for humanitarian purposes because the very effective online campaign did not lead to the actual capture of Kony (Madianou, 2013: 249). Instead, it was labelled as slacktivism which is “low-risk, low-cost activity via social media whose purpose is to raise awareness, produce change, or grant satisfaction to the person engaged in the activity” (Lee and Hsieh, 2013: 1).

A similar form of group activism was also enacted through micro-blogging platform Twitter in Kenya. The last evaluation reported that the site has approximately 650,000 users in Kenya and Africa's most notable tweeters are aged between 20 and 29 (Digital Rand, 2014; VOA, 2012). There are likely to be more users in more recent times but there are no concrete current published statistics of Twitter usage. Hash Tags# or short community tweets are very popular on the site. An example of a past popular Kenyan Hash tag that elicited a global debate was #SomeonetellCNN. In the run up to the
country’s election in March 2014, the Hashtag was very popular amongst young Kenyans and media personalities. Kibera was a popular subject on the feed because of past negative publicity as a result of riots and electoral violence in the area. A tweet from a local media personality read “at this rate CNN will come pull the railway line in Kibera as there is too much peace in the area” (Chebet, 2013). Tully and Ekdale (2014) assert that the site is a popular meeting place for young urban Kenyans. They describe the usage of the site as a noteworthy example of playful engagement with serious underpinnings represented by hash tags such as #TweetLikeaForeignJournalist. The playful sounding tweets reveal serious engagement and critique that Kenyans undertake as they consume foreign news reports on and about Kenya.

Mäkinen and Kuira (2008: 329) argue that social media supplement rather than replace conventional media such as radio and television in Kenya. They claim that social media tools such as wiki’s, weblogs, Facebook, Flickr, YouTube, Twitter, and mashups were increasingly used to organise and share information about the 2008 post-election violence described in chapter three. A Kenyan consumer insight study of 1,310 young people aged between seven and twenty five established that Kenyan urban youth spend at least KSH 2.2 billion (£15,191,579.1373) annually to purchase data accessing Facebook and Twitter on their mobile phones (Mungai and Omondi, 2014). In addition to Facebook and Twitter use, the youth also use ICTs and mobile phones for playing games, downloading music, exchanging SMSs and chatting with friends. Internet connection is prioritized highest as the main source of access to reliable information and knowledge (Njonjo, 2010: 162-163). However, the study does not indicate or elaborate on what exactly reliable knowledge and information means. Young people emerge as significant users of social media in the broader Global North literature (Valenzuela et al., 2012; boyd, 2013; Dahlgren, 2013). Particularly well researched is “mobile youth cultures” (Goggin, 2013). In the Sub-Saharan African region, the mobile youth culture research remains limited. The next section discusses the theme of mobile youth cultures.
4.4 Mobiles and Youth Cultures

As discussed, a large number of new media and ICT studies in the Global North literature are focused on young people. Influential conceptual terms have been developed in the course of the numerous studies undertaken. For example, Matsuda (2005: 133) describes telecocooning as the use of keitai (the mobile phone) for frequent contact with a select few; where the youth make calls and exchange e-mails with the same friends whom they just saw at school. The “round-the-clock set of relationships with an exclusive group of friends is described as a full-time intimate community” (Matsuda, 2005: 133). The goal of the intimate community is to be “reachable to a few and communicate with those we want to communicate” (Fortunati, 2002: 51). Another interesting perspective related to the usage and appropriation of the mobile phone by the youth is that of fashion as a guide to mobile phone use (Fortunati, 2002; Katz and Aakhus, 2002). A survey of college students in the United States and Japan was conducted to demonstrate the relationship between fashion attentiveness and the acquisition, use and replacement of the mobile phone. The results suggested that young people use the mobile phone as a way of expressing their sense of self and perceive others through a fashion lens. The scholars propose that “fashion is a highly relevant influence on personal communication technology adoption, use and replacement” (Katz and Sugiyama, 2006: 321, 331).

As a result of their findings, Katz and Sugiyama (2006: 335) extend the Apparatgeist theory and argue “there are markedly different perceptions of technologies that are driven by the perceptions and social location of the users and non-users and not necessarily by the functionality of the devices as people incorporate mobile phones into their self-image and rely on them as status markers”. In the case of Norway, Ling and Yttri’s (1999, 2002) research of Norwegian teenagers resulted in the identification of micro-coordination and hyper-coordination as the primary categories for mobile phone use. Micro-coordination entails using the mobile phone for making plans with others and redirecting trips “on the fly” whilst hyper-coordination refers to the “expressive and relational dimensions of mobile communication, such as chatting with family members or occasionally checking in with friends via text messaging” (Campbell and Park 2008: 374-375). Hyper-coordination is also concerned with the symbolic aspect
of the mobile phone such as how it is carried on the body and the places where it is used (Katz and Sugiyama, 2006: 323). Additionally, the Norwegian teenagers interviewed perceived functionality as a secondary consideration and that having the correct style and type of device is a vital point in self-presentation for teenagers (Ling and Yttri 2002: 140).

In the Italian context, the mobile phone is also “useful for teen lovers who can communicate behind the backs of their—perhaps rightfully—anxious parents. The camera function can be used to share photos of potential love interests within the peer group in order to elicit their evaluation” (Scifo, 2005 in Ling, 2007: 62). The same form of peer interaction is also visible in the Sub-Saharan African literature I reviewed in chapter two. The research findings from Porter et al.’s (2012: 156, 159) qualitative study of Ghana, Malawi and South Africa reflect that the mobile phone facilitates social networking but it also “increases inter-generational tensions by facilitating escape of surveillance which is a likely indicator of illicit sexual liaisons”. In Finland, there is a vast amount of literature on the youth mobile culture. This is because the emergence of young people’s mobile communication culture in Finland and other Nordic countries preceded its development in the rest of Europe. In one media ethnography of Finnish teenagers, the researchers discovered that the mobile phone can be interpreted as an organic part of everyday life rather than an indication of status. Like the bulk of the literature I have reviewed in this chapter, the teens also use mobile communication to maintain their social networks and to form new relationships. The mobile phone has become an important instrument that young people use to define their personal space (Oksman and Turtiainen, 2004: 321, 324). In fact, the mobile phone is commonly referred to as kännykkä, which means “an extension of the hand” (Mäenpää, 2000; Oksman and Rautiainen 2003 in Campbell and Park, 2008: 373).

In contrast with the Global North literature reviewed, scholarship on young people and new media and ICT use is limited in Africa, South America and Asia (Goggin, 2013: 86). In the Global North, young people are in “the vanguard of social networking practices” (Livingstone, 2008: 394). In Kenya, there are a few corporate consumer surveys that indicate the dominance of youth in new media and ICT use (Njonjo, 2010). It is necessary to extend the empirical research of young people and new media. Particularly important is the need to research the relationship between the young people
and the “ubiquitous” mobile phone in Sub-Saharan Africa (Ekine, 2009: 1). According to the 2012 African Economic Outlook report prepared by experts from the African Development Bank (AfDB), the UNDP, the United Nations Economic Commission for Africa (UNECA) and the industrialized countries’ Organization for Economic Co-operation and Development (OECD), among others, Africa has the youngest population in the world. It has 200 million people aged between 15 to 24 and projections are that the figure will double by 2045 (Ighobor, 2013: 1).

Consequently, it is very important to focus how young people interact with new media and ICTs. To that effect, Goggin (2008: 354) proposed the need to “broaden and intensify the cross cultural work on mobiles, to understand the social and cultural construction, appropriation and domestication of mobiles and how our use of these devices have modified our notions of communication. The “multi-sectoral dimension of new media and ICTs means that they can affect people’s lives in economic, political and social spheres simultaneously” (Gigler, 2011: 10). There have been numerous calls for studies that interrogate the relationship between ICTs and people living in the Global South because “the ground breaking inventions have changed the way millions of people live their lives, yet researchers and practitioners in the field of ICT and development often struggle to prove specific impacts of the technology to funders” (Kleine, 2010: 675).

Towards the end of 2013 there were almost “150 million individuals using mobile devices to access the Internet in Sub-Saharan Africa” (GSMA, 2014b: 3). However, there is very little empirical literature focused on how exactly users and appropriate the mobile Internet in the context of their daily lives. One example is a qualitative study of the socially excluded or people living in poor conditions in South Africa. The researchers established that mobile Internet usage was very low due to low availability of mobile phones and limited awareness of what the mobile Internet was and what it could achieve (Chigona et al., 2009). Much of the emerging research on the usage of the mobile Internet is from India. Rangaswamy and Cutrell’s (2012: 52) anthropological investigation of the significance of the engagement of twenty teenagers with the mobile (pocket) Internet in a Hyderabad slum led to the discovery of entertainment as a critical area of technology infusion and an important path to new skills and abilities. In tandem with Rangawsamy and Cutrell (2012), Kumar’s
An ethnographic study led to the revelation that the mobile application of social networking site Facebook, offers the urban male youth a chance to cultivate international ties and “change their sense of the wider world and their place in it” (Kumar, 2014: 1134).

All the studies reviewed in this chapter reveal that the mobile phone is not a neutral technology that facilitates the collapse of distance, space and time uniformly. The four dominant themes within the M4D literature are explored as mobile phones for social networking and mobility, mobile phones for economic development, mobile phones and social networking sites for political activism and mobiles and youth cultures. There is a clear gap for the exploration of the four themes in the Sub-Saharan African literature. Particularly interesting in the discussion on mobiles for social networking and mobility is that the ability of the mobile phone and the Internet to collapse distance, space and time does not transcend social factors such as social class divisions or differentiation within a society. Social class and the reproduction of social distinctions in the use of new media and ICTs such as the mobile phone and the Internet emerge as significant in the context of this thesis. As will be discussed extensively in the latter discussion chapters, it is one of the contextual constraints that young Kiberans must contend with in the course of their social networking.
4.5 Chapter Summary and Concluding Remarks

The M4D field is “framed within the (ICT4D) perspective where technologies can be designed and woven into social systems in order to bring about positive social change” (Tacchi et al., 2012: 530). In this chapter I explore the four dominant themes within the field. The exploration reveals some interesting patterns of mobile phone use and appropriation. However, what is most distinctive is the fact that there is very limited Sub-Saharan African literature. In the fourth theme of mobiles and youth cultures I explore how the mobile is appropriated and used in various contexts within Europe. There, youth have created “full time intimate communities” around the use of their mobiles (Matsuda, 2005: 133). They have also converted it to a “kännykkä” which means “an extension of the hand” (Mäenpää 2000; Oksman and Rautiainen 2003 in Campbell and Park, 2008: 373). These explorations indicate the depth to which the mobile phone has been researched in contexts such as Finland. In the previous chapter of socio-cultural affordances, there is some indication that such explorations are emerging. For example, Nyamnjoh describes the mobile phone as an “umbilical cord” that connects Senegalese migrants to their home country (Nyamnjoh 2013b: 160). In the context of this thesis, one of the goals is to describe what the mobile phone becomes in the context of Kibera.

In this chapter, it is clear that young people are central to the discussion of Mobiles for Development. The statistics reviewed here indicate that in Kenya, they are the most avid users of new media and ICTs such as the mobile phone, the mobile Internet and social networking sites. Population projections indicate that Africa will be the youngest continent in the world by 2045 (Ighobor, 2013: 1). However, they are a population that is not very well researched. By focusing on young people and their appropriation of new media and ICT this thesis makes a two-fold contribution to the literature. One is that it addresses the academic concerns of exploring the relationship between new media and ICTs with development. Secondly, it amplifies the context of young peoples’ lives as they navigate a slum context as well as the new media and ICT they appropriate.

From the discussions in this chapter, it is evident that there are very limited cases of successful usage of new media and ICTs for economic development such as financial
gains and profits. The only study that expresses a clear link between ICT use and development is Dunn’s (2009: 53) extensive survey of Latin America and the Caribbean (Jamaica, Trinidad and Tobago). The survey indicates that the three leading forms of mobile economic engagements include a strengthening of financial support networks, social bonds and the consolidation of trust between family members and friends using the mobile phone. The only Kenyan study that highlights a link between mobile phone use and economic gain is the mixed method 2007 Research ICT study reviewed in the previous chapter. The researchers discovered that ICTs such as the mobile phone contribute to poverty reduction which they define as “increase in income, participation in governance, enhanced voice, increased access to public goods and services, reduced vulnerability or increase in risk preparedness; and increased capacity to cope with, or prepare for and adapt to, natural or economic shocks” (Waema and Miroro, 2014: 113). Evidently, the potential use of the mobile phone for economic development is plausible. However, there are offline contextual factors such as strong social networks that play a role in the use of technologies for the pursuit of economic development or development of any sort. In the next chapter, the discussion shifts to the research context. Development is a central concept in this thesis so it is important to define it and review the related literature before presenting the research context. This is foundational to the introduction of the research methods, the explication of the research context and the eventual discussion of the research findings that were discovered in the context of Kibera.
CHAPTER FIVE: A Literature Review of Development

In this chapter the broad term of development is explored. The first section of the chapter is dedicated to tracing what exactly the term development means in Kenya. In chapter three, I discussed the Government of Kenya National Development Plan, Kenya Vision 2030 in relation to ICT use. The plan is a blueprint of how the country government perceives development. Within the plan, industrialisation and scientific progress in the form of ICT infrastructural projects emerge as very significant. This is because the macro oriented plan aims at “transforming Kenya into a newly industrializing, middle-income country providing a high quality of life to all its citizens in a clean and secure environment” (Kenya Vision 2030: vii). The plan was launched in 2008 and has partly attained one of the goals to move to the middle-income bracket. In mid-2015, the “World Bank confirmed Kenya’s lower-middle income country status following the change in the way the size of its economy is calculated which showed it was 25 per cent larger than previously estimated” (Odhiambo, 2015: 1). The top down government driven development plan contrasts with the bottom up indigenous ways in which development was perceived in pre-colonial Kenya. In the next section I explore how development was defined in pre-colonial times as well as the evolution of the term in post-colonial times.

5.1 Tracing Development in Kenya

The concept of development has always been important within Kenyan society. In the context of the diverse communities within Kenya, “development was perceived as a social insurance system based on collective responsiveness, mutual individual and communal responsibility, reciprocity and trust to cushion members from the effects of famine, droughts, loss of livelihood and other threats” (Kanyinga et al., 2007: 9). The collective responsiveness is simply the action of being constantly aware of the larger community and being responsive to their needs and wants. This attitude is one that ensured that there was the constant exchange of favours between individuals so everyone in the community never lacked. The social insurance system described is also defined more commonly as “collectivism and less commonly as communitarianism and familism” in the Kenyan sociological literature (Njue et al., 2007: 60). Collectivism is a term that is used to define societies in which people are “integrated into strong,
cohesive in-groups from birth” (Allik and Realo, 2004: 32). The “in-groups include the extended family, ethnic group or village” (Hofstede, 1983: 79). The term collectivism contrasts with “individualism, which pertains to societies in which ties between individuals are loose and everyone is expected to look after himself or herself and the immediate family” (Hofstede, 1991: 32).

The less commonly discussed communitarianism and familism are described as strategies that families employ for longevity. They include the “use of extended kin and family social networks, communal childrearing practices and collective care giving of vulnerable family members such as the elderly, sick and members with disability” (Njue et al., 2007: 60). The most important and notable unifying factor in collectivism, communitarianism and familism is that the “collective identity of the whole community is defined in terms of relationships to others and individual aspirations are praised as communal or group ones” (Ma and Schoeneman, 1997: 263). According to Njue et al., (2007) collectivism raises the standards of living of the extended family by encouraging a “strong sense of community affiliation where communal good outweighs individual interests” (Njue et al., 2007: 60). In contrast, Prazak reveals that it is not always a seamless system of reciprocity as “the strain of extended family obligations may be felt strongly by the urban and educated urban African elite who must be the resource for food and lodging and employment opportunities” (Prazak, 2006: 217). Siegel also asserts that “such hospitality is a financial and emotional drain that tends to wear thin over time” (Siegel, 1996a: 238). Both scholars acknowledge that familism and collectivism differ in diverse ethnic groups. In the wider social science literature, numerous scholars have argued that it is simplistic to classify people as collectivist or individualistic based on their cultural groups.

This is because people will vary based on “worldwide, macro-level changes in immigration, political and economic trends” (Kagitçibasi, 1996; Rothbaum and Trommsdorff, 2007). There is a general consensus in the literature that individualistic and collectivistic traits can co-exist in people. For example, (Tamis-Lemonda et al., 2008: 191) discuss how “middle-income European-American parents stressed independence and self-reliance in interactions with their infants, while fostering strong affective bonds and dependencies”. Tamis-Lemonda et al., (2008) also cite Whiting and Whiting (1974, 1978) who discovered that mothers in Kenya “simultaneously wished
their children to be obedient, generous, respectful, and connected to the family as well as capable of developing skills such as independence so as to better function in a market economy”. Despite the social tensions of collectivism, it is reasonable to conclude that even in current times, “numerous African elites are generally tied to their rural kin. Others provide school fees and lodging for their own or for favourite classificatory brothers or sisters and put up relatives visiting the hospital or the market” (Siegel, 1996b: 31). By and large, collectivism and communitarianism remain relevant in select Kenyan contexts because of an enduring Harambee philosophy.

5.1.2 Harambee and Ubuntu Philosophy

Harambee is very similar to collectivism, familism and communitarianism because of the explicit mention of mutual communal responsibility and the exchange of favours based on a foundation of trust. Harambee existed before independence as a grass-root form of social exchange of labour and other forms of mutual assistance. There is a discrepancy within the literature as to the origin of the term. One popular school of thought is that, “Harambee is a colloquialism of Indian origin which was entered into the Kenyan lexicon by members of the Indian community during the colonial period. The origin of the word is two Indian words hare and Ambe; hare means praise whilst Ambe is one of the Hindu gods associated with wealth and good health” (Ndii and Waiguru, 2001: 7). Martin (1990) and Sobania (2003) attribute the term to Swahili’s working gang cry, which is an “amalgam of two words aaaa which means ready and mbee meaning push” (Ochanda, 2013: 59). Another school of thought is that the term originated from “Halambee which was used by some Bantu speaking people (possibly the Mijikenda) people of the Kenyan coast to mean pull together” (Ombudo, 1986 in Burlingame and Chepkwony, 2008: 2).

The concept of Harambee was popularised as an official national slogan and Kenyan philosophy on June 1, 1963 when Jomo Kenyatta became the first Prime Minister of Kenya. In his inaugural address, he promoted the concept that eventually became an official motto that is now incorporated in the county’s coat of arms (Nyangena, 2003: 7). The concept encapsulates “collective effort, community self-reliance and co-operative enterprises” (Ndii and Waiguru, 2001: 7). There is one resonant theme encapsulated in the terms communitarianism, familism, collectivism and Harambee
within Kenyan society. The terms underscore a strong focus on individuals being conscious of the needs and desires of others in the greater society and community. Empathy and the consciousness of the needs and desires of others are to be manifested in the physical act of sharing what an individual has with others. *Harambee* is very similar to the Ubuntu philosophy which originates in South Africa. *Ubuntu* is drawn from a “Nguni word in South Africa and it is the capacity in African culture to express compassion, reciprocity, dignity, harmony and humanity in the interests of building and maintaining a community with justice and mutual caring” (Nussbaum, 2003b: 2,3).

The late Nelson Mandela promoted *Ubuntuism* very much in the same way that founding father of Kenya, Jomo Kenyatta promoted *Harambee*. Mandela, (like Kenyatta) was adamant that there was nothing wrong with the development of the self but this had to be a process that was conscious of the needs of others. This is captured in the translation of *Ubuntu* that reads, “a person is a person through other persons or I am because we are” (Oppenheim, 2012: 369). In contrast to the top-down Vision 2030 in which the government is tasked with putting infrastructural measures in place for the delivery of development, the philosophies of *Ubuntuism* and *Harambee* constitute a bottom up approach to development which lays emphasis on communities of people as the ends and means of development. Following Kenya’s independence on December 12 1963, the concept of *Harambee* was formally integrated into the government’s development strategy. *Harambee* operated as a form of cost sharing between the government and project beneficiaries. Initially, the beneficiaries contributed communal labour to government initiated projects such as laying of water pipes then communities began initiating projects such as “schools, health centres, and water projects which they would finance by public fund raising on the expectation that the government would provide the recurrent expenditures” (Ndii and Waiguru, 2001: 7).

*Harambee* was a key strategy to pool resources in a bid to promote development (Schwartz, 2001). In the 1970s, *Harambee* as a philosophy and development strategy evolved further to an event that was categorised in two broad groups: Private and public *Harambees*. Private *Harambees* pooled funds for events such as weddings, funerals and the payment of college fees for family and friends whilst public *Harambees* were very effective in pooling resources to build schools, health dispensaries, cattle dips and roads (Waiguru, 2006: 252). However, despite the
effectiveness and success of the original *Harambee* initiatives, a study of *Harambees* from January 2000 to September 2002 revealed that the foundational ethos of collective good and consciousness of the needs of others was eroding (Ndii and Waiguru, 2001; Waiguru 2006). According to Waiguru (2006: 261-262), those ethos were replaced by a perverse culture of political philanthropy where politicians used the *Harambees* as a form of political patronage for attracting votes and maintaining loyalty amongst their electorate. Misappropriation of funds and the accentuation of inequalities between classes and regions were also identified as forms of corruption promoted by the *Harambees*. However, there is insufficient evidence in her paper and in the broader literature that identifies the specific class and regional differences that were exacerbated (Waiguru, 2006: 261, 262).

To counter the corruption of *Harambee*, the government eventually enforced the “Public Officers Ethics Act in 2004 to prohibit public servants (cabinet secretaries, principal secretaries, senators, governors, members of the county assembly, county officials, parastatal and public university chief executive officers and ministry officials) from organising and leading *Harambee* drives” (Burlingame and Chepkwony, 2008: 4). Scholars agree that the introduction of the *Harambee* fund drives has helped diverse communities meet various socio-economic needs and they have enabled development (Burlingame and Chepkwony, 2008: 4; Waiguru, 2006; Ndii and Waiguru, 2001).

Indigenous conceptualisations of development such as *Harambee* and *Ubuntu* are discussed sparingly in the mainstream development literature. In contrast, views of development as a donor driven and top down approach that is focused on economic and GDP growth dominate the Global South literature. In a historical analysis of the term development, Unwin (2009) traces the origin of the term to the eighteenth century period of European enlightenment from the ideas of Jefferson (1743-1826), Smith (1723-1790), Kant and Condorcet. In relation to the works of Easterly (2006) and Sachs (2005), he stresses that development has been preoccupied with economic growth and identifying the ways in which the economic systems of poor countries can be made more effective. The few who break away from the European school of thought on development are labeled the post development theorists or alternative development theorists. One influential form of development thinking that emerged and grew after the Second World War is the philosophy of Pan Africanism.
5.1.3 *Pan Africanism in Development*

The late Jomo Kenyatta, founding father of Kenya, together with other founding presidents Kwame Nkrumah of Ghana, Julius Nyerere of Tanzania, Patrice Lumumba of the Republic of Congo, Leopold Senghor of Senegal, Marcus Garvey of Jamaica and African Americans such as William Du Bois spread the message and values of Pan-Africanism which “emphasised a form of intellectualism, and political and economic co-operation that would lead to the political unity of Africa. The Pan-Africanist spirit advocated that riches of Africa be used for the benefit, upliftment, development and enjoyment of African people” (Nyangena, 2003: 3). Kwame Nkrumah of Ghana was very vocal in his brand of Pan-Africanism as he sought to integrate the whole of Africa. In 1958, he organised and hosted the All Africa’s People’s’ conference in Accra and eventually the Organisation for African Unity was created in 1963. As time elapsed the “Pan Africanism fervor slowly began to be replaced by postcolonial pragmatism” (Mazrui, 2005: 58). Mazrui argues that Pan Africanism began to die off alongside African intellectualism in the university campuses due to government authoritarianism and declining academic freedom. Indeed, the period after the euphoric season of independence for many African countries was characterised by civil unrest in the form of coups, wars and socio-economic upheaval.

The unrest contrasted very sharply with the spirit and the rhetoric of the Pan African founding fathers who initially wanted to “address the inter-related issues of power, identity politics, self-assertion and autonomy” (Nyangena, 2003: 3). In contrast to the development theories available from the Global North, there is very little influential indigenous and African post development theory. Slater attributes the lack of Africanised post development theory to the continuation of a long history of power relations where “Southern people are objects of knowledge and rule so that the North provides the theory and the South provides the data” (Slater, 2014: 3). Manyozo (2012: 3-4) draws upon Marx and Escobar to argue that development is a site of class conflict; he argues that the whole history of development is littered with the unequal relationship between the North and South. He argues, “development is a problem best investigated using the social resources of reason and experience”. Numerous African and Global South researchers draw upon the works of Paulo Freire and Robert Chambers. Freire’s work on critical consciousness is particularly prominent in participatory development
and communications literature. Freire was a Brazilian educational theorist, but his work is applied in political, media and development studies (Richards et al., 2001; Morrow and Torres, 2002; McCellan et al., 2014).

Freire’s conceptualisation of conscientização (critical consciousness) has been frequently referred to in African development work (Richards, 1979; Okigbo, 1996; Campbell and McPhail, 2002). Critical consciousness calls for people who “find themselves rooted in temporal-spatial situations to critically reflect about the conditions of their existence and as they do so they can come to perceive it as an objective-problematic situation. They can then emerge from their submersion and acquire the ability to intervene in reality as it is unveiled” (Freire, 1993: 109). The explicit focus on empowerment or betterment and liberation of the individual from the oppressive environment through a knowing of the world or critical consciousness resonates greatly with African scholars. Additionally, Freire’s work emphasises the agency of individuals in a community or a society as opposed to top-down development focus where the government or leaders must actively intervene in communities for their effective development. He was adamant that if a person displayed the ability to critically reflect upon their situation then they were certainly capable of changing their lives and their environment. Freire’s conceptualisations are philosophically structured rather than empirically organised for ease of application in a research context. He did not provide steps on how to apply his work empirically. However, many have managed to connect his ideas to participatory analytical and theoretical frameworks.

Like Freire, Robert Chambers’s work has been very influential in the field of participation in development. They both recognise the agency and power of individuals in determining their fate and progress as opposed to the assumption that the experts and elites at the top know what is best for people’s realities. Numerous scholars and non-profit organizations in Africa have employed Chambers work. His conceptualisation of the sustainable livelihoods framework is particularly noteworthy in many rural African studies (Ashley, 2000; Adato and Meinzen-Dick, 2002). He is interested in the voices of the poor contributing to the debates about their conditions so that changes can be based on what they need and not what the experts see best. Frameworks from both scholars are particularly useful if one wants to evaluate and measure sustainability of development projects. Another alternative development theory and framework is
Amartya Sen’s Capabilities Approach (CA) is acknowledged as the “philosophical foundation of human development” (Alkire, 2010: 15). His initial conceptualisation of the Capabilities Approach (CA) was in a 1979 Stanford University lecture *Equality of What?* In the lecture he vaguely introduced the idea of a “basic capability as being able to do certain basic things” (Sen, 1979: 218). Sen continued to provide fuller accounts of the approach in the *Dewey Lectures* (Sen, 1985) and significant articles such as *Development as Capability Expansion* (Sen, 1990). In the latter article, he asserts that the underlying motivation of the term capability is well captured by “Marx’s claim that, replacing the domination of circumstances and chance over individuals by the domination of individuals over chance” (Sen 1990: 44). Consequently, he argues that the capability reflects a person’s freedom to choose between different ways of living. In *Development as Freedom*, Sen extends his argument by asserting that “an adequate conception of development must go beyond the accumulation of wealth and the growth of gross national product and other income related variables” (Sen 1999: 14). Sen acknowledges that the focus on freedom, capability and the quality of life has connections to Aristotle’s focus on flourishing and capacity which are summarised in the flourishing theory (Sen, 1999: 14).

The flourishing theory proposes that human beings are social animals that can only flourish in the context of society, the nature of any living being is determined by what that being is equipped to do and to flourish as a being of that kind is to do those things excellently and continuously (Bynum, 2006: 161). Aristotle’s propositions are similar to Sen’s argument that development is the process of expanding the real freedoms that people have reason to value. Like Aristotle, Sen also highlights the social context when he asserts that “expanding the freedoms that we have reason to value not only makes our lives richer and more unfettered, but allows us to be fuller social persons, exercising our own volitions and interacting with and influencing the world in which
we live” (Sen,1999: 15). Sen uses the terms freedoms and capabilities interchangeably in *development as freedom*. He argues that development is the process of expanding the real freedoms that people enjoy:

Expansion of freedom is viewed as both the primary end and the principal means of development. They can be called respectively the constitutive role and the instrumental role of freedom in development. The constitutive role of freedom relates to the importance of substantive freedom in enriching human life. *The substantive freedoms include elementary capabilities like being able to avoid such deprivations as starvation, undernourishment, escape morbidity and premature mortality, as well as the freedoms associated with being literate and numerate, enjoying participation and so on.*

In the constitutive perspective, development involves expansion of these and other basic freedoms. Development in this view is the process of expanding human freedoms and the assessment of development has to be informed by this consideration (Sen, 1999: 36)

Sen recommends that there is a distinction between the existence of a capability or freedom and the process that facilitates the expansion of that capability or freedom. He suggests that the evaluation of development should include both the existence of a capability and the opportunity to expand that capability. In a latter paper he brings out the distinction more clearly when he argues that seeing opportunity in terms of capability allows us to distinguish between whether a person is actually able to do things she would value doing and whether she possesses the means and instruments or permissions she would like to (Sen, 2005: 153). Therefore, Sen broadly proposes that a capability is the ability to choose the life one has reason to value (Sen 1979, 1985, 1999). Sen (1999) also introduces the term functionings. The concept also has Aristotelian roots and reflects the various things a person may value doing or being. The valued functionings may vary from being adequately nourished and being free to “complex ones such as being able to take part in the life of the community and having self-respect” (Sen,1999: 75). Consequently, a person’s capability refers to the alternative combinations of functionings that are feasible for the person to achieve.

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2 *Note the interchange of the term freedom with elementary capability.*
Capability is a kind of freedom; the substantive freedom to achieve alternative functioning combinations (the freedom to achieve various lifestyles) (Sen, 1999: 75). Therefore, the evaluative focus of the capability approach can either be the realised functionings (what a person is actually able to do) or the capability set of alternatives he or she has (their real opportunities) (Sen 1999: 75). A focus on freedom of choice is also found in the *Ubuntu*, *Harambee*, Pan Africanism, *conscientização* and the sustainable livelihoods framework I have reviewed in the previous section. All of the philosophies are branded as ethical approaches to development because they focus on putting people first in the development process (Alkire and Deneulin, 2009: 23).

Nussbaum has also been influential in extending the Capabilities Approach as a theory of social justice (Nussbaum, 2000, 2003a, 2006, 2011). She has collaborated with Sen numerous times but their conceptualisations of the Capabilities Approach differ. This is because she makes what Sen describes as a value judgement when she articulates central capabilities in her arguments for social justice. Although Sen says it is permissible to have important capabilities, he is against “a grand mausoleum of one fixed and final list of capabilities” (Sen, 2004: 80). He refuses to defend a “pre-determined list chosen by theorists without any general social discussion or public reasoning” (Sen, 2005: 158).

Nussbaum provides an easily understandable account of the CA. However, she is explicitly focused on social justice issues such as equality and oppression. Her work is vastly applied in human rights and feminist research because of her foundational work on women and human development (Nussbaum, 2003a; Mosedale, 2005). Regardless of their difference in the articulation of what exactly capabilities are, Nussbaum and Sen share some similarities in their views on capabilities and functionings.

### 5.2.1 Nussbaum’s Conceptualisation of the Capabilities Approach

Like Sen, Nussbaum defines a “capability as a kind of freedom; the substantive freedom to achieve alternative functioning combinations. The freedoms and opportunities created by a combination of personal abilities and the political, social and economic environment” (Nussbaum, 2011: 20). Nussbaum also defines functionings as beings and doings that are the outgrowths of capabilities since they are the active
realisations of one or more capabilities. She is adamant that the existence of capabilities is of great importance even if they are not used because they are spheres of freedoms of choice. Therefore, “options are freedoms and freedoms have intrinsic value” (Nussbaum, 2011: 25). In the spirit of Aristotle, she specifies a list of central capabilities that she believes will provide a dignified and minimally flourishing life. They are as follows (Nussbaum, 2011: 33)

1. **Life.** Being able to live to the end of human life of normal length.
2. **Bodily health.** Good reproductive health, adequate nourishment and shelter.
3. **Bodily integrity.** Being able to move freely from place to place, security against sexual violence and having opportunities for sexual satisfaction.
4. **Senses, imagination and thought.** Being able to use the senses to imagine, think and reason. Being able to use one’s mind in connection with experiencing and producing works and events of one’s own choice.
5. **Emotions.** Being able to have attachments to things and people outside ourselves; to love those who love and care for us and grieve at their absence.
6. **Practical reason.** Being able to form a conception of the good and to engage in critical reflection about the planning of one’s life.
7. **Affiliation.** (A) Being able to live with and toward others, to recognise and show concern for other human beings, to engage in various forms of social interaction. (B) Having the social bases of self-respect and non-humiliation; being able to be treated as a dignified being whose worth is equal to that of others.
8. **Other species.** Being able to live with concern for and in relation to other animals, plants and the world of nature.
9. **Play.** Being able to laugh, to play and enjoy recreational activities.
10. **Control over one’s environment.** (A) Political. Being able to participate effectively in political choices that govern one’s life. (B) Material. Being able to hold property (both land and movable goods), and having property rights on an equal basis with others; having the right to seek employment.
Nussbaum indicates that her list of capabilities is merely a proposal so that they can be applied in diverse contexts. However, it is very difficult to apply her philosophy of the good life which is grounded in constitutional discourse to studies such as this one which are focused on technology use and appropriation. I believe her framework would also favour a deductive study where one must specify the variables or the hypotheses prior to the studies. She concludes that the exercising of innate or internal capabilities is dependent on the political, social and economic conditions (Nussbaum, 2011: 23). The acknowledgement that the conditions that prevail in a community have an effect on the capabilities or capability set is very important. Those conditions are also referred to as the conversion factors.

5.2.2 Conversion Factors

The extent to which people can generate capabilities and realise various functionings from artefacts, goods and services such as the mobile phone and cyber café access are influenced by three sets of conversion factors. The conversion factors are based on the premise that humanity is very diverse. According to Sen, “we are deeply diverse in our internal characteristics (age, gender, general abilities, particular talents, proneness to illness, and so on) as well as in external circumstances (such as ownership of assets, social backgrounds or environmental predicaments)” (Sen, 1992: xi). Consequently, the consideration of the diversity in humanity is what distinguishes the Capability Approach from most theories of development (Zheng, 2009: 70). There are three categories of conversion factors. Firstly, personal conversion factors include individual characteristics such as gender and literacy. For example, if a person is illiterate this will have an effect on that person’s ability to convert access to the Internet into a realised functioning. Secondly, social conversion factors include a number of characteristics of social settings such as “social norms (e.g. role of women, rules of behaviour, materialism, religion, etc.), social institutions (e.g. rule of law, political rights, public policies), and power structures (e.g. hierarchy, politics)” (Zheng and Walsham, 2008: 224). Thirdly, environmental conversion factors are elements such as climatic conditions or geographical location. For example, “if there are no paved roads or if a government or the dominant societal culture imposes a social or legal norm that women are not allowed to cycle without being accompanied by a male family member, then it becomes much more difficult or even impossible to use the good to enable the
functioning” (Robeyns, 2005: 99). Consequently, the actual achievement of functionings or a capability set is a result of personal choice to select from the capabilities available “subject to personal preferences, social pressure and other decision-making mechanisms. These are again affected by personal, social and environmental characteristics, such as personal history and social influences” (Zheng, 2007: 3).

5.2.2.1 Empirical cases of conversion factors and the element of choice in ICT usage studies

An empirical example of how conversion factors influence ICT use is exemplified in an interpretive case study in Sweden. Hatakka et al., (2013) evaluated the effects of students laptop use from a capability perspective by investigating increases and decreases of students’ opportunities and choices. The researchers chose to focus on educational capabilities and they were open to individual differences. They discovered major positive outcomes or functionings enabled by the Internet resources were a more fun learning environment, efficiency gains, increased access to information and support for their education management (Hatakka et al., 2013: 106). Additionally, they observed that some conversion factors have a dual effect as they are enabling for some people but restrictive to others. For example, the student’s economy or availability of funds affected whether or not they could access the Internet from a laptop. In some cases, the same enabling Internet resources were also restrictive because they were a distraction from their schoolwork.

In a study of schools in the Western Cape South Africa, Chigona and Chigona (2010: 11) applied the CA to their research to understand factors which may hinder educators in a developing country context from effectively using ICT for curriculum delivery. They discovered several personal, social and environmental factors that hinder the educators from using ICT effectively. The factors included “insufficient ICT training to enable the educators to use the technology for teaching effectively and a lack of freedom for some educators to access the laboratories” (Chigona and Chigona, 2010: 11). From the studies reviewed, it is evident that the Capabilities Approach provides an evaluative framework that can facilitate the identification of conversion factors that enable or restrict capabilities and realised functionings. Additionally, the CA takes into
account the issue of choice in the use or non-use of goods, artefacts and services such as the Internet resources I have discussed. The consideration of the concept of choice is of great significance within the approach because it is instrumental in the decision to convert a capability such as access to the Internet into a realised functioning such as meaningful social networking.

The very act of choosing specific combinations of functionings endows a person with the “freedom to lead one type of life or another” (Numbaur, 2013: 222). However, the choice not to choose specific combinations of functionings can also restrict the same freedom. Numerous scholars who have applied the CA to their research or have operationalised the approach have explicitly focused on the element of choice. In a Kenyan ICT survey of 1,461 low income households and a preliminary survey of sixty households conducted in February 2010, Ndung’u and Waema (2011: 111) discovered that the “households choices to use new technologies were based on their perceptions of the role that the new technologies played in enhancing their quality of life. Access and usage was limited and restricted to urban areas while mobile phone usage was distributed across the country”. Using the Capabilities Approach as their theoretical framework they argue that development outcomes are functionings and that the ability of individuals to make use of the technologies to achieve the relevant functionings is a function of their education, skills, and exposure to the technologies. They also observe that there are some negative outcomes such as the threat of thievery because of the ownership of a mobile phone (Ndung’u and Waema, 2011: 112).

In the context of Chile, Kleine (2010) operationalised the CA using her choice framework in an ethnographic case study related to the impact of telecentres in rural Chile. One illustration from her findings was of a woman who documented that the greatest impact the telecentre had on her life was the facilitation of the chance to virtually visit Kaiserslautern (Kleine, 2010: 687). The CA supports the visit as an expansion of freedom and as development because the lady had reason to value it. Alternatively, other competing measures of development such as Gross Domestic Product (GDP) would have noted that the woman used the technology to make a virtual trip but since there is no direct economic benefit, her views may not have been quantified into the overall tally of development outcomes. In the context of this thesis, I acknowledge that particular capabilities are context and culture dependent. Therefore, it
is the goal of the research discussion in chapter nine to offer a new account of capabilities in the environmental context of Kibera.

The many choices that have to be made in arriving at a capability set are accomplished in and through an individual’s participation within the community in which they live. The extent of participation can be limited by the prevailing institution which can make it difficult to take advantage of the opportunities that present themselves (Nambiar, 2013: 222). The focus on capabilities, functionings, conversion factors and personal choice as an evaluative space for defining development make it an approach capable of assessing how people use and appropriate new media and ICTs for development. As noted, the approach has been applied to diverse ICT4D studies. The holistic and open-ended nature of the approach enables numerous researchers to apply it to various contexts. In this particular thesis it is suitable because it contrasts with the top down pursuit of ICTs for development (ICT4D) agenda that the government of Kenya and donors (international organisations) pursue in their pursuit of development within the country. It offers a departure from the predominant ICT infrastructural developments to a focus on people as the ends and means of development.

Whilst economic progress in the form of expanding GDP and GNP are very necessary in Kenya, there is a definite need to refocus on the beneficiaries of the expansive development. As reviewed in chapter three and four, there is a lot of optimism about the mobile phone’s capability to provide services in sectors such as health, education and disaster response. However, the voices of the users and the supposed beneficiaries of development remain very limited. Sen’s Capability Approach provides a formidable way to evaluate development from a people centred perspective. The allure of the approach is the idea that development is simply defined as what an individual has reason to value. Development is “ultimately the expansion of the capability of people to do the things they have reason to value and to choose” (Sen, 1997: 20).

5.2.3 Criticisms of the Capabilities Approach

As attractive as the CA is, it is “philosophically profound, but methodologically somewhat vague” (Zheng and Walsham, 2008: 224). The main criticism of the Capabilities Approach is that the focus on individual capabilities may be misleading
because people are interdependent beings in the societies in which they exist (Gore 1997; Evans, 2002; Stewart and Deneulin 2002; Gasper and van Staveren 2003; Stewart 2005; Deneulin 2006; Alkire, 2008: 8). For example, Deneulin (2008: 107) argues that “despite the crucial role of social arrangements in the construction of individual freedoms themselves, Sen is very reluctant to approach development with a supra-individual subject”. In a similar vein, Stewart (2005: 187) argues that the Capabilities Approach should also focus on group capabilities because the benefits of belonging to a group may be of intrinsic importance in the “expansion of well-being, the provision of self-esteem and positive human relationships and so on.”

One key point that emerges from the criticisms of the CA is that it is necessary to consider the political, social and environmental structures in which people exist. The scholars lay emphasis that people do not live in isolation and are often a product of their environmental context as well as socio-cultural norms. I agree with the importance of considering the societal and interpersonal group dynamics of individuals. However, within the discussion of conversion factors and the element of choice in the CA there is evidence that Sen is aware of environmental and socio-cultural conditions people are embedded in. He explicitly acknowledges that conditions that prevail in a community have an effect on the capabilities, capability set and realised functionings (Sen, 1992: xi, 40). As discussed in the previous section, the ability of individuals to convert resources or artefacts into realised functionings or a capability set is based on the premise that humanity is very diverse. Therefore, people find themselves in a range of contexts. As will be elaborated fully in chapter seven; in the context of this thesis, the youth reside in the physical environment of a ‘slum’ but they are exposed to a range of other diverse social environments such as families and schools.

Therefore, I argue that a focus on the conversion factors is sufficient enough to capture the diversity in a community. Furthermore, the focus on an individual is very necessary because people will perceive capabilities or functionings in very diverse ways. Even in a society that is described as communitarian, people have markedly different views of development based on age, gender, and levels of education. This does not mean it is impossible for people to desire the same capabilities or forms of development. For that reason I believe it is prudent that Sen has left the Capabilities Approach open enough to facilitate empirical evaluation in the form of diverse opinions. It is in fact, the reason
that I applied the individual centred approach to make sense of the data that I eventually collected in Kibera, Kenya. Additionally, the communicative ecologies framework and the domestication of technologies approach that are also used to make sense of the data in this thesis all focus on the individual use and appropriation of new media and ICT. The Capabilities Approach is further enhanced by the philosophical paradigm that this thesis is grounded upon. In the next section I explore critical realism and conclude the section by discussing how communicative ecologies, domestication of technologies and the Capabilities Approach all merge together to present the data collected in this thesis.

5.3 The Philosophical Paradigm of Critical Realism

There are no fixed methods to apply critical realism to research and one of the founders of critical realism Bhaskar (1975) privileged the extension of a new philosophy of science as opposed to clearly setting out methods or steps to conduct research. Consequently, many researchers often apply various methods to their critical realist research and draw upon various scholars who have extended the philosophy (Sayer, 1992, 2000; Archer, 1995). The Kenyan ICT use surveys discussed in chapter three are instrumental in providing a general analysis of the ICT sector in Kenya but they cannot capture the variations of use within the diverse contexts in the country. It is impossible to generalize ICT use across time and space and it is fruitful to view ICT use from a critical realist perspective because “social reality is layered” and the social context of use is very significant in research (Elder-Vass, 2010: 44). The critical realist approach acknowledges partial agreement with positivists “that the world contains material conditions upon which certain broad consensus beliefs can be attained, but at the same time, due account must be given to variations in the meanings individuals from different communities may attach to the same social phenomena” (Gunter, 1999: 7-8).

The critical realist paradigm is often viewed as a middle ground between the positivists’ absolutism and the interpretive relativism (Mingers, 2013: 795). The acknowledgement that the integration of new media and ICTs in our lives is a process that takes place contextually fits in very well with critical realism because, “critical realism wants to get beneath the surface to understand and explain why things are as
they are and to hypothesize the structures and mechanisms that shape observable
events” (Mingers, 2002: 302). One goal of a critical realist is to abstract the underlying
causal powers or causal mechanisms under investigation and think conceptually about
how they operate (Roberts, 2014: 4-5). Ethnographic techniques can be used “within
the model of critical realism to investigate the nature of generative structures through
examination of social phenomena” (Porter, 1993: 594). Consequently, the
ethnographic methods utilised and the subsequent data analysis focuses on uncovering
the layers of social reality in Kibera. The theoretical lens of the Capabilities Approach
also fits in very well with the critical realist orientation because of the acknowledgment
that there are layers in social reality that determine how agents interact.

I draw a parallel with the personal, environmental and social conversion factors in the
Capabilities Approach that determine how one converts an artefact such as the mobile
phone into a capability set or a range of functionings such as social networking or
political activism. Critical theorists assume that people can consciously act to change
their social and economic conditions and acknowledge that human ability to improve
their conditions is constrained by various forms of social, cultural and political
domination (Klein and Myers, 1999: 69). Critical realism “recognizes the inevitable
fallibility of observation, especially in the social world, and therefore requires the
researcher to be particularly aware of the assumptions and limitation of their research”
(Mingers, 2002: 302). Qualitative methods within critical realism have a more
profound role as they are more capable of “describing phenomenon, constructing
propositions and identifying structured interactions between complex mechanisms”
(Mingers et al., 2013: 800). Accordingly, the objects of social research are those
“persistent relations between individuals and groups, and ... the relations between these
relations” (Bhaskar, 1989: 71 in Rees and Gatenby, 2014: 6).

5.3.1 Defining a Context in Critical Realism

There are some notable examples of the use of critical realism in ethnographic research.
In a study of racism and professionalism in a medical setting, Porter builds on Bhaskar
(1989) to argue that the aim of natural and social science becomes the identification of
the structures and mechanisms which generate tendencies in the behavior of the
phenomena (Porter, 1993: 594). He extends Bhaskar’s thesis that, “society, must be regarded as an ensemble of structures, practices and conventions which individuals reproduce and transform” (Bhaskar 1989: 36). According to Kempster and Karry, (2011: 111), critical realists seek to express the power of embedded meanings, practices and relationships as structures that affect people. Consequently, a context is constituted by structures which include a nexus of embedded meanings, practices and relationships that pre-exist agents. It is also constituted by agents who sustain and elaborate meanings, practices and relationships. The basic theoretical assumption of critical realism is that human action is enabled and constrained by social structures but this action in turn reproduces or transforms those structures (Kempster and Karry, 2011: 111).

Similarly, Sayer (1992: 92) defines structures as the set of internally related objects or practices that constitute the real entities we seek to investigate in a specific contextual situation. These structures may be part of a larger structure, and also may contain a number of component substructures. Fleetwood (2005) also describes the structure as a “socio-technical environment which typically includes a social structure consisting of individuals, groups, and organizations, along with a set of rules and practices, technological artefacts (e.g., software tools and information technologies), and discursive entities such as language and culture”. According to Porter (1993), theoretical analysis of the nature of structures is an essential prerequisite to the understanding of social phenomena. He provides an example of racism from his empirical work and argues that racism involves enduring relations between agents in different social positions. Being “black in a racist society entails being categorized in numerous disadvantageous ways. Racist engendered positions predate any of the individual actors situated within them and may well outlast them” (Porter, 1993: 593, 597).

Critical realism has been applied to diverse disciplines such as education (Tao, 2013), nursing research (Porter, 1993; McEvoy and Richards, 2003), Information Systems (IS) research (Mingers, 2002; Wynn and Williams, 2012; Smith, 2006; Mingers et al., 2013), geography (Yeung, 1997; Proctor, 1992) leadership and management (Kempster and Parry, 2011) but many scholars have noted that there are very few clear examples of how to operationalize critical realism in research (Wynn and Williams, 2012;
Yeung, 1997). This is because Bhaskar did not intend to confine critical realism to one formula of application and Yeung (1997: 56) argues that the critical realists were not too concerned with methodology in the 1970s and early 1980s because they were mainly involved in engaging with a debate within the philosophy of science in opposition to the positivist position. In recent times, some very formidable engagements with method have emerged. There are two sets of scholars that I draw upon extensively because of their accessibility and pragmatic approach on how to apply critical realism to research. Wynn and Williams (2012: 796) propose five methodological principles to guide a critical realist research. In the context of this thesis, two principles are utilised and they are summarised below. The scholars also draw upon Sayer (1992) extensively so his work is also relevant in the context of this thesis.

**Figure 5: Methodological Principles to Guide Critical Realist Research**

<table>
<thead>
<tr>
<th>Methodological Principle</th>
<th>Evaluation Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explication of events</strong>: Identify and abstract the events being studied, usually from experiences, as a foundation for understanding what really happened in the underlying phenomena</td>
<td>Thick description of case story and an abstracted sequence of events (experiences of participants and observers)</td>
</tr>
<tr>
<td><strong>Explication of structure and context</strong>: Identify components of social and physical structure along with relationships among them.</td>
<td>Description of the structural entities, constituent parts and contextual conditions existing in the case. Explication of changes to the structure.</td>
</tr>
</tbody>
</table>
In the next research methods chapter, I apply the first two principles of explication of events as well as the explication of the structure and context. In tandem with critical realism and high quality qualitative research in general, I also reflect on my positionality and influence within the research (Mingers, 2002: 302). I follow the methodological principles by presenting a thick description of the research methods followed by the discussion and analysis of the components of social and physical structure in Kibera along with the relationships among them in the next chapter.

5.4 Towards a Theoretical and Evaluative Framework

Based on Amartya Sen’s CA, I set out to establish the existence of capabilities in the research context. In the context of this thesis I borrow from Sen’s (1999: 15) broad definition of development as *the process of expanding the real freedoms that people have reason to value*. As reviewed, the words freedom and capabilities are used interchangeably by Sen. Therefore, my research objective was to probe the existence of potential capabilities, freedoms or opportunities for those who appropriate new media and if the existence of new media itself was a capability that helped the people realise several functionings. Despite what seems to be an explicit application of Sen’s theory in my study, it is important to note that this was not a deductive study. Before and after the fieldwork I was careful not to be constrained by theoretical frameworks. I had analysed and reviewed the literature on Capabilities Approach before the fieldwork began in January 2013 but was open to the fact that the results might not align with the theoretical frameworks reviewed. I also considered that, “good ethnography is theory driven and is likely to be much more reflective of inductive theoretical insights than those that are purely deductive” (Wilson and Chaddha, 2010: 29).

Anderson presents an argument for the use of an inductive theoretical approach in ethnography. His argument is influential in the context of this thesis as he argues that “the ethnographer should enter the field armed with a certain sociological sophistication influenced by the theoretical work of scholars and as fieldwork proceeds this perspective helps one to formulate questions concerning the social organization of the subjects and their settings” (Anderson, 2002: 1536). His words capture my actions because prior to the fieldwork I was influenced by the theoretical work of Amartya Sen on the Capabilities Approach and Nick Couldry’s work on voice. Couldry expands
Sen’s Capabilities Approach by prescribing that, “the narrative act of giving reasons about our life is a crucial part of what gives substance to Sen’s understanding of freedom. If at the root of Sen’s normative framework is his concept rights to capabilities then one of those central capabilities is the capability of voice” (Couldry, 2010: 105).

Out of Couldry’s broad theorisation of voice, I had adopted voice as process that states that, “humans have a desire to narrate and this involves an on-going process of reflection, exchanging narratives back and forth between our past and present selves, and between us and others” (Couldry, 2010: 7). The reason I selected the capability of voice to complement the Capabilities Approach was because the initial focus of this study was to investigate the creative engagement between youthful Kiberans and the Voice of Kibera (VOK) communication platform located in Kibera, Kenya. The new media and ICT communication platform VOK is representative of the convergence of mapping software, mobile and technology enabled by Ushahidi (Kiswahili word for testimony) free and open source software. As discussed extensively in chapter three, Ushahidi is one of the mobile applications for disaster response in Kenya that enables crowdsourcing of information from SMS, Twitter and e-mail that is then displayed as red dots on the interactive map of Kibera.

Figure 6: Voice of Kibera Platform
A click on the red flags will display a report such as:

*M-Maji in Kibera (a code that directs people where to get water that was launched in the Kibera by Umande Trust, Stanford University, Safaricom and Nairobi Water Company).*

- **Location:** Gatwekera
- **Date:** 27-09-2013
- **Status:** Verified
- **Time:** 21:18
- **Category:** Sanitation

In the example above, the information relayed on the map indicates that Stanford University, mobile company Safaricom and the Nairobi Water Company collaborated on a joint community project to provide Kibera residents with water. This was to be facilitated by residents’ texting a select code. The mobile phone project is one of the many that have been trialled in slum contexts all over Nairobi. There is insufficient evidence as to whether the project is still operational.

**Figure 7: Summary of How Voice of Kibera works**

1. **User sends SMS to VOK safaricom number 0726300400**
2. **The SMS information is verified by the editor by contacting fellow VOK members/contacts in the respective villages**
3. **The SMS grammar is edited**
4. **The SMS is displayed contextually on the map as a red dot**
5. **People can click on the red dots and read the information**

*Source: from field notes of April 2013
The editors position is rotational and is ever changing*
The VOK operates as a Non-Governmental Organisation in Karanja village, Kibera. It is embedded within the Map Kibera Trust founded by Erica Hagen and Mikel Maron in October 2009. The team is comprised of 20 youth drawn from the 13 villages of Kibera. Eight of the youth are in charge of updating the digital map, six are in VOK and another six are in the sister organisation, Kibera News Network video journalism project. Kiberans outside the organisational context can access the VOK if they have an Internet enabled mobile phone, computer or tablet. To send a report or SMS for display on the interactive map, one utilises the designated Safaricom (Kenya’s leading mobile network operator) phone number. For Safaricom subscribers, the cost of one SMS is one shilling (considerably less than a (£) penny) or free in case of mobile service promotions. As will be explored in the next chapter, the dated and limited statistics on Kibera indicate that the average annual income per household is KSH8,500 (£55.12) and an estimate of KSH1,420 (£10.10) per month as the income per capita (Research International, 2009: 26). Therefore, a shilling for an SMS is reasonably affordable in most of Kibera.

In order to use VOK, there is no privacy agreement to assent to and the people who send messages are granted anonymity. Once the youth at the VOK receive the messages they edit them and facilitate their display on the map as the red digital dots illustrated on the previous page. In tandem with the workings of Voice of Kibera, it was my initial research objective to investigate if the narrative act of reflection and exchange of narratives in the community described by Couldry’s capability of voice is facilitated by VOK’s mobile platform. I was to investigate if the act of sending and receiving SMS reports from VOK’s platform was equivalent to choosing a capability of voice. I perceived that in some cases the reports might contain information on health and political awareness that can lead to even more tangible benefits such as empowerment and social change. For example, a user may read an SMS that gives directions to a free medical camp or a local political debate. Such an action has the potential to provide a user of the technology with an advantage over someone who is seated at home jobless and sick.

According to Hagen (2011: 70), “countless surveys have been conducted in Kibera but the NGOs do not share the information with the community or implement their ideas”. Therefore, the ability of the technology to facilitate the capability of voice for the
residents is a potentially transformative action with positive socio-cultural outcomes. In one of the evaluations that had been conducted by the VOK founders, they established that there were at least 386 users between April and December 2010 (Hagen, 2011: 80). The excerpt below is from one of the articles that highlight the perceived impact of the Voice of Kibera and Map Kibera trust as a whole. It is retrieved from the Map Kibera blog and summarises the activities of a Global Voices Summit that members of the organisation attended.

Map Kibera also shared how the information sharing has helped improve the community and how it has been extended to slums of Mathare and Mukuru, where other young people like Cosmas, Yvonne, Javin and Vincent, who were also present at the summit, shared their experiences in these respective regions. (KNN, 2012).

Another article on a UNICEF web page titled Map Kibera and Regynnah’s empowerment shares the following testimonial:

Until November 2009, when Map Kibera came about, I used to stay at home doing casual jobs to help out. Now I am one of a group of 13 who have been trained to use GPS devices and upload data to the Internet. Map Kibera has really helped my people know what we have in our community and how to make use and improve what is available (Awino and Map Kibera, 2011).

A more recent article reads:

Voice of Kibera utilizes the Ushahidi platform to give the citizens of Kibera a “collective global voice”. The Voice of Kibera is an initiative of the Map Kibera Project and uses the map generated by community members to visualize and display events happening in Kibera. Prior to Voice of Kibera, the news stories about Kibera were not produced or written by residents of Kibera. This

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3 Note the claim that information sharing has empowered the community.
4 There are print journals in Kibera known as Kibera Journal that is compiled by Kiberans and distributed by them
resulted in an inaccurate depiction of what Kibera is and who lived there (Archisholm, 2013).

All the articles above highlight the active usage and positive benefits of the platform. However, they do not provide one with precise information on how and when members of Kibera who do not have any affiliation with the organisations access the platform. Consequently, my first task was to acquire data on Internet enabled mobile phones in Kibera. It was a challenging task and I had to negotiate with Safaricom (the leading mobile network provider in Kenya) for slightly over a year to get the figures that I discuss in the research findings discussion chapter eight. The sum of my interactions in the field from January to April 2013 led me to reassess the purpose of the research and the sample because it was evident that the usage of VOK was very minimal. I did not meet many Kiberans outside the organisation’s context who knew what either Voice of Kibera or Map Kibera was.

In the interviews I will explore and discuss in chapter eight and nine, there are four users of Voice of Kibera. However, the same youth eventually abandoned the organisation and stopped using the platform by the end of my fieldwork in December 2013. As a result of my three-month field experience in April 2013 I decided to assess the engagement between the youthful Kiberans and new media technologies more broadly. Ethnographic research is quite unpredictable and I had to make a key decision about my theoretical position in the field and after the fieldwork because it was evident I was no longer trying to investigate the potential of capability of voice. I had to avoid the danger of an inductive approach that can “result in inappropriate use of certain theoretical insights to interpret new findings” (Wilson and Chaddha, 2010: 25). Consequently, my research questions were altered to:

**Research Questions**

RQ1. Do the young people in Kibera appropriate new media technology?
RQ2. What forms of new media do the young people appropriate?  
(Sub question: Which one is the most significant to each individual?)
RQ3. How and why do they appropriate the new media technologies?
RQ4. Is there an expansion of capabilities for those who appropriate new media technologies?  
(What possible form is the capability or capabilities?)
Sen’s open-ended CA favoured my inductive approach and as the investigation proceeded, I realised that the functionings were also relevant to my thesis. As will be elaborated in the discussion of the research findings in chapter eight and nine, the questions on media appropriation in my topic guide (see appendix 1) elicited vast data on the specific functionings or what exactly the young Kiberans were able to do with their media. After the fieldwork I was able to analyse the data as I reviewed more literature in an attempt to make sense of my fieldwork. This was to “ensure that important issues were not overlooked and to guide my interpretation and focus” (Rowlands, 2005: 87). The CA also acted as a sensitising or orienting concept because theory and data collection are interpolated. Therefore, in order to make sense of the corpus of data, I utilised the CA, communicative ecologies framework and the domestication of technologies version of appropriation. As discussed extensively in chapter two, the domestication of technologies approach is particularly useful when complemented with the communicative ecologies framework because the two facilitate a contextual and individual approach to analysis of how young Kiberans use and appropriate new media and ICTs in the physical, social and economic structure of a slum. Like the Capabilities Approach, domestication and communicative ecologies are open enough to allow divergent views in many technology users.

5.4.1 Why Research Kibera?

In chapter three, I explore how Kenya emerges as significant in the M4D and ICT4D literature because it has a notably high mobile penetration (78.2 percent in a country of 40 million people), 3G and 4G penetration (14.2 percent) (Heinrich, 2014; GSMA, 2013). In addition to high mobile phone adoption in the country, Kenya is celebrated as Africa’s “Silicon Savannah” due to the government goal to establish a smart techno city comprised of a technology hub, a mix of businesses, residences and urban amenities like shopping malls (Smith, 2012: 1). The goal of the Konza techno city is to serve as an influential ICT hub in the African region; a city that would function like Silicon Valley. In addition to the ambitious project, there are a vast number of technology based multinational companies such as Google and Oracle that are headquartered in Nairobi. Innovation hubs such as iHub, NaiLab and mLab provide spaces for technology entrepreneurs to create their applications as they seek out investors.
However, in the midst of the remarkable growth of the ICT sector, the country is also faced with socio-economic challenges such as the expansion of ‘slums’.

In one of the more recent evaluations of ‘slums’, it was estimated that more than 71 percent of the urban population of approximately 11,978,118 Kenyans dwell in ‘slums’ (Mutisya and Yarime, 2011: 201). Economists Marx et al., (2013: 187) indicate that in Sub-Saharan Africa, slum populations are growing at 4.5 percent per annum, a rate at which populations double every 15 years. Ironically, the largest mobile phone market is also speculated to be drawn from the low-income communities (Karugu and Mwendwa, 2008). Therefore, Kibera was selected as a research context because it exemplifies a paradoxical example of enthusiastic new media and ICT appropriation in the midst of an environment with resource constraints. As will be fully elaborated in chapter seven, Kibera is also very interesting as it has attracted vast “international attention and donor funding but achieved very little in meeting actual development goals” (Hagen, 2011: 70). In this thesis I purposefully focus on young people because it was my goal to “broaden and intensify the cross cultural work on mobiles, appropriation and domestication of mobiles because scholarship on the youth and the mobile in Africa, South America and Asia is limited” (Goggin, 2013: 86; Goggin 2008: 354).

5.5 Chapter Summary and Concluding Remarks

This lengthy chapter presents an extensive review of the broad development literature. The first section of the chapter is dedicated to exploring the indigenous ways in which development is conceptualised in Kenya. It is a historical account of the evolution the term development has undergone. The indigenous accounts of development are explicitly focused on development as a bottom up and people centred process that involves communal co-operation and mutual responsibility. This contrasts with the national development Kenya Vision 2030 industrialisation, top down and government driven plan that drives development thinking and ICT investment in Kenya. Whilst indigenous forms of development like Harambee and Pan Africanism are very people centred, the latter plan is focused on the provision of infrastructure and economic growth as people are moved up and down the economic charts of progress.
In the next section of the chapter, the focus shifts to a review of major development theories. Development thinking by Freire (1993) and Chambers (1995) is compared with Sen’s influential Capabilities Approach. The CA is presented as the theoretical and evaluative framework that is used to make sense of the data collected in Kibera.

The greatest allure of the approach is also its greatest criticism. It is an open-ended approach that allows one to go to research contexts and evaluate what people perceive to be development in their lives. This is because Sen (1999: 15) is adamant development is the expansion of freedoms, opportunities or capabilities that people have reason to value. Unlike Nussbaum (2011) who is very clear on what freedoms and capabilities need to be expanded for development to take place. Sen does not define the capabilities. Empirical researchers are encouraged to narrow down what capabilities they may find useful but they must base this on the context and the people. This is because Sen believes people are the ends and means of development. In practice, the openness of the CA can be difficult to apply in a research that has clear objectives and timelines.

In the context of this thesis, it was initially a challenge to be so open to what development is but in the context of the research I discovered that people are often very clear on what they value as development or progress. Additionally, in the process of data collection and analysis that is described in the next chapter there is a way in which the data speaks and forms itself based on the responses of what people have to say. The patterns are clear and Sen’s open-ended CA allows one to think very broadly as to what form of development is taking place. Additionally, the openness also allows one to consider the societal contradictions that are in many research contexts. If the CA had clear-cut variables for one to use to evaluate the data, it would be very difficult to take note of contradictions. The greatest challenge of the openness is time. One must certainly spend a lot of time listening to people within the research context as well as listening to the data. However, this is prudent because it lays emphasis on the idea that development is indeed a process.

The latter section of the chapter is dedicated to introducing the Critical Realist (CR) philosophical paradigm that undergirds this thesis. Critical realism is often viewed as a middle ground between the positivists’ absolutism and the interpretive relativism (Mingers, 2013: 795). The acknowledgement that the integration of new media and
ICTs in our lives is a process that takes place contextually fits in very well critical realism because, “critical realism wants to get beneath the surface to understand and explain why things are as they are and to hypothesize the structures and mechanisms that shape observable events” (Mingers, 2002: 302). Additionally, the CR paradigm is consistent with the theoretical position that development is a process. I believe that the philosophy, paradigms or ontological and epistemological orientation of a researcher influences the research methodology and methods (Creswell, 2009; Guba and Lincoln, 1994). Therefore I subscribe to the critical realist ontology that there is an existing, causally efficacious world independent of our knowledge and our access to the world is in fact limited and always mediated by our perceptual and theoretical lenses (Mingers et al., 2013: 795).

In the next research methods chapter as well as the research context chapter, I apply the first two critical realist principles of explication of events as well as the explication of the structure and context. In tandem with critical realism and high quality qualitative research, I also reflect on my positionality and influence within the research (Mingers, 2002: 302). The latter section of the chapter explores the evolution of the research that took place in the fieldwork phase. The research questions that this thesis addresses are presented and Kibera is introduced as a suitable research context for the exploration of the relationship between new media and ICT use with development. The next chapter shifts attention to the people-centered research methods that facilitated the collection of data in Kibera.
CHAPTER SIX: Research Methods

I selected the qualitative research approach of ethnography in order to allow the voices of young Kiberans to contribute to the important discussion on technology appropriation in the Global South. My choice was greatly influenced by the desire to capture the realities of the potential beneficiaries of technology in their natural setting. This action was significantly influenced by the aim to contribute to emergent Global South media audience literature. Additionally, the widely popularised classification of Kibera residents as the poor “people of a dollar a day” in the development literature prompted me to choose a combination of qualitative research methods that would elicit an in-depth understanding of Kiberans and their context (Bodewes, 2005, 2010; Voices of Youth, 2014). The focus on the respondents and residents of Kibera as the source of data also facilitates the capability of a research to capture any discrepancies between the academic literature, media rhetoric and the realities on the ground.

6.1 Methodological Considerations

Qualitative researchers try to “develop a complex picture of the problem or issue under study and this involves reporting multiple perspectives, identifying the many factors involved in a situation, and generally sketching the larger picture that emerges” (Creswell, 2009: 176). In an application of methodological triangulation, the “methodological choices in this study were driven by the need to complement the weaknesses of the other methods used” (Madianou, 2002: 98). In order to validate the data I collected, I applied methodological triangulation by combining the data from the participant observation (especially the go-alongs) with the data from the semi-structured interviews. This was done in order to “enhance the quality of the work” and avoid discrepancies between what people say and what they actually do (Reeves et al., 2008: 513). I commence the discussion by elaborating on why I selected a qualitative research design and then proceed to discuss the nature of the ethnographic research method I employed. This includes a reflection of positionality within the field site followed by a discussion of participant observation as a research method for negotiating access and eventual data collection within the field site. I also discuss how I used “go-alongs” to complement the participant observation research method (Kusenbach, 2003).
This is followed by a discussion of the type of field notes I documented as well as the documentary evidence I collected in the form of e-mails. The latter part of the chapter is dedicated to the discussion of the sampling strategy I employed as well as the semi-structured interviews I conducted with the twenty-two young people I eventually interviewed. I conclude with a discussion of the thematic data analysis method I utilised to analyse the whole corpus of data I collected. This is followed by a discussion of how data was validated.

6.2 Qualitative Research to Study the Media Audience

The purpose of qualitative research is to describe, explore and explain phenomena in a study. Consequently, the research questions often take the form of what is this? Or what is happening here? (Marshall and Rossman, 1995 in Ploeg, 1999: 36). The process of qualitative research involves emerging questions, data collection in the participants setting and inductive data analysis conducted inductively building from particulars to general themes (Creswell, 2009: 4). In tandem with the preceding, my research was exploratory in nature. Therefore, the two research objectives were to explore if young Kiberans were appropriating new media technologies and the second one was to explore if the appropriation of new media technologies by the young Kiberans led to an expansion of capabilities or development. The focus on young Kiberans as new media and ICT users is particularly significant for emergent non-Western media audience literature. It is in alignment with the audience research proposition that reads, “research that formerly examined audiences, reception and effects must now account for users and uses, interactivity, reconfiguration, and reciprocity” because of the increasing usage of new media and ICTs (Lievrouw and Livingstone’s, 2006: 3). Therefore, “audiences are increasingly to be understood as plural (multiple, diverse, fragmented), as active (selective, self-directed, producers as well as consumers of texts), and as both embedded in and distanced from specific contexts of use” (Livingstone, 1999: 63).

There is a general consensus within the research design literature that it is important to select a research design that fits the research questions (Bryman, 2004b; Ploeg, 1999). In this thesis, the exploratory nature of the research questions was an excellent fit for a
qualitative research design. This is because the open ended questions asked what, how and why.

As noted in the previous chapter, the research questions that directed the research were:

RQ1. Do the young people appropriate new media technology?
RQ2. What forms of new media do the young people appropriate?
(Sub question: Which form is the most significant to each individual?)
RQ3. How and why do they appropriate the new media technologies?
RQ4. Is there an expansion of capabilities for those who appropriate new media technologies?
RQ5. What possible form is the capability or capabilities?

I conducted the research in the natural setting of Kibera and I consider this to be one of the greatest strengths of the study. It was my goal to present multiple perspectives or realities rather than aiming for the true or closest representation of reality (Hein et al., 2011: 2). Therefore, the critical realist paradigm I have discussed in the previous chapter is a suitable fit because it “proposes a view of society in which human agents are neither passive products of social structures nor entirely their creators, but are in an iterative feedback relationship to them” (Davies, 2008: 26). In the introduction, I have noted why I selected the research method of ethnography to collect the qualitative data. The method, which facilitates close fieldwork engagement, is described next.

6.3 Ethnography

Ethnography is a process of data collection that involves the “researcher participating overtly or covertly in people’s daily lives for an extended period of time, conducting informal or formal interviews and gathering documents or artefacts that can throw light on issues that are the emerging focus of inquiry” (Hammersley and Atkinson, 2007: Loc 211). It involves a detailed description of the research setting or individuals followed by analysis of the data for themes or issues (Stake, 1995; Wolcott, 1994 in Creswell, 2009: 1984). Ethnographers are encouraged to go beyond generation of data and use introspective observation to build a reflexive understanding of how these processes are experienced (Schensul at al., 1999 in Hein et al., 2011: 160). Due to the close relationship that a researcher shares with the researched, the reflexivity or
relationship the ethnographer shares with the participants is a central element of ethnographic work (Reeves et al., 2008: 513).

In this thesis I focus mainly on the multiple realities of the young Kiberans. However, I balance this with an account of my positionality (gender, status and self-presentation). Due to the nature of the research context, I also go a step further and present a critique of Kibera as a context by analysis of the greater representation of Kibera in the literature. Ethnographic research involves a detailed description of the field setting of the individuals followed by an analysis of the data for themes or issues (Stake, 1995 in Creswell, 2009: 184). However, in my case, I had to present a detailed description of the research setting after my fieldwork. As a Kenyan citizen, I approached the literature on Kibera with a keen and cautious eye so as to elicit fresh perspectives. It was my goal to uncover the layers of Kibera and its inhabitants. Therefore, I had to apply criticality by reconsidering taken-for-granted assumptions (Golden-Biddle and Locke, 1993: 600). Numerous scholars offer various criteria for achieving criticality in the research context. Lincoln (2002) recommends that researchers should be deeply involved and closely connected to the scene. Whilst Klein and Myers (1999: 72) recommend that proper contextualisation requires critical reflection on the social and historical background of the research setting so that the intended audience can see how the situations under investigation emerge.

Additionally, the participation of the researcher within the setting is also an indication of authenticity which incorporates a prevailing view in “anthropology and organisation studies that ethnographic writing garners in authority and ability to convince by the writers conveying their first hand access to a particular world” (Golden-Biddle and Locke, 1993: 595). It was my role as an ethnographer to develop a written account that conveys a rich and complex understanding of the member’s world, adds to existing knowledge in the field and provide a cultural critique (Marcus and Fisher, 1986). The contextualisation and eventual critique of the world that the young Kiberans inhabit was not a neat and linear process. In order to fulfill the task it was necessary for me to undertake an extensive self-audit or reflection. A process of continuous self-reflection during field research is very important for one to “debrief their misconceptions, feelings and prejudices” (Tiley and Chambers, 1995). I perceived the moments of reflection as very instrumental in clarifying some beliefs that may have altered my
description of the research setting and hampered the eventual goal of eliciting the voices of the young Kiberans. The reflexive process I undertook is described in the next section.

6.3.1 Reflexive Moments

In the previous chapter I have discussed how I changed the direction of my research in April 2013. At around the same time, I also decided to inculcate a more reflexive attitude to the research process. This was characterised by “fostering an on-going self-awareness during the research process” (Pillow, 2003: 179). My reflexive process was defined by an examination of my own personal and sometimes unconscious reactions to the research setting and the researched (Finlay, 2002: 225). It involved a “reflection on self, process, representation and critically examining power relations…and challenging pre-given categories and narratives” (Sultana, 2007: 376). I had to acknowledge any assumptions about the field site and the residents and “bracket them from the study” (Asselin, 2003: 100). Bracketing was my persistent effort not to impose my own understanding and constructions on the data (Crotty, 1996 in Ahner, 1999: 407). I believe it was very useful before and after the fieldwork to dedicate some time to focus on “how does who I am, who I have been, who I think I am, and how I feel affect data collection and analysis” (Altheide and Johnson, 1998 in Pillow, 2003: 176).

In addition to reading numerous articles such as the ones highlighted in this chapter, I spent a lot of time socialising with international non-profit personnel at conferences who were very keen to discuss how effective their human rights and freedom related media projects were in Kenya. I decided to put aside their very convincing claims and I also decided to read the media reports and the non-profit organisation web pages critically. Most importantly, I also made the decision that I would not constrain the data to theoretical insights that do not fit the data. After applying for ethical approval in October 2011, I was granted ethical approval to conduct my study in Kibera. In order to gain access to the field setting I had to spend the first three months of January to March 2013 negotiating with the gatekeeper who was to “facilitate ease of access to the interviewees and residents of the respective villages in Kibera” (Miller and Bell, 2012: 62). The process of negotiation for access was complicated by the fact that Kiberans are generally very wary of outsiders. One reason for the distrust of foreigners is “because
of years of exploitation by media producers who have used their images as examples of poverty” (Ekdale, 2014b: 189).

Past cases of exploitation of Kiberans have made it very difficult for researchers and outsiders in general to penetrate Kibera in more recent times. When I was finally granted access, I also observed instances of exploitation. However, they are beyond the scope of this thesis. Another reason that complicated my negotiation for access was that even though I am a Kenyan citizen, the gatekeeper who was to eventually introduce me to the Kiberans did not view me as an insider just because I shared the same nationality. Prior to the commencement of my PhD I had never visited Kibera and was totally unfamiliar with the residents. Therefore, before commencement of the study I was an insider who shares the same race as the young Kiberans but an outsider to their subculture.

6.3.2 Insider-Outsider Status in Research

The tension between insider and outsider status in the research context is not easy to resolve and in their discussion of occupying the space between insider and outsider research, Dwyer and Buckle (2009: 60) argue that there are “costs and benefits to be weighed regarding the insider versus outsider status of the researcher and they conclude that the positive and negative elements of each status must be carefully assessed”. Additionally, Mullings (1999: 340) emphasises that the insider or outsider binary is a boundary that is “highly unstable and it ignores the dynamism of positionalities in time and through space”. She concludes that no individual can consistently remain an insider and few ever remain complete outsiders. I agree with Mullings (1999: 340) conclusion that it is not possible to unpack the insider from the outsider completely and it is very important to carefully assess what role to occupy based on the research goal at hand. After an assessment of my research tasks, I decided that it was imperative that I generate rapport. Therefore, I commenced my fieldwork as part outsider then moved to part insider and eventually became an insider as time elapsed.

As the table on the next page indicates, I was eventually accepted into Kibera and provided with access to potential interviewees and data. I was able to generate rapport with a research gatekeeper based on his unique position as a long-term resident of
Kibera. He was a university student actively involved in the running of a self-help group for vulnerable women. I met him through an American professor who had completed ethnographic work in Kibera. Therefore, I presented him with my ethical approval form and research proposal. I explained to him that his identity would be kept confidential and that the data would also be treated in a similar manner. After a few more coffee and juice dates, we got more comfortable with each other and I was finally able to start my fieldwork more actively for three days a week on 4th February 2013. The primary method that facilitated my collection of data was participant observation. Therefore, in the next section I explain what form of observation I engaged in and how this eventually led to the use of “go-alongs” (Kusenbach, 2003) as a data collection method. The table below documents the monthly process of how I transitioned from being a part outsider with limited access to Kibera and its residents to the eventual role of being an insider who was immersed in the field site.

**Figure 8: My Insider-Outsider Roles in the Field Work Phase (Jan 2013- Dec 2013)**

<table>
<thead>
<tr>
<th>Month</th>
<th>Activities</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>Meetings near Kibera with gatekeeper.</td>
<td>Part Outsider</td>
</tr>
<tr>
<td>February</td>
<td>Participant observation trips to Voice of Kibera office and Kibera villages.</td>
<td>Part Outsider</td>
</tr>
<tr>
<td>March</td>
<td>Participant observation trips to the villages.</td>
<td>Part Insider</td>
</tr>
<tr>
<td>April</td>
<td>Participant observation trips to the villages</td>
<td>Part Insider</td>
</tr>
<tr>
<td>May</td>
<td>Participant observation trips to the villages</td>
<td>Part Insider</td>
</tr>
<tr>
<td>June</td>
<td>Introduction to interviewees in Kibera.</td>
<td>Insider</td>
</tr>
<tr>
<td>July</td>
<td>Interviews of the youth and socialising in Kibera.</td>
<td>Insider</td>
</tr>
<tr>
<td>August</td>
<td>Interviews of the youth and socialising in Kibera.</td>
<td>Insider</td>
</tr>
<tr>
<td>September</td>
<td>Interviews of the youth and socialising in Kibera.</td>
<td>Insider</td>
</tr>
<tr>
<td>October</td>
<td>Interviews of the youth and socialising in Kibera.</td>
<td>Insider</td>
</tr>
<tr>
<td>November</td>
<td>Interviews of the youth and socialising in Kibera.</td>
<td>Insider</td>
</tr>
<tr>
<td>December</td>
<td>Interviews of the youth and socialising in Kibera.</td>
<td>Insider</td>
</tr>
</tbody>
</table>
6.4 Participant Observation: Opportunities and Challenges

I was a covert participant who was interested in “grasping the natives’ point of view in the engaged period of fieldwork” (Malinowski, 1922: 25). Participant observation is a process where “anthropologists and social scientists take part in the daily activities, rituals, interactions and events of a group as a means of learning the explicit and tacit aspects of their life routines and their culture” (DeWalt and DeWalt, 2010: 1). The observer’s presence in a social situation is maintained for the purpose of scientific investigation as they “register, interpret and record” (Schwartz and Schwartz, 1995: 344). Participant observation requires the researcher to penetrate the networks of people they desire to study and to develop sufficient rapport to pass freely within these networks. It is especially useful if little is known about one’s subjects (Plant and Reeves, 1976: 158). Outsider researchers who are predominantly from the Global North have conducted all the ethnographic participant observation Kenyan ICT studies I reviewed in chapter four (McIntosh, 2010; Whyche et al., 2013a; Whyche et al., 2013b). Therefore, there are numerous calls for researchers from the Global South to contribute native or insider research in order to offer fresh perspectives.

I potentially fill that research gap in the body of knowledge and have an opportunity to present the emerging perspectives. Gold (1958: 217) proposes four possible participant observation roles for conducting fieldwork. They are the complete participant, complete observer, the participant as observer and the observer as participant. In practice, most field workers are flexible and combine two or more roles. Adler and Adler (1987) also identified three membership roles of qualitative researchers engaged in observational roles. The first were peripheral member researchers who do not participate in core activities of group members, second were the active member researchers who become involved with the central activities of the group without fully committing themselves to the members values and goals and complete member researchers who become fully affiliated during the course of the research (Adler and Adler, 1987 in Dwyer and Buckle, 2009: 55). In my case this was characterised by my active participation in the lives of the youth in Kibera without a full commitment to their personal visions, goals and values.
As noted in chapter one, my initial goal was to focus on Voice of Kibera as an organisation so it was imperative that I gain access to their office and their users. Therefore, my first step was to identify the “gatekeepers who were the people capable of facilitating ease of access” to the interviewees and residents of the respective villages (Miller and Bell, 2012: 62). I eventually developed a relationship with a gatekeeper who facilitated access to the Voice of Kibera office. I was able to visit the office located in Karanja village in January and February 2013 but that did not mean I was accommodated as a group member with similar goals and values. I eventually became an active member researcher in the day-to-day life of Kibera residents. However, I was never really fully committed to their goals and values as a community because I had to offer an academic critique of the context. It was not a neat and linear process because as I will describe in the next chapter, the slum environment is one that is full of complexities. For instance, there were times when I witnessed the direct exploitation of the youth such as unpaid wages and discrimination but could not get involved in the pursuit of justice. Participant observation is often characterised as the most authentic and reliable ethnographic method because it provides access to “naturally” unfolding events and delivers volunteered member interpretations (Becker, 1958 in Kusenbach, 2003: 461).

The nature of close involvement within participant observation is of potential value as it enables “observation or participation in action rather than merely accessing opinions as in the case of an interview only study. Positive benefits can often be gained because the field participants see the researcher as trying to make a valid contribution to the field itself” (Walsham, 2006: 321). Evidently, participant observation has the potential to provide rich and valid observational data. However, it can also have some negative effects on the researcher.

6.4.1 Negative Effects of Participant Observation

One negative effect of participant observation is anxiety that can be “aroused in the participant observer when they are not fully accepted by the observed” (Schwartz and Schwartz, 1955: 351). In my case, my anxiety was aroused by the attitudes of many middle class Kenyans I spoke to about my research. According to the African Development Bank, the middle class is the group that spends between US$2 (GBP£1.28,
KSH160) and US$20 (GB£12.77, KSH1,600) a day. Upper middle class equates to those that spend between US$10 (GB£6.39, KSH800) and US$20 (GB£12.77, KSH1,600) a day, lower middle refers to those that spend US$4 (GB£2.55, KSH320) and US$10 (GB£3.69, KSH800) a day and the floating class are those that spend between US$2 (GB£1.28, KSH160) and US$4 (GB£2.55, KSH320) per day (Gounden and Nkhumeleni, 2013: 1). In the sociological literature, there is a longstanding debate as to whether the researcher should systematically and statistically define class or whether class exists in the experience of the researched (Bourdieu and Wacquant, 2013: 292). In the context of this thesis, class is defined in a Bourdieu (1987) sense but it also incorporates the perceived “experience of class in relation to others” (Skeggs, 1997: 74). It is “social differentiation based on cultural, economic and social capital” (Bourdieu, 1987: 4). The experience of class is revisited extensively in the discussion chapter nine based on the discussion of the research findings.

Every time I introduced myself as a researcher working in the context of slums many would laugh and lament that an upper class looking person such as me should not be in the ‘slum’. In tandem with Skeggs’s (1997: 74) conceptualisation of the experiences of class, people made referents to me based on the class they perceived me to occupy. Consequently, my research subject spilled into my social life outside the field site. In the literature there are also other scholars who acknowledge that they were accused of “undertaking research in incompatible settings” (Schacht, 1997: 4). I sought encouragement in the reflexive literature and regardless of all the social tensions I experienced outside the field site, it was rather fortunate that the young Kiberans I researched were not perturbed by my perceived upper middle class status. Some of the young Kiberans eventually established out that I resided in an affluent suburb in the outskirts of Nairobi. However, it was more of an advantage to my research because many of them had not interacted freely with a fellow young Kenyan from a higher income suburb. As will be discussed extensively in chapter nine, the young Kiberans were more likely to foster middle and upper class social ties from foreign countries than from the wealthier areas of Kenya. This finding has implications for the discussion of social ties in the discussion chapter nine so I revisit it there. I used public means of transport to access the field site to avoid any marker of difference. It was very

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5 The definitions of classes in Kenyan policy literature vary and there has been much local debate as to the validity of the African Development Bank classifications
important for me to be laid back and friendly and I believe that my difference in status as a non-resident of Kibera was both a strength and a weakness. This is because it compelled me to be more curious and perceptive. I took nothing for granted and was very eager to immerse myself in my new environment. However, it also meant that it took some time for me to be accepted by the young Kiberans as a researcher within the context.

Additionally, I believe that my gender and age as a young female that is petite in size (5feet 3inches) was strength because the respondents perceived me as their peer. The cultural stereotype of “females as unthreatening” also facilitated easier formation of relationships (Hammersley and Atkinson, 2007: 2137). It is only the three times that I walked without a resident companion that I had to deal with unwarranted cat calls and gestures from young men. However, once I said hallo or goodbye politely they would walk away. I regulated my interaction by the rules of human conduct such as reciprocity, generosity and sympathy (Daniels, 1983: 199).

6.4.1.1 Self-Presentation

In addition to status, I also acknowledge that the researcher’s appearance can be an important factor in shaping relationships with people in the field (Hammersley and Atkinson, 2007: 1908, 1958). Researchers working in some slums in the Philippines found out that the residents were more likely to show interest if they used English and dressed in more formal attire as it was a display of respected high status (Narag and Maxwell, 2014: 320). Daniels (1983) reflects rather humorously on her experiences as a fieldworker amongst military men in the North American context. She had to alter her appearance from what she describes as careless academic dress to something more feminine. She also lost forty pounds, studied women’s magazines and eventually acquired an eye-catching wardrobe in order to acquire informants. Her discussion on the importance of self-presentation in the field is also of great relevance in Kenyan society (Daniels, 1983: 204). Although it is not officially documented in scholarly manuscripts, Kenyans are very observant of one’s attire; neatness and modesty are encouraged. In most contexts, immodest or revealing dress can lead to social rejection or uncomfortable stares. I often prefer dressing in relatively formal skirts and dresses.
but because my informants were young, I had to make some efforts to be casual yet trendy in some denim. This was particularly useful when I conducted interviews and participated in the go-alongs. As part of my active membership participant observer role in the field, a key data collection method for generating valuable data was the “go-along” that involved accompanying the young Kiberans to natural outings by walking (Kusenbach, 2003). This included walking to the supermarket and popular cafés to enjoy meals and socialising. Some of the young people also enjoyed showing me the slum and would request to walk me around, I always obliged. In the next section I describe the go-along’s I participated in.

6.5 The Go-along

Go-alongs are a more “systematic form of hang-out”; the most common ones are walk-alongs (on foot) or ride-alongs (on wheels) (Kusenbach, 2003: 463). These forms of hang outs are very good at encouraging unsolicited forms of oral accounts about the setting and community members. Kusenbach (2003: 464) recommends that a productive time window for a go-along be about an hour to 90 minutes. In the setting, it was important to spend lots of time socialising with people because hurrying or timing events can be perceived as rude. Therefore, my average go-along was four hours long and my longest one was six hours long because we walked through around one half of the slum with one of the interviewees. In that instance my interviewee recommended the go-along because he was very passionate about community development and he wanted to show me his neighbourhood in greater detail. The gatekeeper who facilitated initial access to Kibera, had also encouraged me to eat any food I was offered and to ensure I purchased water in the slum. He had cautioned me that packing my own food and water would be perceived as an act of pride.

In contrast, a fellow local academic had warned me vehemently against consuming any food in Kibera as he was certain it would lead to illness or death. However, I listened to my gatekeeper’s instructions as opposed to my colleague and the action of consuming the same food and water as Kibera residents was very instrumental in building rapport. At the end of the go-alongs I would record some field notes. This is because I rarely jotted down field notes in their presence in order to promote a fluid and conversational atmosphere for the research participants. Instead, I would “reconstruct” my field notes.
immediately after my fieldwork experiences in the public service vehicle (matatu) ride out of Kibera (Fetterman, 2010: 118). They are described in the next section.

6.5.1 Fieldnotes

Fieldnotes are the “traditional means in ethnography for recording observational and interview data. There is no fixed formula as to jot down field notes and it is not always possible to record everything” (Hammersley and Atkinson, 2007: 3997). I spent roughly six hours a day around three times a week in the field site. Therefore, I would reconstruct the field notes after the fieldwork. I would reconstruct very short and informative notes using verbal cues such as ‘blackberry girl’ and ‘two young ambitious’. Initially, I recorded the notes on my iPad’s MaxJournal tablet application because of the accessible and clear interface. In September 2013, I decided to switch to the password protected Evernote application because it facilitated the synchronisation of the field notes on all my apple gadgets. This was advantageous as I was able to access them from my MacBook computer, iPad tablet and iPhone. Additionally, all the gadgets are password protected and the information was stored on a secured server. The field notes recorded after the go-alongs and regular participant observation field site trips were very useful in providing information for me to contextualise Kibera and offer a fuller explication of the structures within the slum.

Figure 9: Max Journal iPad Application: Short field notes
Hammersley and Atkinson (2007) argue that even the briefest of notes that are jotted in the earliest field encounters can prove to be very useful once they are reconstructed. The activity of jotting very brief notes in my early encounters of the field was of great use as I constantly pondered over the meanings of the words that I had summarised. I was later able to expand my notes into paragraphs of data. As exemplified in the Evernote image, the left side of the application displays a small index of all the notes in my Kibera progress notebook. The right side displays a reconstructed field note that was first created on the 10th of October 2013 and later updated on the 15th of February 2014. It is drawn from a field visit and an audio recording of a semi-structured interview that took place on the 15th of June 2013.

6.5.1.1 Mobile Phone use in the Fieldsite

The occasional use of my iPhone smart phone in the field endeared me to the young Kiberans as the “smart phone is an aspirational gadget amongst many Sub-Saharan African youth” (Porter et al., 2010, 2012). Some scholars argue that because mobile phones are so deeply embedded in the lives of the young people, using that particular technology functions as a point of commonality between the researcher and the
researched (Hein et al., 2011: 264). In my case, the use of an iPhone was advantageous as the Kiberans would request to look at it and be very friendly once they saw it. They would also joke about me gifting it to them. In addition to the field notes, I also managed to collect some documentary evidence in the form of E-mails. The E-mails were instrumental in the acquisition of rare data on web-enabled phone users in Kenya.

6.5.2 Documentary Evidence: E-mails

Documents such as the E-mails presented in this section are very useful in the provision of information about the research setting. The information is also very important because it is not in the public domain. I had to negotiate for over a year with three different Safaricom staff members for the data. In the first instance, the staff member who was to assist me requested for a full proposal and information about my research. I followed his instructions and he ignored all my correspondence once I sent him all the information. Thankfully, I was able to meet another staff member who was very prompt to facilitate my request. He was able to negotiate with another staff member on my behalf in order for me to acquire the data. However, he also noted that the data was incomplete as he did not provide data on all the villages of Kibera. In the E-mail communication displayed in the next section I have withheld the identities of the contacts due to privacy concerns. The reference to Kibera in the E-mails also includes the surrounding suburban estates. As will be discussed in the next chapter, Kibera is a diverse area divided into villages and surrounded by some suburban areas. The Safaricom staff member was not able to provide the data about the formal and informal parts of Kibera separately and the communication also includes a reference to Kangemi that is a low-income settlement on the outskirts of Nairobi.

Figure 11: E-mail Communication with Safaricom Staff

<table>
<thead>
<tr>
<th>07 March 2014 14:34</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unfortunately I have taken long to get back to you. I have also been unable to split the data based on the list of settlements you are researching on.</td>
</tr>
<tr>
<td>However, I have taken information for the general areas, basically Kibera and Kangemi.</td>
</tr>
<tr>
<td>- Number of subscribers <em>(Kibera and Kangemi)</em> 3,484,330</td>
</tr>
<tr>
<td>- Number of data enabled devices 1,097,315</td>
</tr>
<tr>
<td>In case of any clarification drop me a note.</td>
</tr>
</tbody>
</table>
The data above is often kept very confidential just like the socio-economic data about residents of Kibera that is held by some NGOs. As limited as it may be, it provides a rare glimpse into the context and answers the question as to whether Kiberans prioritise access to new media and ICTs. The answer from the data is that they do and in fact, more recently in 2015, a Safaricom staff member informed me that the sale of data bundles is very high and profitable in Kibera. The two Safaricom staff members I requested the data from were selected to be informants because they provided important information about the research context and it was by no means a choice based on representativeness. It was an action based on convenience. The data they provided is discussed extensively in chapter eight in the discussion of mobile phone access in Kibera. Another source of evidence and data that corroborates these findings is the semi-structured interviews I conducted of 22 young Kiberans. As presented in chapter eight and nine, the young Kiberans are avid users and appropriators of the mobile phone and the mobile Internet. In the next section I discuss the sampling strategy I
utilised and provide a diagrammatic summary of the sample. I then discuss how I conducted the semi-structured interviews and what forms of data I collected.

6.5.3 Sampling Strategy

In the previous chapter I discussed that my research’s focus on young people was purposeful because I wanted to contribute to the avid calls for research on young people and Global South users. My selection of the young Kiberans as a sample was influenced by the gap in the literature and it was also because, “children and young people are usually the early users of new media as they are more flexible or creative users. They also lack the conceptual baggage of many adults which leads them to fear new technologies and more generally the future” (Livingstone and Bovill, 1999: 10). The purposive sampling I sought to employ before the fieldwork was complicated by the changes I made to the research focus. As noted in the previous chapter, it was my goal to study the young users of Voice of Kibera. However, when I realised that there were barely any young Kiberans outside the organisational context who had heard of Voice of Kibera, I altered the design to focus more broadly on the appropriation of new media and ICTs in the context. Purposeful sampling was to be carried out to select information-rich cases to illuminate the research questions under study (Mays and Pope, 1995). However, after I changed the focus of the study, I requested my gatekeeper to connect me with some young Kiberans from the wider population.

Consequently, I reverted to non-representative snowball sampling (henceforth SBM) or chain referral sampling. Cohen and Arieli (2011: 427) describe the sampling method as one that is useful for conducting research in “marginalised societies or populations that are hard to reach or hidden”. Atkinson and Flint (2001) also add that the SBM can be useful if the aim of the study is explorative, qualitative or descriptive (Cohen and Arieli, 2011: 427). In tandem with the scholars, this thesis documents an exploratory study of a marginalised community (Cohen and Arieli, 2011; Atkinson and Flint, 2001). Therefore, it is justifiable to have utilised SBM. There is a vast amount of literature on hidden, marginalised and even illegal communities and the use of SBM in such societies. For example Whyte (1955) employed the sampling method in Street Corner Society and other scholars like Aggarwal, Pandey and Bhattacharya (2007) employed the strategy in the study of ‘slums’. One of the major advantages of SBM is
that it eases the process of locating hard to reach individuals. As noted in the previous chapter, Kiberans are very wary of outsiders because of years of exploitation and negative media coverage of their home. They particularly do not like being photographed or interviews to be recorded by people who do not live in Kibera.

However, when a member of their community approaches them on a researcher’s behalf they can assent to a meeting or an interview. The use of SBM in Kibera presented me with advantages but it also had a limitation. SBM is reliant on the existent social network of the person who does the referral so it is likely that some potential interviewees were masked or left out because they were not in the same social network as the gatekeeper (Heckathorn, 1997 in Cohen and Arieli, 2011: 428). The gatekeeper did a good job of connecting me to a diverse group of young people and I believe a larger sample has the potential to yield a greater number of both male and female respondents. However, because of the changes I experienced in the research process, there was very little time left for data collection and interviews. As noted, I spent almost three months just trying to get acquainted with the gatekeeper and building rapport. The young people I eventually sampled comprised of four users of Voice of Kibera who were also affiliated with the organisation. Two were in the process of trying to join the organisation as full time mappers whilst the other two were contemplating departure from the organisation. By the end of fieldwork, all the four users had left the Voice of Kibera organisation. Eventually, I interviewed 12 young men and 10 young women.

6.6 Semi-structured Interviews

I interviewed young Kiberans aged between 18 and 28. The semi-structured and in-depth interviews I conducted were guided by conversations rather than structured queries in what Yin (2009: 106) defines as a “fluid” process. The fluid nature was open and flexible so that I could discourage fear and reluctance. A topic guide based on emergent themes in the literature review was utilised to interview the young Kiberans and it was more open ended so that I could listen carefully to what they say or do in their life settings (Creswell, 2009: 8).

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6 See appendix one
A demographic profile of the interviewees in the course of 2013 is presented on the next page. All the names provided are pseudonyms due to consideration of privacy and ethical guidelines of the interview process. I often spent the first few moments reassuring the interviewees about confidentiality and assuring them that they could pull out of the interview at any given moment. When the young Kiberans heard I was a media researcher they appeared to be genuinely interested in the study. The topic of study facilitated the generation of rapport. In one instance in June 2013, a community leader and interviewee I was introduced to remarked, “oh so you’re not researching HIV or violence? Wow!” In another encounter a female interviewee went as far as hugging me after the interview, “these are the kind of studies we need!” She observed.

6.6.1 Methodological Rationale for the Use of Semi-structured Interviews

In the paradigm of critical realism that undergirds this thesis, “critical realists utilise interviews and other social research methods to appreciate the interpretations of their informants and to analyse the social contexts, constraints and resources within which those informants act” (Smith and Elger, 2012: 6). Semi-structured interviews were particularly significant in the context of this thesis because they allowed technology users in Kibera to contribute to the academic discussion on how new media and ICTs are used and appropriated in Kibera. They facilitated a “more thorough understanding of the respondent’s opinions and the reason behind them” and specific knowledge which cannot be generalised (Borg and Gall, 1983: 442). In four instances I conducted paired semi-structured interviews. I had to conduct the interviews in that format because the youth chose to meet me at the same time. They were also comfortable with being interviewed in pairs. All but one of the pairs (Felista and Pat) were unfamiliar with each other. I coordinated the interviews by asking them questions in turns. Initially, I was not comfortable with the paired interviews but I gradually discovered that they were more useful in “eliciting thoughtful and reflective accounts” (Highet, 2003: 109).
Figure 12: Demographic Profile of the Sample

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Gender</th>
<th>Education Level</th>
<th>Profession</th>
<th>Village</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Francis</td>
<td>28</td>
<td>M</td>
<td>University</td>
<td>Part time university student, NGO work, Small scale business</td>
<td>Karanja</td>
</tr>
<tr>
<td>2. Sam</td>
<td>28</td>
<td>M</td>
<td>University</td>
<td>NGO work</td>
<td>Karanja</td>
</tr>
<tr>
<td>3. Diane</td>
<td>20</td>
<td>F</td>
<td>College</td>
<td>Part time college student, Family Business worker at bar and mobile money shop</td>
<td>Kianda</td>
</tr>
<tr>
<td>4. Moha</td>
<td>19</td>
<td>M</td>
<td>High School</td>
<td>Youth group coordinator, Family business work</td>
<td>Kianda</td>
</tr>
<tr>
<td>5. Coby</td>
<td>24</td>
<td>M</td>
<td>College</td>
<td>Full time college student, Self-help group participant</td>
<td>Kianda</td>
</tr>
<tr>
<td>6. Rythmix</td>
<td>28</td>
<td>M</td>
<td>College</td>
<td>Barber shop owner, DVD shop owner, Reggae artiste, Volunteer in self-help group</td>
<td>Makina</td>
</tr>
<tr>
<td>7. John</td>
<td>21</td>
<td>M</td>
<td>University</td>
<td>Full time university student, Local youth politician</td>
<td>Makina</td>
</tr>
<tr>
<td>8. Naima</td>
<td>20</td>
<td>F</td>
<td>University</td>
<td>Full time university student, Volunteer at self help group</td>
<td>Makina</td>
</tr>
<tr>
<td>9. Susan</td>
<td>28</td>
<td>F</td>
<td>College</td>
<td>Volunteer at local groups, Part time jobs when available</td>
<td>Fort Jesus (Olympic)</td>
</tr>
<tr>
<td>10. Brian</td>
<td>28</td>
<td>M</td>
<td>Primary school</td>
<td>Gym instructor, Manual part time jobs based on availability - such as cleaning and building</td>
<td>Gatwekera</td>
</tr>
<tr>
<td>11. Felista</td>
<td>20</td>
<td>F</td>
<td>University</td>
<td>Full time university student</td>
<td>Kianda</td>
</tr>
<tr>
<td>12. Pat</td>
<td>20</td>
<td>F</td>
<td>University</td>
<td>Full time university student</td>
<td>Kianda</td>
</tr>
<tr>
<td>13. Liza</td>
<td>25</td>
<td>F</td>
<td>University</td>
<td>Videographer, designer and part time university student</td>
<td>Ayany</td>
</tr>
<tr>
<td>14. Tracy</td>
<td>23</td>
<td>F</td>
<td>University</td>
<td>University student and waitress</td>
<td>Makina</td>
</tr>
<tr>
<td>15. Neema</td>
<td>23</td>
<td>F</td>
<td>High school</td>
<td>Adult literacy courses, House wife</td>
<td>Kianda</td>
</tr>
<tr>
<td>16. Norah</td>
<td>18</td>
<td>F</td>
<td>Primary school</td>
<td>Assistant at family owned grocery shop</td>
<td>Kianda</td>
</tr>
<tr>
<td>17. Jackson</td>
<td>27</td>
<td>M</td>
<td>College</td>
<td>Slum tour guide, Self help group coordinator, Activist</td>
<td>Makina</td>
</tr>
<tr>
<td>18. Collo</td>
<td>25</td>
<td>M</td>
<td>High school</td>
<td>PlayStation shop owner</td>
<td>Karanja</td>
</tr>
<tr>
<td>19. Paul</td>
<td>19</td>
<td>M</td>
<td>High school</td>
<td>Self help group volunteer, Actor</td>
<td>Kianda</td>
</tr>
<tr>
<td>20. Tom</td>
<td>22</td>
<td>M</td>
<td>Primary school</td>
<td>Any job that is available (Hustling)</td>
<td>Kianda</td>
</tr>
<tr>
<td>22. Dave</td>
<td>28</td>
<td>M</td>
<td>College</td>
<td>Job based on availability, Youth group member, Media trainee</td>
<td>Olympic</td>
</tr>
</tbody>
</table>

Key:
(F) For female
(M) For male
* Pseudonyms are used to protect the identities of the residents due to ethical considerations of confidentiality.
After the more formal part of the interview where I asked questions about their media appropriation, the youth would open up and reveal more about the complexity of their lives. I used an audio voice recorder to record twenty of the interviews after being granted full permission by the interviewees and I took down notes for the other two. The greatest advantage of the semi-structured interviews is that the youth were more relaxed and open. In fact, one of the male youth reported that if I were using questionnaires, the likelihood of collecting inaccurate data would have been very high. He claimed that in most instances, researchers were afraid of visiting the ‘slum’ so they would send a Kibera resident to get them to fill out the questionnaires. The resident would then administer some of the questionnaires and fill the others out with random answers. Qualitative interviewing is generally regarded as an appropriate method for generating data with young people (Mahon et al., 1996; Morrow and Richards, 1996 in Hight, 2003: 109). This study also confirms the same.

I had to exercise a lot of patience to listen keenly as the interviewees had quite a lot to say. The only challenge I experienced was that one of the interviewees was not equally perceptive and articulate (Creswell, 2009: 179). However, this experience was a finding. As I elaborate in chapter nine, the more highly educated youth were very open and articulate whereas the less educated were a bit reserved in information exchange and communication. The interview with Norah (18) and Karen (21) was particularly challenging, as they were very hesitant to share their opinions. They gradually relaxed when a male friend of theirs came for lunch at the café we were seated. Qualitative research usually involves smaller sample sizes than quantitative research and it is a flexible process that often continues until data saturation (Ploeg 1999: 36). The data saturation point was characterised by a repetition of information by the interviewees. It was the point at which the “flood of ideas and information were reiterated and no new stories were told” (Lunt and Livingstone, 1999: 93). During and after the fieldwork phase, I transcribed the interviews into twenty-two extensive notes on Evernote Application. Data analysis was an iterative process where I had to apply a lot of creativity to eventually arrange the concepts systematically. I broke down the notes into manageable sections and sorted the data in order to “bring similar categories together into broader themes” (Noble and Smith, 2014: 2). In the next section I discuss the method of data analysis that I applied to the various forms of data I collected.
6.7 Data Analysis

The purpose of the data analysis was to “identify the most complete and logically compelling explanation of the observed events given the specific conditions of the contextual environment” (Wynn and Williams, 2012: 799). Analysis of ethnographic data tends to be undertaken in an inductive thematic manner because data is examined to identify and to categorise themes and key issues that emerge from it. Through a careful analysis of data, “ethnographers generate tentative theoretical explanations from their empirical work” (Reeves et al., 2008: 513). In this thesis, the primary qualitative data is comprised of field notes reconstructed from “go-alongs” and participant observation trips with the young people of Kibera (Kusenbach, 2003), the 22 Evernote transcriptions of the semi-structured interviews and E-mail documents exchanged with key informants from Safaricom. Data is produced from social interactions and are therefore constructions or interpretations. Consequently, the process of data analysis led to “a reconstruction of those constructions” (Lincoln and Guba, 1985: 132). Qualitative researchers usually work with text that can be “transcribed in entirety or in selected sections. It is an interactive or recurring process, essential to the creativity of the analysis, development of ideas, clarification of meaning and the reworking of concepts as new insights emerge or are identified in the data” (Noble and Smith, 2014: 2).

In chapter five I presented critical realism as the philosophical paradigm that guides this thesis. At the end of that chapter I also highlight that this chapter and the next research context chapter are based on the critical realist principle of explication of structure and context. This is because the next chapter is a discussion of the thick description of the research context, which incorporates the physical, socio-economic, political, and governance structure of Kibera. In critical realist research it is not compulsory to follow a uniform methodological outline as the “founder” of the philosophy does not stipulate a specific or compulsory formula for empirical work (Bhaskar, 1978, 1979, 1989). However, there is vast scholarship from notable scholars such as Wynn and Williams (2012), Archer (1995) and Sayer (1992, 2000) on the empirical application of the critical realist approach. A critical realist explanation involves a gradual transition “from actions through reasons to rules and thence to structures” (Sayer, 1992: 112). The action of following such a process is not always
one that is easy to model or apply to empirical work that is often bounded into a limited
time frame and context so critical realists often use a process of conceptual abstraction
known as “retroduction” (Rees and Gatensby, 2014: 6-7; Olsen and Morgan, 2004: 25;

In retroduction the aim is to “explain rather than predict, describe or deconstruct social
behaviour. Therefore, whatever kinds of data the critical realist ethnographer collects,
they will need to begin the retroductive process by filtering this data into themes and
categories” (Rees and Gatenby, 2014: 6-7). Retroduction is a mode of inference in
which events are explained by postulating (and identifying) mechanisms that are
capable of producing them. Therefore, retroduction goes a step further than both
deduction and induction because it involves “additional theorizing regarding the
existence of entities that may not be represented in the empirical data” (Wynn and
Williams, 2012: 800). In this thesis, I am focused on the empirical data collected and
in tandem with a typical inductive research, my data analysis process begins with
empirical data which I analysed to identify conceptual, theoretical entities and patterns
among them (Wynn and Williams, 2012: 800). Like the proponents of retroduction, I
strongly believe that it is useful take note of observed patterns and commonalities
outside the empirical data. That is why I provide the explication of the structure and
the context in the next research context chapter. However, this thesis is firmly focused
on thematic analysis because it is the goal of this thesis to produce a nuanced
understanding of the roles and uses of mobile phones and the Internet in the context of
Kibera. This is achieved by abstracting meaningful themes from the young people’s
semi-structured interview accounts and the field notes.

Creswell (2009: 185-188) indicates that data analysis is an interactive process that
involves “organisation and preparation of the data for analysis, transcribing interviews,
optically scanning material, typing up field notes or sorting and arranging the data into
different types depending on sources of information” (Creswell 2009: 185-188). In
contrast, Hammersley and Atkinson (2007: 4339, 4448) argue that the analysis of data
is not a distinct phase in ethnography as it is an iterative process that begins in the pre-
fieldwork phase in the clarification of research problems. They reject that there is a
formula and recipe for success in analysis. In a middle ground approach to the
recommendations of both sets of scholars, I was very attentive to the data even before
the completion of fieldwork so I was actively visualising and listening to my audio interviews. However, I eventually organised the data analysis process by sorting of the data after the fieldwork was over. Therefore, in order to conduct a thematic analysis of the data collected in the fieldwork phase of this thesis, I listened to the audio taped interviews and downloaded them to my iTunes account that is password protected on my MacBook computer. I transcribed the interviews into twenty-two extensive notes on Evernote Application on my MacBook computer (on a secured server). Then, I read through the notes and spent hours reflecting upon what they meant. I listened and read through each interview at least four times after fieldwork in 2014 and another four times in 2015. From the transcribed conversations, the “patterns of experiences were listed from direct quotes” such as my mobile is my office (Aronson, 1994: 1).

I identified all the data related to the identified concepts and patterns of experiences and built on them. For example, one of the patterns I identified was the larger theme of mobility. The concept of mobility is a dominant theme and strand explored within the M4D literature so I borrowed “useful analytical concepts from the literature as well as from the participants” (Hammersley and Atkinson, 2007: 4585). I then applied the theoretical lens of Capabilities Approach as well as the evaluative framework of communicative ecologies and the domestication of technologies approach to the selected themes. The process involved a lot of reading and listening to the audio recordings of some of the key interviews again. I corroborated the interview data with the observational field notes recorded in my Max Journal application and Evernote application. Lastly, I concluded the thematic analysis by seeking an analytical relationship across the whole corpus of data I collected. I proceeded to build a valid argument for choosing the themes and developed a storyline to relay the empirical context (Aronson, 1994: 2; Hammersley and Atkinson, 2007). That process was directly related to the interpretation of the research results and entailed reconstructing the research context. I had a vast amount of data to analyse so I required quite a lot of time to sift through the data even when I had transcribed it neatly. I was also very keen on reconstructing the research context so I had to spend a lot of time reflecting on the context. I managed to revisit the context in the course of writing up my thesis and it was a very useful experience. The greatest challenge was to single out the themes that were most dominant. I have noted in the previous chapter that this study contributes to diverse bodies of literature.
The universal nature of the research focus often led me to get carried away with the vast amounts of theoretical literature that offer ways of thinking about a context such as Kibera. However, after much reading and an extensive literature review, I eventually retained the communicative ecologies framework, domestication (appropriation) and the Capabilities Approach as useful lenses for making sense of the corpus of data I generated. In the field site, new media were not used and appropriated in isolation so it was necessary for me to draw upon the richness of theory to provide an in-depth glimpse into how young Kiberans relate with new media and ICTs. All these issues are elaborated and discussed extensively in the discussion chapters eight and nine.

6.7.1 Validation of Data

In order to validate the data I collected, I applied methodological triangulation by combining the data from the participant observation (particularly the go-alongs) with the data from the semi-structured interviews. Ethnographers commonly triangulate or compare and contrast interview and observation methods to “enhance the quality of their work because what people say about their behaviour can contrast with their actual actions” (Reeves et al., 2008: 513). Hammersley and Atkinson (2007: 4984) argue that data in itself cannot be valid or invalid and what is important is the inferences that are drawn from it. Therefore, the ethnographer must be continually aware of how his or her presence may have shaped the data. In tandem with Hammersley and Atkinson (2007), I have reflected and provided a thick description of my reflexive moments in the fieldwork in this chapter. In order to facilitate “ethnographic reliability” I checked all the transcripts to make sure they did not contain obvious errors made during transcriptions (Creswell, 2009: 190). In the previous discussion, I have also noted that my participation in the natural setting of the researched was an indication of authenticity which incorporates a prevailing view in “anthropology and organisation studies that ethnographic writing garners in authority and ability to convince by the writers conveying their first hand access to a particular world” (Golden-Biddle and Locke, 1993: 595).

I have also applied “theory triangulation” by applying the evaluative framework of the communicative ecologies, appropriation (domestication) and the Capabilities Approach theory to make sense of the data that I collected in the research context (Reeves et al.,
Lastly, I spent a prolonged time in the field (one year) and have used rich, thick description to convey the findings and the purpose of the description is to “transport all the readers to the research context” (Creswell, 2009: 191). Consequently, the claims made in this thesis are grounded in evidence and theory. Claims “describe, interpret, deconstruct, critique, predict and explain lived experience. Claims are statements that connect the world bounded by our data to our interpreted understanding of that data” (Freeman et al., 2007: 27).

A common criticism of ethnographic research is that it facilitates the in-depth focus on one entity, context culture or group so the research limits the generalizability or replicability to other contexts (Myers, 1999: 6). However, Creswell (2009: 193) clarifies that the goal of qualitative research is not to “generalize findings to individuals, sites, or places outside of those under study and that the value of such research is the particular description and themes developed in the context of the specific time”. In the previous chapter, I have discussed the positivist studies that already dominate the ICT4D discussions in Kenya. Consequently, it is the explicit goal of this thesis to depart from broad empirical generalisation by providing a contextual focus. The thick description in the next chapter and the latter discussion chapters serves to strengthen the argument that it is very necessary to study new media and ICT technologies at the local or micro-level for an in-depth glimpse into how technology interacts with the complex structures that people are often embedded in.

6.8 Chapter Summary and Concluding Remarks

In this chapter I provide an extensive discussion of why I selected a qualitative research design and ethnographic research methods. I reflect on my positionality within the field site followed by a discussion of the participant observation and go-alongs I employed as complementary research methods. This is followed by an examination of the type of fieldnotes I recorded as well as the documentary evidence I collected. The latter part of the chapter is dedicated to the discussion of the sampling strategy I employed as well as the semi-structured interviews I conducted with the 22 young people I eventually interviewed. I conclude with a discussion of the thematic data analysis and method of validation of data I utilised to analyse the whole corpus of data I collected. The next chapter shifts to an explication of the structure and context of Kibera slum.
CHAPTER SEVEN: The Research Context

This chapter presents a thick description of the research context of Kibera based on the critical realist philosophical paradigm that undergirds this thesis. In alignment with Wynn and Williams (2012: 796) methodological principle of the explication of structure and context, the chapter explores the physical, socio-economic, political and governance structures that make up Kibera. The goal is to “critically reflect on the research context” (Klein and Myers, 1999: 72). The first section is dedicated to a discussion of the physical structure of Kibera.

7.1 The Physical Structure of Kibera

Kibera is only five kilometres away from the capital city of Nairobi, Kenya and is infamously labelled as “Africa’s largest slum” (Ray, 2015). It originated over 100 years ago during the colonial era as a “remote military exercise ground for the British army King’s African Rifles (KAR) that comprised of an Islamised mix of Sudanese, Ugandan and Congolese people known as the Nubi” (Parsons, 1997: 88). The area is wrongly identified as Kibera instead of the appropriate Kibra due to the diverse diction of the numerous ethnic groups of Kenya. The original and accurate label of Kibra is derived from the Sudanese Arabic word for bushy place or “land of forest” (Constantine, 2014). Parsons highlights that Nubi veterans and their families retired to the area as they could not settle in the native reserves set aside for the indigenous ethnic groups of Kenya by the British colonial government (Parsons, 1997: 99). Due to their foreign origin, Nubians were categorised as detribalised natives and were denied the right to claim land on the reserves. However, the government eventually allowed the war veteran Nubians and their wives to settle in Kibera in 1917. Later in 1930 they attempted to move the settlement to a place known as Kasura but could not do so due to a land contest with the Maasai community (Constantine, 2014).

In 1963, the expansion of Kibera was incentivised by Kenya’s independence from the British colonial government when Africans were allowed to migrate to urban areas (Macharia, 1992: 225). This led to an influx of people from various ethnic communities drawn from Kenya’s 42 ethnic groups (de Smedt, 2009a: 203). Consequently, the Kibera’s growth is commonly linked to the failed efforts of the
British colonial administration to re-organise it and the colonial government’s policy of malicious neglect which entailed withholding municipal services and development as Kibera’s population grew and diversified (Ekdale, 2011). This policy was continued by the independent Kenyan government that also failed to provide low-income housing through private enterprise (Kunguru and Mwiraria, 1991 in Ekdale 2011: 11). The concept of rural to urban migration is commonly presented as the justification for the growth of ‘slum’ settlements in Sub-Saharan Africa (Oucho and Gould, 1993; UN Habitat, 2008; Beguy et al., 2010). Much of the literature on Kibera is focused on the numerous socio-economic ills that plague its residents as well as high profile visits by celebrities and philanthropists. When the President of the United States Barack Obama was the Senator of Illinois, he visited the slum alongside his wife Michelle Obama in August 2006. The Associated Press described the event as a visit to one of the “world’s worst slums where about a third of the capital city’s total population, at least 700,000 people, are cramped into a single square mile in the slum of Kibera, with little access to running water and other basic services” (Associated Press, 2006).

Another article from the CNN website reads, “life isn't easy in Kibera, one of Africa's largest slums. About one million people live in this sprawling settlement in Nairobi, Kenya's capital, with limited access to electricity, running water and other basic infrastructure services” (Bartnett, 2012). A more recent article by Ray (2015) of United Kingdom’s iTV network describes Kibera as a “shanty town of rusting roofs slung across mud, rocks and a rubbish dump. Its half a million inhabitants live in single room mud huts and tin shacks crammed closely together”. Aside from vivid descriptions of Kibera as a mass of destitution, one common thread in all the news pieces is the citation of high population figures of seven hundred thousand, one million and half a million respectively. Those population figures have been the source of much debate in Kenya because they contradict the last national census results of 2009.

In contrast to the media reports, the government of Kenya census findings indicate that the population of Kibera is 170,070 people set on 2.5Km² (KNBS, 2009). On the 31st of August 2010, the past Minister of state for planning, national development and Vision 2030 presented the census results in a nationwide televised government ceremony (Oparanya, 2010). According to his PowerPoint presentation, the
enumeration methodology that was employed by the government was summarised in the following steps:

- The unit of enumeration was the individual.
- The frameworks of identification included households, institutions, persons on transit, and out-door sleepers.
- A complete count of the population present on the census reference night (24th and 25th August 2009) was conducted.
- De facto method of counting was adopted and included counting people according to where they spent the reference night.
- A canvasser method was also used for data collection in the form of a questionnaire administered by pre-trained personnel.

Locally trained personnel recruited from the wider Kenyan public administered the census. The United States census bureau also provided technical assistance. Census officials experienced some challenges in the arid parts of Kenya and the census was repeated in some of the regions (Oparanya, 2010). Kibera was not one of those regions. Other researchers affiliated with international organisations from France and Belgium re-surveyed Kibera in 2009 and 2012. The ground survey by French Institute for Research in Africa and Belgian Keyobs estimated a population of 200,000 (IFRA, 2009). Italian mapping specialist Marras discovered a density of 220,000 to 250,000 people by utilising geographical information systems (Marras, 2012). Irrespective of the official census results and approximate expert estimations, numerous NGO websites still cite the population of Kibera as one million (Lunchbowl, 2015; Kiberalawcentre, 2015). The discrepant population figures led to speculation that, “the number has generationally been bloated by organisation’s to attract more aid and profit for some groups” (Warah, 2010).

In Hiding the Real Africa, Rothmeyer (2011) documents an experience a Kenyan writer and former UN-Habitat staff member had with respect to the population figure, “in 2010, Rasna Warah wrote in the Kenyan paper Daily Nation, that while working for the Worldwatch Institute, an NGO, she had published inflated population estimates using UN-Habitat data, despite knowing there was no consensus on the numbers among her former colleagues at the organisation” (Rothmyer, 2011: 1). Italian missionary and
journalist Father Renato argues that it is not surprising that the population figures have been inflated for years because, “politicians, NGOs, and the Kibera residents themselves have an interest in inflating the numbers because high numbers attract attention and hopefully, funding” (Sesana, 2014: 1). In addition to bloated population figures, much of the literature clusters Kibera as a homogenous area. As noted in one of the articles, Kibera is described as a “shanty town of rusting roofs slung across mud, rocks and a rubbish dump” (Ray, 2015: 1).

The Kibera law centre NGO even compares the area to New York’s Central park. Their website reads “Kibera is a field and valley (not quite as large as Central Park) jammed with tin huts, 8 people per hut, with urine and faeces running in ruts of the rambling walking paths” (Kiberalawcentre, 2015: 1). In reality, Kibera exists as a stratified society distinguished by socio-economic and infrastructural differences (Desgroppes and Taupin, 2011: 1). Due to the economic and infrastructural differences that are evident in the villages, the youth refer to the 13 villages in the informal part of Kibera as ghetto whilst those in the formal part are in Kibera as lower Karen suburb. The ghetto villages labelled in yellow on the map on the next page are: Kianda, Raila, Gatwekera, Makina, Kisumu Ndogo, Kambi Muru, Mashimoni, Kichinjio, Lindi, Laini Saba, Silanga, Soweto East and some parts of Soweto West. Kibera as Lower Karen suburb denotes Olympic, Ayany and Salama (or Karanja Road) villages that are in the ‘formal’ area.

7.1.1 Kibera as Ghetto

The label of Kibera as ghetto is interesting as the youth resent it when outsiders label them as “ghetto fabulous” but it is also a label they proudly ascribe to their home when they socialise amongst themselves. They would proudly state, “Kuja nikupeleke ghetto uone maisha! (Come I take you to the ghetto you see and experience real life!)

The controversial term ghetto originated in times of residential segregation when different racial groups settled in select areas (Wirth, 1928; Hutchinson and Haynes 2012, Anderson, 2012). In South Africa it is associated with the infamous racial group isolation of the Africans in decrepit areas during the era of apartheid between 1948 and 1991 (Christopher, 2005).
In African American sociological research, the term ghetto fuses negative connotations of rejection with optimism, hope and resilience (Clark, 1965; Moynihan, 1965; Weaver, 1948; Wacquant, 2004). A good example of this fusion is manifest in numerous Kiberan organisational labels such as: Ghetto Light Youth Group, Ghetto Mirror publication and Ghetto Film Trust (Gustafsson, 2012: 116). The youth cleverly adopt the term Kibera as ghetto and capitalise on its obscurity for self-promotion and in order to attract publicity. Furthermore, Kenyan popular culture features successful music artistes like eko dydda and Octopizzo whose claim to fame is that they grew up in the ghetto and are in a position to “Get Higher Education To Teach Others, which is derived from the acronym GHETTO” (eko dydda, 2011). The song lyrics of the artists are loaded with creative messages of empowerment such “slums means silver lives under me” (eko dydda, 2011). Kenyan popular culture is certainly a “youthful artistic energy emblematic of the real situations people face on a daily basis” (Eisenberg, 2012: 557).
7.1.1.1 Sheng Language in Kibera

The alternation between two or more languages in the same utterance has given rise to the slang and *sheng* culture that forms a distinct feature of some Kenyan residential communities. Language use is an influential symbol of identity and an important clue to social group membership (Mazrui, 1995: 168). The origin of *sheng* is unclear but it is speculated to have originated in Kaloleni neighbourhoods in Eastlands, Nairobi (Abdulaziz and Osinde, 1997: 44). Some scholars claim that it is an amalgamation of many languages spoken in Kenya (Tetley, 1984). Sociolinguistic evidence from Kenya indicates *sheng* is a slang based primarily on “Kiswahili-English code switching which serves as a para-code of mainly lower class urban youth” (Mazrui, 1995: 171). I concur with Bosire (2006) and Mazrui (1995) who argue that the foundation of sheng lies at the traditional code switching between Swahili and English (thus the term sh-eng). The sheng spoken in Kibera varies greatly from other communities within Nairobi. Notably, the variation in more affluent areas has more English terms whilst that of rural areas is likely to include the dominant ethnic language spoken. The urban low-income housing estates and communities are more likely to incorporate more Kiswahili terms (Githiora, 2002: 161; Mazrui, 1995: 170).

Consider a sentence such as: *Ndee ya tools*. In Kiswahili, *Ndee* is ten shillings, *ya* is for, whilst *tools* means device/s. However, tools in sheng cleverly signifies chewing gum for enabling one to chew *miraa/khat* (a stimulant in plant form). The linguistic innovation is constantly evolving and this is a way for the different groups within Kibera to retain their distinctiveness. Likewise, a study of black youth in South Africa by Bembe and Beukes (2007: 464) discovered that youth shape and reshape language to suit their individual needs and status; it is a fashion item of sorts. The Cristo youth in Brazil use a range of innovative slang terms that create new discourse rules that alter the rhythm of their speech (Roth-Gordon, 2007). In Kibera, Sheng serves the dual function of creating social distance with the “mainstream urban culture while strengthening the bonds of solidarity within the in group” (Mazrui, 1995: 172). Young Kiberans are very proud of their innovative language and the constant evolution is humorous and creative. One characteristic of the distinctiveness of the Kibera villages is the sheng spoken. In the next section I elaborate further on other distinguishing features within the villages.
7.1.2 The Villages of Kibera

The 22 young Kiberans who form the sample of this study are drawn from Kianda, Makina, Gatwekera, Salama (Karanja road), Ayany and Olympic. As indicated, I spent the year of 2013 from January to December in the various villages of Kibera. Therefore, in order to provide a thick description of the villages of Kibera, I draw upon some of my observations, personal communication from the residents, limited academic articles and government documents such as the Kenya Census report to provide a thick description of the villages of Kibera. This thesis is one of the first documents to offer a detailed account of the diverse villages in Kibera. In the past, scholars such as Bodewes (2005, 2010) have provided some descriptive accounts of the diversity within the villages. However, not all the villages are described. As discussed, scholarly papers and media articles tend to cluster Kibera as one homogenous area yet it is a very diverse area. Kibera has also evolved over the years and this chapter captures the changes that have taken place within the area.

Kianda village sits on gently sloping land characterised by mud, wooden and concrete structures with corrugated galvanised roofing sheets. It is a vibrant and friendly space with loud pubs, small restaurants and a significant number of roadside traders. The average rent is about KSH1,150 (GBP£8.21) per month per room based on the location of the structure. Rooms located in the lower part of the village cost less than those that overlook the main road whilst commercial premises are rented out at higher rates (Marras, 2008: 3). As noted, there are contradictory population figures of Kibera but the last census reports that Kianda has the second highest population density of 29,356 people (Kenya Census, 2009). The youth from the village reported it was very cohesive and in my go-along tours to the village we had to stop quite often for them to socialise and plan dates. They spoke a lot of Sheng and it was very easy for me to sit freely and chat with them. There was a vibe of ambition and a hope for a better future in their animated discussions.

A more amplified Makina village is characterised by a palpable entrepreneurship spirit. It is almost as energetic as Oxford Street, London. Neatly painted shops stocked with diverse wares are packed with customers and smiling salespeople. Restaurants, bars, churches, mosques and schools are scattered in different parts of the village. Even in
the midst of crowded rooms and houses there is a vibrant allure as fashionable young men and women line the streets socialising. Unlike the other ghetto villages there is very little pollution towards the heart of the village. The mainly Muslim Nubian community is dominant in the area and the shop owners are drawn from diverse communities. Monthly rent is higher in the area and can be as high as KSH 20,000 (GBP£142) for a three bedrooomed house. The young people from other parts of Kibera were adamant that it was a very unsafe village due to the targeting of profitable businesses by the ethnic gangs. The ethnic gangs are instrumental in the informal governance structure of Kibera; they are discussed extensively in explication of the political and governance structure towards the conclusion of this chapter. *Makina* is documented to have a population density of 25,242 (Kenyan Census, 2009) and a large number of grocery and hardware shoppers frequent the area from the adjacent Adams Arcade and *Kabarnet* Gardens suburbs.

In contrast, *Gatwekera* is rather sleepy with crowded houses and very little business activity. It is the most infamous part of the slum as it is associated with ethnic violence and crime (Masava, 2013; Ombati, 2013). During hangouts and go-alongs the youth drawn from the other areas of Kibera disclosed wariness of the village and its residents. They often indicated that they felt discriminated by the people from the area. In contrast, the interviewees drawn from the village were adamant that their community of “24,991” was vibrant and cohesive (Kenya Census, 2009). It is also interesting that even in what is perceived as the most deprived area there were very many satellite dishes and public centers for people to catch up on live sports and news channels. There are also numerous food joints and delicacies on sale in many parts of the village. Some residents were also dressed in stylish outfits with “swagger” stereotypically associated with the *Luo* community (Oxford Online Dictionary). The monthly rent ranges from KSH 1,000 (GBP£7.14) for a room to KSH 2,500 (GBP£18) but there are claims that some people do not pay rent by intimidating their landlords. The *Luo* also dominate the adjacent Raila Village and this is partially attributed to their migration from rural homes in Western Kenya to offer political support to outgoing area member of parliament and former Prime Minister Hon. Raila Odinga (de Smedt, 2009b).

The consummate politician served the whole Kibera area and surrounding suburbs for four consecutive terms. He also ran for presidency twice within that period.
Consequently, the hilly Raila village is named after him. It is described as a high-risk residential area due to its vulnerability to mudslides, floods and accidental fires (Gatheca, 2012). Many of the residents have also built their homes dangerously close to the Nairobi River estuary that cuts through the village. Fortunately, a large number of them have been relocated to the slum upgrade houses popularly referred to as Canaan or Soweto Highrise. Sometimes there is even confusion as to whether Raila is the neighbouring Highrise village that is the site of the government slum upgrading project. In the upgraded homes, the monthly rent for a three bedroomed apartment inclusive of water and electricity is KSH 3,500 (GBP£24.8). Some families share the kitchen, bathroom and veranda to subsidise the costs (Fernandez and Calas, 2011: 7). In some sections of the village, cheaper houses are available for a monthly rate of approximately KSH500 (GBP£3.6) per room. The neighbouring up-market Mbagathi, Kilimani and Lang’ata suburban estates border the multi-ethnic village alongside the plush Riara University and Kenya Medical Research Institute. It is a dynamic village of “19,318” and numerous factory workers, hospital sector workers, domestic workers and mechanics live in the convenient area (UN Habitat, 2008).

*Soweto East* differs greatly from smaller counterpart *Soweto West*. In contrast to the traces of modern housing and amenities in the former, high rise flats of corrugated iron sheets, mud and wood are more popular. It is the smallest village in Kibera yet it is a hubbub of activity filled with many branded development projects such as biogas generation, public toilets and bone jewellery shops. It is perceived to be one of the dirtiest and insecure parts of Kibera but the length of time spent in the village was insufficient to validate the claims of notoriety that were associated with the village. Likewise, I spent very little time in the *Kisumu Ndogo, Kambi Muru, Mashimoni, Lindi* and *Kichinjio* villages. Therefore, they are discussed in a general fashion. However, this serves as one of the most formidable documentations of the very unique villages.

The name *Kisumu Ndogo* is derived from the *Kisumu* County located on the shores of Africa’s largest freshwater Lake Victoria in Western Kenya. It is the county of origin of majority of the *Luo* migrants in Kibera. The docile village is characterised by congregations of young men shooting pool or chewing *khat* (stimulant in plant form). In contrast to the congregations of young men, there were also a notable number of large groups of women clearing up sewage, brick laying and selling fried fish and
vegetables. Unemployment amongst *Kisumu Ndogo* residents is very high and majority of the residents of the village depend on scarce casual labour jobs in the Industrial Area of Nairobi. The terrain is rough and makeshift roadside kiosks are dotted along the main road. Houses are made of concrete that is sometimes covered by graffiti art.

The adjacent *Kambi Muru* also has some graffiti walls and a distinctive business feel. *Luhy a* and *Luo* communities as well as a large Nubian population dominate it. In fact, the village name is derived from the Nubian term for “camping place for the *Muura* clansmen who were one of the nine clans of the Nubian tribe” (Bodewes, 2005: 32). Numerous shops in the area are branded with local company logos such as Equity bank or Safaricom. *Posho* mills (small scale maize grinding shops) display their freshly ground flour in the open for purchase. Mosques, churches and famous institutions such as the Kibera academy are located in the vibrant space.

Neighbouring *Mashimoni* is derived from the Kiswahili term “place of holes” (Bodewes, 2005: 32). It is a spirited space filled with small shops and *Jua Kali* (hot sun) artisans or ‘engineers’ and ‘designers’ who creatively weld their metal into a range of functional wares such as suitcases, beds and sofa sets. They are representative of Kenya’s informal or micro-enterprise sector (Daniels, 2010; King, 1996). The dusty, loud and sometimes-muddy village is very intriguing as the functional wares on display are of great artistic value. Unlike *Makina*’s sturdy and spacious structures, the little shops are poorly designed with plastic paper rooftops and aging wooden frames. However, this is also synonymous with the interesting *Jua Kali* sector that thrives in rough open air spaces. Housing in *Kisumu Ndogo* and *Kambi Muru* costs approximately KSH 500 (GBP£3.57) per room monthly.

In contrast to the entrepreneurial villages discussed, larger and densely populated *Lindi* is described by residents as the gangland of Kibera. Extortion, armed robbery and general lawlessness are reported to be rampant in the multi-ethnic village. The last Kenyan Census indicated that the village’s population density was 35,158, which is the highest in Kibera (Karanja, 2010: 1). Power lines hang dangerously low in the village paths whilst others crisscross the mud and concrete walled houses. The numerous residents are very varied so generalisation of their status as criminals would be erroneous. Schools, mosques, churches, dispensaries, pubs and restaurants are
distributed all over the village. Narrow, dusty pathways connect the different sections of the village as well as the bordering Silanga.

It is not uncommon to stumble upon pigs and chicken roaming freely in the Luhya dominated Silanga as it is home to some small-scale farmers who also grow vegetables such as kale. PlayStation gaming cafés, cybercafés and food joints are popular in the area. The prevalence of technologies such as computers and PlayStation cafés challenges the assumption that resource poor contexts also have limited access to technology and also affirms Ganesh’s proposition on the importance of the analysis of numerous ways in which the poor and marginalised use technologies for entertainment (Ganesh, 2010: 3). PlayStations are not explored in the discussion chapters because this thesis focuses on the most significant forms of new media and ICT artefacts within the context. However, the existence of such cafés in Kibera presents opportunities for the future empirical exploration of the diverse ways in which people appropriate technologies in the pursuit of leisure and entertainment. Like Soweto West, innovative projects such as biogas toilets are spread throughout Silanga. Housing is almost similar in cost to the adjacent villages and costs between KSH 800 (GBP£7.14) to KSH 2,000 (GBP£18) monthly. As in Kisumu Ndogo, it is common to stumble upon congregations of young men.

Similarly, the adjacent Laini Saba is very energetic. Kihato (2013: 29) fittingly describes the vibrant village as Kibera’s most valuable real estate and the shop owners are described as watajiri wa Dubai (Dubai’s wealthy class) as they are strategically positioned along the railway line where they display a variety of goods for sale. Kikuyu and Kamba traders dominate the commercial activities in Laini Saba and unlike the hand made Jua Kali of Kambi Muru, the traders also retail imported items like mattresses, beds, buckets, cookers and other electronic items. There are so many goods on sale that I was assured on one go-along I could purchase a whole home in the village. The village has a population density of “28,182” (Kenyan Census, 2009).

What emerges from the discussion of the villages is that Kibera as ghetto is not a simplistic homogenous area. Similarly, the Kibera as lower Karen is also very interesting because the area is actually a legal housing estate and not a ‘slum’. However, it is strongly associated with the informal Kibera due to proximity to the
ghetto area as well as shared infrastructure and media coverage that clusters the two parts as one. Some youth drawn from the suburban area prefer to describe the area as Kibera slum or ghetto and most maps will cluster the formal and informal areas together. The use of nicknames by residents to describe areas such as Kibera is not a novel idea. Dürr (2012: 708) argues that slum residents usually refer to their neighbourhoods by place names or nicknames rather than use pejorative terms like slum or favela. The real Karen suburb is one of the oldest and most desirable residential areas in Nairobi named after plantation owner and Danish writer of Out of Africa, Karen Blixen. The Karen suburb is approximately 15 Kilometers away from Kibera so it is borrowed as a nickname due to proximity.

7.1.3 Kibera as Lower Karen Suburb

The actual upper income Karen suburb offers a blend of colonial bungalows and villas on gorgeous and expansive grounds (Hass Consult, 2014: 1). It is characterised by gated housing communities, upmarket restaurants, animal parks, horse shows, art galleries and cultural centers. In contrast, Kibera as lower Karen denotes Olympic, Ayany and Salama (Karanja road) villages in the formal section of Kibera. Olympic village has concrete buildings with brick tiled roofs whilst some buildings have corrugated galvanised iron sheet roofing. The area has very well constructed cybercafes, pubs and restaurants. Lots of vehicles are parked in the area as testament to the well-tarmacked roads. A mini-estate famously labeled as Fort Jesus is also located within Olympic. It is named after one of Kenya’s coastal landmarks built over a spur of coral rock between 1593 and 1596 by the Portuguese in the city of Mombasa. The fort bears “physical witness to the interchange of cultural values and influences among peoples of African, Arab, Turkish, Persian and European origin that fought to gain and maintain their control over the strategic port” (UNESCO, 2013: 1). Young Kiberans claim the area derives its name from the Swahili architecture that was in use along the East African Coast as far back as the 18th Century. Truly, most of the houses reflect almost a similar look and feel of “large chunks of coral stone (coral ‘rag’) set in a thick mortar of coral lime and sand, strong tropical hardwood and white lime plaster finishings” (Lamu Island Property, 2014). The houses have a general look and feel of Swahiliness but it is not clear whether they are the exact replica of the coastal houses.
The monthly rent for a house in Olympic ranges from KSH 7,000 (GB£50) for a one bedroomed house to KSH 30,000 (GB£214) for a three bedroomed house. Some residents are homeowners and a typical house costs approximately KSH 6 million (GB£42,857). Unlike the informal ghetto part of Kibera, title deeds for the houses are legally available and it is believed that the Nubian community owns most of the houses in the area. The price range for housing in the rest of Olympic is almost similar but there are a few smaller houses that cost much less.

The neighbouring Karanja Road village (officially Salama) is also fascinating. Beauty salons, fashion boutiques with alluring displays and the aroma of food are distinct in the area. A popular restaurant commonly referred to as Kibera’s Hilton is located in the area. Numerous well-constructed apartment blocks are scattered in the village and in most of them two bedroomed houses of 80.00m² cost around KSH 10,000 per month (GB£90). Like some parts of the ghetto, some of the houses are constructed with corrugated galvanised iron and concrete but they are better built. In fact, the main road that runs through the village is built better than some middle income housing estates in Nairobi’s Eastlands. Neatly constructed shops are also neatly arranged along the roadside in an orderly fashion.

The bordering Ayany Estate is also very well organised and is the most well developed part of Kibera. Equity Bank plaza, a large Co-operative bank branch and two towering shopping plazas are located in the estate. The schools in the area are very well built and some of the neat houses are hidden away behind secure gates. Save for the chirping of colourful birds, most parts of the estate are very silent. Rent is almost the same price as Olympic as the monthly rate for a three bedroomed house costs around KSH40,000 (GB£285). From the contrast between Kibera as ghetto and Kibera as lower Karen suburb it emerges that Kibera is very diverse. However, there is hardly any literature that captures the diversity of the socio-economic profiles of the residents of Kibera. In the course of fieldwork I tried to get in touch with contacts at organisations that may have this data and I discovered that most organisations kept their surveys and data confidential. Additionally, many of the organizations restricted their data collection to the specific village in which they were headquartered.
Fellow academics from the local universities also informed me that they have never heard of the existence of any documents detailing the full demographic or socio-economic profiles of Kiberans. As presented in the previous chapter, I documented the education levels, age, interests and occupations of all the participants. That exercise was very useful in affirming the diverse nature of Kiberans. In the quest for any published information on the socio-economic profile of Kiberans, I reviewed a few papers that offer sufficient evidence of the diverse nature of the residents. However, they are not very exhaustive and are slightly dated (Research International 2009; Gulyani and Talukdar, 2010). They are presented in the next section.

7.2 The Socio-economic Structure of Kiberans

In 2009, a survey of Kibera established that the average annual income per household was KSH8,500 (£55.12) and an estimate of KSH1,420 (£10.10) per month as the income per capita. The income was largely derived from wage employment and small business engagement or what are commonly referred to as micro-enterprises (Research International, 2009: 26). Another study of 1,755 households in Nairobi’s slums discovered that 73 percent of households are poor and 2 percent are non-poor (Gulyani and Talukdar 2010: 1712). In comparison with the poverty line of KSH3,174 (£26.13) per adult per month (excluding rent), both studies conclude that household or micro enterprises are helping Nairobi’s slum residents in their fight against poverty (Research International, 2009; Gulyani and Talukdar, 2010). The last Government literacy survey established that Nairobi had the highest level of people with basic reading, writing and numeracy skills (KNBS, 2007). As discussed extensively in chapter three, the pursuit and desire for formal education is very high in Kenya. Kibera is no exception. Kihato asserts that Kiberans have a “reverence for education and they will sacrifice almost anything to send their children to good private schools, pay for extra tuition and buy books” (2013: 29). In a case study of private schools in Kibera, Dixon and Tooley (2012: 702) discovered that parents prefer to enrol their children in low cost private schools as opposed to free government schools due to perceptions of higher quality in the former.
Research International’s report indicates that “three-quarters of slum dwellers in Nairobi” have completed primary school with no significant difference between males and females; it also highlights that one of the major pulls to reside in Kibera is the cheap rent (Research International, 2009: 20). Therefore, they are what Cawthorne (2007: 1) describes as the “hidden middle class” who can afford to live in better residential areas but choose not to. Although he attributes their choice to the “disdain for a solitary posher life”, I opine that this strategic decision by the residents in order to save up for their children or their own educational needs (Cawthorne, 2007: 1). The mystery of the hidden middle class is only one that can be demystified with time as scholars intensify ‘slum’ studies. Furthermore, if the highly anticipated “rise of the middle class” occurs in Africa, substantial narratives are bound to emerge (African Development Bank, 2011: 3). On several field visits, the young Kiberans assured me that Ksh50 (less than GB£0.50 Pence) could purchase a lot in Kibera. However, in all the time I spent in café’s consuming Kenyan chapati (round fried flat bread) and fruit juice I observed that the prices were very similar and sometimes even higher than those of Nairobi city centre’s cheap backstreet cafés.

The demographic profile of the young Kiberans in the research methods chapter is a good indication of the high levels of education status. It is also evident that there are a significant number of people in Kibera who are not deprived and can easily be described as “middle class” people who face a low probability of experiencing poverty (National Intelligence Council, 2012). The definition of middle class is adopted from the African Development Bank that defines it as the group that spends between US$2 (GB£1.28, KSH160) and US$20 (GB£12.77, KSH1,600) a day. Additionally, class in the context of this thesis refers to “social differentiation based on cultural, economic and social capital” (Bourdieu, 1987: 4). Class is also defined based on how the young Kiberans describe their perceived lower income status based on their “reference and experience of social class” (Skeggs, 1997: 74). The discussion of social class in the context of Kibera is revisited extensively in chapter nine. From my observations of Kiberans, I infer that Kibera has residents in all three categories of middle class as well as those who live below the poverty line.

Other socio-economic data indicates that the unemployment rate among women is almost five times higher than men and unemployment amongst the young people is one
of the key factors that leads to a high level of insecurity and violence in the slums (Gulyani and Talukdar, 2010: 1715; Research International, 2009: 12). The average slum household has three members and single person households (single men and single women living in rooms or shared housing) account for almost a third of all households (Gulyani and Talukdar; 2010: 1714). A past World Bank study of slums and informal settlements indicates there are more males than females in the slums; a ratio of 55: 45 (World Bank, 2006: 23). In addition to the cheaper rent, another pull to reside in Kibera is political. As indicated in the description of the Raila Village in the previous section, de Smedt (2009b: 587) documents that in the 90s some members of the dominant Luo ethnic group in Kibera migrated from their rural homes to ensure that the then member of parliament Raila Odinga would be re-elected to parliament.

de Smedt (2009b) does not indicate the number of people that migrated to Kibera but in the course of one of the go-alongs I participated in, I was taken to a spot that the migrants congregate upon arrival in Kibera. It is a hilly section of Kibera right next to Raila village. Ethnic allegiance is noted as a source of cohesion within the Kiberan community amongst those of the same ethnic group (Research International, 2009: 10). However, it can also lead to polarising episodes such as the infamous post-election violence of early 2008. As described in chapter three, Kibera is one of the places in which violence broke out after the disputed elections. According to Marx et al., (2014: 5), the Luo, Luhyia and Kamba communities are the most prevalent ethnic groups in Kibera. The scholars also observe that the Kikuyu and Nubian communities are well represented in the provincial administration and landlord population yet they are only 6 percent and 1 percent of the household population respectively (Marx et al., 2014: 5). Their data is derived from household-level data collected in Kibera with high-resolution satellite imagery data captured over the slum area. They also use data from the 2009 Kenya Census and draw on surveys that they conducted with chiefs, assistant chiefs, village and zone elders (Marx et al., 2014: n8). The chiefs and elders make up the formal structure of authority that governs Kibera. In the next section I explore the other governance authorities within Kibera.
7.3 Political and Governance Structure of Kibera

The formal structure of governance in Kibera comprises the elected Member of Parliament, members of the county assembly representatives as well as the government’s provincial administration of “four chiefs and eleven assistant chiefs. The informal structure includes a council of elders and the ethnic gangs” (Marx et al., 2014b: 3). Chiefs and assistant chiefs are “government appointees with legally defined responsibilities and specific territorial jurisdictions” that include dispute resolution as well as ensuring security and peace are maintained in the respective villages (Joireman and Vanderpoel, 2010: 9). They form the “cornerstone of the Provincial Administration” under the central government’s office of the president (Osborn, 2012: 1). The powerful sources of influence in the governance of Kibera are the chiefs who control the real estate market by granting temporary occupation licenses for real estate projects that eventually revert to permanent status due to the lack of regulation in the area (Joireman and Vanderpoel, 2010: 6; Neuwirth, 2006). Throughout the history of Kibera, “chiefs have illegally allocated land to prospective structure owners in exchange for payment. When a structure owner wishes to sell his units, he and the new owner will meet together in the chief’s office and the chief will authorize the transaction and require both parties to sign a written agreement. This behaviour exceeds the formal, legal duties of the office of the Chief and gives some economic insight into why the informal settlements in Kenya continue to grow” (Joireman and Vanderpoel, 2010: 10).

The informal structure of authority includes the council of elders and the ethnic gangs. The council of elders are documented to be a resident focused alternative to the formal structure of authority. However, in a research of the structures of authority in Kibera, Joireman and Vanderpoel (2010: 12) observed that the council of elders are somewhat interdependent with the chiefs. This is because the chiefs in the respective villages select the council of elders. The researchers discovered that there are also instances whereby the council of elders collude with the chiefs to sell off land. The council of elders are supposed to be focused on the needs of residents and act as intermediaries that provide access to the chief and other formal structures of authority. However, some of the elders also participate in the extortion of some landlords and residents in the
form of requesting for bribes for the exchange of services such as security provision (Masava, 2013: 1).

The ethnic gangs are comprised of people from the same ethnic group. For example, *Mungiki* for the *Kikuyu* and *Kamukunji* for the *Luo* ethnic group. As will be explored further in the next section, the gangs control and levy taxes over certain public goods and amenities such as water, sanitation and electricity. They may also provide protection to co-ethnic individuals in cases of interethnic disputes (Marx et al., 2015: 8). The ethnic gangs sometimes use violence and they justify their actions on the basis of their ethnicity. For example, they argue that they exist in order to rescue Kibera residents from their respective ethnic groups from oppression. Some of them like the *Kamukunji* even hold public meetings and forums occasionally (Joireman and Vanderpoel, 2010: 11). However, they also rob and extort the same residents that they argue that they rescue. The ‘slums’ are described as areas where “government and broader society have not managed to organise in a way that provides for widespread provision and maintenance of public goods that include clean water, sanitation, garbage collection, a social safety net and the legal infrastructure of property rights” (Marx et al., 2013). However, Kibera has a “complex structure of economic stakeholders, who have acquired a degree of social legitimacy to extract profit out of trade of inadequate basic necessities” (Huchzermeier, 2008: 20). Water, electricity, refuse collection and toilet facilities are all available at a fee and residents have the choice to pay “illegal” private service providers such as the gangs or individuals who tap the water and electricity services or legally available government entities (Gulyani et al., 2006; Odbert and Twigg, 2011).

The country’s electricity distributor Kenya Power retails legal electricity at a fee and during fieldwork in 2013 I saw quite a number of company lorries in the area. A representative of the company reported that the company had negotiated with the village chiefs and elders to assist in the process of installing legal electrical connections. The cost of a legal power connection is about £2.50 (KSH 300) a month for the average house of 12 by 12 feet and the government’s Nairobi Water Company provides water for around £1.50 (KSH 200) a month or slightly less. The illegal service providers such as the ethnic gangs sometimes tap the genuine electricity and water connections for retail at lower costs to some residents. However, it is a very dangerous
trade that causes accidental fires and tragic deaths (Mutahi, 2011; Ombati, 2013). Due
to the vast differences in demographic data on those living in slums or low-income
settlements, there is a persistent debate is whether ‘slums’ are representations of
modernisation or poverty traps (Marx et al., 2013). The modernisation theory posits
that ‘slums’ are a transitory phenomenon characteristic of fast growing economies that
progressively give way to formal housing as economic growth trickles down and
societies approach the later stages of economic development (Frankenhoff, 1967;

In contrast, the literature on poverty traps indicates that the nature of urban slums
makes it difficult to achieve improvements in standards of living through marginal
investments in housing, health or infrastructure alone (Marx et al., 2013: 191; Basu,
2003; Matsuyama, 2005; Bowles et al., 2006; Golgher, 2012; Jalan and Ravallion,
2002). This thesis does not critically evaluate modernisation theory, poverty traps and
poverty mind set in the context of slums. However, the discussion chapter explores the
young Kiberan’s perceptions of development in relation to their appropriation of new
media and their environment. As will be discussed, the young Kiberans relayed
confidence that they would eventually break away from the ‘slum’ environment.
Despite the challenges they sometimes faced, they were very positive about their
relationships and the community groups they had formed in the context of Kibera.
Obombo (2012: 53) also discovered “Kiberans are not embarrassed to be residents and
they believe in experiencing full life and joy in their purported walls of suffering”.
Similarly, Ekdale (2014: 93) discovered that there is a significant disconnect between
the lives experienced by the residents and the prevailing hopeless discourse about the
Kibera. He concludes that residents are “sophisticated critics of the dominant discourse
and outspoken advocates for a more nuanced understanding of themselves and their
community”.
Figure 14: Aerial Image of Kibera focused on Kianda Village

Aerial image of Kibera courtesy of Andama, A. (Used with permission June 10 2013)
7.4 Chapter Summary and Concluding Remarks

In this chapter I have presented and discussed a thick description of Kibera. I have done this by applying Wynn and Williams’s (2012: 796) second methodological principle of critical realism. The second principle is the explication of structure and context that involves a rich and thick description of structural entities in a context. In this case I have identified and described the components of physical, socio-economic, political and governance structures that make up Kibera. The goal is to provide a richer and more critical picture of an area that has been described as a homogenous land of suffering for so many years. In essence, it is my goal to contextualise Kibera accurately in this chapter and the whole thesis in general. I explore the diversity within Kibera as two in one: Kibera as ghetto and Kibera as Lower Karen suburb. This dual description of the context is derived from the young people’s perception of their environmental stratification.

In the next section of this thesis I revert to a discussion of the research findings that were generated in the very interesting space. What is particularly interesting is that the research findings resonate very much with existent literature on the appropriation of new media and ICTs in the Global North context reviewed in chapter four. Despite, their resource constrained environment, the young people are avid users and appropriators of the mobile phone and the mobile Internet for the purpose of social networking. Additionally, traditional forms of communication such as face-to-face communication remain significant and relevant in the contexts of the young people’s communicative environments.
CHAPTER EIGHT: Discussion of Research Findings

8.1 The Appropriation of New Media and ICTs by the Young People of Kibera

Introduction

Emergent literature within ICT4D and M4D explores how the marginalised and low-income young people use new media and ICTs in the Global South (Porter et al., 2012; McIntosh, 2010). As reviewed in chapter four, empirical evidence suggests that the young people in marginalised areas make use of new media and ICTs in very similar ways to young people from more affluent countries in the Global North. They predominantly co-ordinate their daily schedules, appropriate their mobile phones as fashion statements and build relationships as they extend their offline networks online. The key difference is that the Global North literature on how young people use and appropriate new media has been well documented over the years whilst in the Global South, the empirical evidence is only just emerging. Additionally, the users from the Global South have been predominantly framed by NGOs and development practitioners in the ICT4D field as “virtuous beneficiaries of technology” who use the artefacts in constructive ways such as generation of monthly income or seeking life changing health and educational information (Arora and Rangaswamy, 2013: 901)

The goal of this chapter is to discuss how the young people appropriate new media and ICTs in the context of Kibera. This discussion is based on one of the key questions that guides this thesis. RQ1 asks: Do the young people appropriate new media and ICTs? Additionally, this chapter also explores what the mobile phone has become in the context of Kibera. The appropriation of the mobile phone by the young people in Kibera has transformed it to be a socio-cultural artefact that is fondly described as an office and a personal secretary that is effective in the co-ordination of daily activities such as social networking. The discussions presented in this chapter are predominantly based on research findings from 22 semi-structured interviews of 12 young men and 10 young women of ages 18-28 in Kibera. The interviews were conducted in the course of January to December 2013 in the villages of Kianda, Makina, Olympic and Ayany. The semi-structured interview data is triangulated with data from some of participant
observation field notes. This is a case of “methodological triangulation” because I combine the semi-structured interviews with data from the fieldnotes (Reeves et al., 2008: 513). Ethical considerations to conceal the identities of the research participants have been incorporated so the names articulated in this chapter are all pseudonyms.

All but one of the interviewees (a young female eighteen year old Norah) had appropriated new media and ICTs. Additionally, the young people appropriate the new media and ICT artefacts in the context of a communicative ecology that also includes significant local information flows. The most significant local information flows in the lives of the young people of Kibera are youth groups, youth forums, church and school as well as community radio station Pamoja FM. Communicative ecologies were introduced and discussed in chapter one. In that chapter, I indicated that it is very important to map out all the forms of communication that are significant locally so that one can examine how any interactions between older forms of ICT such as radio combine with newer forms of communication such as the mobile phone. In the context of this thesis, the communicative ecologies framework facilitates the critical analysis of how the mobile phone and mobile Internet appropriation occurs in the social context of each of the young people’s communicative environments. Therefore, the communicative ecologies framework places “ICTs in the context of all the ways of communicating that are significant locally and it is recognised that any new connections and networks (social and technical) that develop as a result of the introduction of individual ICTs will be far more effective if they are somehow interconnected with existing, locally appropriate systems and structures” (Tacchi et al., 2006: 5).

The mapping of the communicative ecologies and the acknowledgement that communication takes place is the context of a communicative environment is a unique contribution to the Kenyan media and ICT4D literature. The Kenyan studies reviewed in the literature review are focused on the usage of different forms of new media and ICTs in isolation (McIntosh, 2010; Wyche et al., 2013a, Murphy and Priebe, 2011; Shrum et al., 2011). The focus is on amplifying how important the new media artefact under study is in the context where it is introduced. Therefore, such an action leaves out the possible influence of older well-established forms of communication and ICT within the context. Consequently, this chapter commences by discussing the dominant
forms of local information flows that comprise the communicative ecologies of the young Kiberans in the context of daily life in Kibera. The first form of local information flow is face-to-face communication in the context of Kibera.

8.2 Face-to-Face Communication in Kibera

Face-to-face communication continues to be described as a “superior method of communication for conflict resolution, negotiation, developing relationships, and resolving situations of uncertainty” (Rhoads, 2010: 113). The African continent has long been described as the “oral continent” where diverse ethnic groups value personal contact and communication more than literature (Finnegan, 2007). In Kenyan society, it is a potent form of developing relationships because it is a polite sign that a person has created the time to meet or interact with another. Phiri (2009: 124) argues that the “personal presence of face-to-face communication is perceived to be more important than phone calls in the African context”. In the context of Kibera, the young people value their face-to-face communication and they also value their phone calls. The young people of Kibera enjoy walking in their area of residence as they socialise face-to-face with members of the community. That is why in chapter seven, I describe the “go-along” as one of the vital ways that I elicited data (Kusenbach, 2003). From those go-alongs, I was able to witness the young people as they participated in face-to-face communication. I was also able to learn a lot about the demographics and social life of the residents.

In my longest go-along with Jackson (27), we walked through Makina Village for approximately six hours as he showed me several stalls and shops. At one point, he gestured to a rotund elderly woman swathed in traditional cloth (leso) seated outside a small café next to a display box full of sweets. He remarked, “you see that box, she can sell sweets worth thousands of shillings in a month, she is also the sole owner of that line of shops and has educated all her children to university level. She is very rich.” We walked past her neat line of shops and Jackson (27) stopped several times to speak to various residents of his village. He indicated that his daily morning routine involved a walk around Kibera as he engaged in face-to-face interactions and communication. In fact, on the day I eventually interviewed him he insisted that we tour the slum so that he could show me his neighbourhood properly. I obliged. Jackson (27) reported: So I
always get up at six. I thank the ultimate Supreme Being, sometimes I go to gym, and sometimes I do not. I have a passion for my community. I love it. So I want to be involved in the day to day living of the community. I have to go visit my youth group every morning.

(June 15, 2013: Makina village)

Similarly, Francis (28) was very passionate about face-to-face communication and interactions within the community. He also ensured that I met some of his friends who were between ages 20-28 from Karanja Village as well as Soweto East. I met with him frequently in Karanja village at venues such as Kibera’s Hilton and he often discussed how important it was to participate in community life by visiting others. He often said he perceived Kibera to be a very good residential area because of the various youth groups and activities that were always taking place. Diane (20) was also engaged in a lot of face-to-face communication and interactions with young people drawn from her age group. Naima (20) was also very interested in face-to-face communication with members of her age group. She had moved to Kibera in 2010 from Kariobangi, which is a low-income settlement approximately 15 Kilometres away from the Nairobi city centre. She contrasted the cohesiveness in Kibera with that of Kariobangi and argued that Kibera was more vibrant and cohesive because it had more groups and activities. She also opined that young people in Kibera were very active and productive so she enjoyed interacting with them in a youth group she had recently joined.

8.2.1 Youth Groups in Kibera

One important context for young Kiberans to engage in face-to-face communication is the youth group. The youth groups are organisational units of young Kiberans aged between approximately 13 and 35. The average group has twenty members. The groups meet frequently for social and economic reasons that are articulated in the next section. For privacy considerations, I will not articulate the exact labels that the young people ascribe to their groups. I observed that young men committed more time to join the groups than the women. Some of the interviewees reported that this was because young women had very limited time to commit to the group activities. Young women were more likely to be engaged in house work such as baby sitting, cleaning and cooking as well as part time odd jobs and schooling. The few women who were active youth group
members in the sample were also the most highly educated. For example, university student Naima (20) was in the same group as Francis (28). Their youth group had a Kiswahili label that can be translated into many versions of the word strength. In their youth group, they engaged in various economic activities such as poultry keeping and small-scale farm projects.

Figure 15: Image of Youth Group in Kibera (Gatwekera Village)

University students Felista (20) and Pat (20) were in a more formal youth group that operated as an education provision NGO. They engaged in activities such as reading to younger children in the various community libraries in Kibera as well as volunteer work. Moha’s (19) youth group was in charge of running a public toilet, shower house and a biogas generation plant. Coby (24) was also very actively engaged in several groups. He was very passionate about eradicating drug abuse in the community. Moha (19) was in four youth groups and he noted that they were the best solution to problems that afflict those in the ‘slum’. He believed that young Kiberans could shape and change Kibera. Just like the population figure, it is unclear how many youth groups exist in Kibera. From my participant observation, I estimate that they are approximately
The first part of the topic guide that I used to collect data was focused on generating biographical data from the youth. Consequently, I encouraged them to share freely about their home life. I discovered that they were more comfortable socialising and communicating within their youth groups.

I observed that they were very cohesive within their youth groups. In contrast, they were reluctant to discuss their family members and when I probed some of them during my participant observation trips and go-alongs, they noted that most of them had strained relationships with their parents and families. This is discrepant with the Kenyan sociological literature that presents Kenya as a collectivist country where mutual responsibility and sharing with close knit extended kin and family social networks is commonplace (Njue et al., 2007: 60). The emerging studies of young people and new media technologies in Sub-Saharan Africa I reviewed in chapter five give a much more nuanced account of the relationship between young people and parents or elders. The studies indicated that freedom to communicate freely using new media and ICT technology can sometimes strain the relationships between the young people and their elders (McIntosh, 2010; Porter et al., 2012). In the context of Kibera, it was evident that the young Kiberans were keen to engage with members of the larger youthful community than with their kin. After I interviewed Coby (24) in a small serene café at Makina, we had a small discussion in which Moha (19) and Diane (20) participated. Our meal of fried fish, Kenyan Chapati and Ugali (cooked maize meal) was served and we all relaxed. Moha (19) quipped, “The ghetto has many challenges and I don’t think I will ever look back when I get the chance to leave.” I then responded, “I thought you are actively and happily involved in many groups?”

Coby (24) replied, “It’s not that simple, huku kuna shida (there are many problems here), Kibera is a goldmine in some ways but there are some people, especially the older generation, our parents who are trapped here.”

Moha (19) retorted, “It’s true Fei. Huku ghetto (here in the ghetto) there are many problems and that’s why we keep ourselves so busy. But when we move we will never come back”. Diane (20) joined in, “The ghetto is a trap and many people, including our parents are trapped in that dangerous trap and cycle of poverty. They will never leave.”
I probed, “So you guys think poverty is a trap and a cycle?” They all nodded simultaneously and Coby (24) added, “Of course it is, people here are not physically poor, they are poor psychologically.”

Moh a added, “That is very true, they are addicted to this environment.”

Diane (20) added, “The old people are incapable of leaving and breaking free but we are not like them.”

Similarly, in one of the paired interviews I conducted on a later date in August, Pat (20) and Felista (20) also noted that their parents were “Very different and they have no hope of leaving the slum like them.” The optimism in the young people’s attitude was very palpable. Previous studies of young people living in select Nairobi slums also reveals that they foster a very optimistic attitude to their circumstances and life chances (Kabiru et al., 2013; Tignor and Prince-Embury, 2013). According to Kabiru et al., (2013: 82), the “youth maintain high aspirations despite the harsh realities of the slum”. They try to achieve their aspirations through education, delinquency, religion or residential mobility. In the Kiberan case, they strive to attain formal education and also desire the residential mobility I have explored in this section. The reverence for education is explored extensively in the next chapter.

8.2.2 Kinship Networks

The young Kiberans reported that collective responsibilities such as financial assistance for parents and housework were very demanding activities. This was particularly notable amongst the young women that I interviewed. All the young women I interviewed indicated that they were in charge of their own finances and had to work very hard to earn money for their needs and those of their families of origin. For example, university student Tracy (23) narrated how it was very difficult to live with her parents because they viewed her as a house help who had to do all the house chores. Additionally, she also had to work very hard academically and get a job to support her small brother. She noted that it was hard to view her parents as such; she instead viewed them as employers. She also observed that when her siblings acquired a stable
income they made very conscious efforts to distance themselves from the family of origin. “You know once you get a man or a wife you have to run away from your family, my sister had to do exactly that. Otherwise my parents would scare her man away with all their needs.” Similarly, single mother and university student Liza (25) who lived with her brother and mother reported how she had to lock up her child in the home as she went to look for work as there was no one in the house who could assist her to care for the child.

Single mother, Neema (23) also narrated the difficulties she underwent when she became pregnant at a tender age. Her parents disowned her because she was unable to provide labour in the home. When she eventually got another partner and moved in with him, her parents accepted her back because she was able to provide occasional financial assistance from her partner. Interestingly, the same young people who complained about the poor relationships they had with their families were very happy to discuss the young friends they cherished in Kibera. They perceived that those friends helped them with both emotional and social support. Diane (20) and Tracy (23) also indicated that there was a dark effect to the detachment many young women felt from their parents. Tracy (23) argued that part of the reason prostitution and transactional sex occurred in some parts of Kibera was because young girls were forced to provide for their families. Transactional sex and issues such as domestic violence against women in Kibera are vastly documented in the health studies literature (Ngugi et al., 2012; Yadav et al., 2005). In the context of this thesis, none of the young women interviewed reported any dealings of transactional sex or domestic violence. There is a general consensus that young women face many challenges in a ‘slum’ environment and they are also faced with the social conflict of occupying a subservient role.

As indicated in the previous chapter, many informal settlements and slums are inhabited by people who have migrated from the rural areas. Therefore, in some of the ethnic communities, the women are greatly subservient to men. However, when they move to the urban slum they are surrounded by a confluence of cultures, some of which do not expect women to be subservient in the home (Sommers, 2010: 323). As I noted in chapter four, there is a tension within collectivism and communitarianism where “the strain of extended family obligations may be felt strongly by the urban and educated urban African elite who must be the resource for food and lodging and employment
opportunities” (Prazak, 2006: 217). In the young Kiberans’ case, their parents lean on them for financial provision and labour so some of them experience, “financial and emotional drains” (Siegel, 1996a: 238). Whereas the youth groups provide cohesive family like associations where they can interact freely.

In contrast to the young women, the young men did not seem encumbered with the challenges of labour and financial provision for their families of origin. Francis (28), Sam (28), Moha (19), Coby (24) and Jackson (27) only complained that their older kin were resistant to change and were trapped in the poverty mind set that I have articulated. They desired for their parents to be independent minded and eventually move from Kibera. As discussed in chapter seven, there is extensive economic literature that presents slum environments as poverty traps in which people are unable to leave due to social and policy constraints (Marx et al., 2013). There is generally no consensus as to whether the slum is actually a trap and it is beyond the scope of this thesis to establish that. However, what is apparent from the responses of the young people is that there is a mindset that develops from exposure to being in a ‘slum’ environment over time. It is almost like the fear of change and ambivalence to attain a better life. These are themes that are well explored in African American literature in the USA context (Young, 2006; Jones and Luo, 1999). The poverty trap or mind set in the context of Kenyan slums is definitely a topic which future research can explore.

As indicated, I had to probe the young Kiberans on their family relations because they were not so keen on discussing their families. In order to validate their perceptions of family life, I spent some time validating their responses with Francis (28). This is because he played a dual role in the fieldwork. He was instrumental in negotiating access for me as the gatekeeper and he was also one of the interviewees. His coherence and willingness to participate in the study prompted me to request him to clarify the data the young people relayed about their family lives. I did not have the opportunity to spend time observing them in the context of their families of origin so I decided to validate their responses. I shared the responses they provided without disclosing their identities and Francis (28) opined that the responses were a valid reflection of the tense family lives of Kibera residents. Like the young women discussed in the previous section, he observed that Kibera is a man eat man society where collectivism and togetherness are uncommon amongst family members.
8.2.2.1 A Man Eat Man Society

In the interview of Moha (19), the same phrase of Kibera as a competitive *man eat man society* also come up in the discussion. Francis (28) also indicated the shortage of economic resources were a source of family discord in many homes. This is because many family members had to safeguard their day-to-day survival. In contrast, the youth groups reflected the collectivism and togetherness that nuclear and extended families were supposed to foster. As a result of the young people’s responses, I argue that their family relations point to evidence of loosening Kinship ties. In the broader Sub-Saharan African literature there is evidence that the traditionally strong kinship ties are loosening as families become more urbanised and formally educated (Smith, 2011; Meda, 2013). Smith (2011: 326) argues that this is because, “education is seen as contributing to the loosening of collective customary social controls and the flourishing of individual rationality”. Education is explored in greater depth in the next chapter of this thesis. This is because the young Kiberans value educational attainment and it is a social conversion factor that enables them to realise the capability of mobility, a form of development.

In summary, the findings from the semi-structured interviews and participant observation reflect that the most highly educated young people are actively engaged in youth groups and optimistic about their departure from the Kibera. They also actively differentiate themselves from their parent’s lifestyles and opinions. This is complementary with Smith’s (2011: 326) discussions of the flourishing of individual rationality and discrepant with the Kenyan literature that argues Kenya is founded upon “tight and collective kinship networks that place the family’s aspirations over the individual aspirations” (Njue et al., 2007). The young Kiberans keenly expressed the pursuit of individual aspirations over family ones. Like Horst and Miller (2005) during their anthropology of the cell phone in Jamaica, I assumed that “kinship would form the bedrock of individuals’ social connection” but I eventually discovered that “the prominence of kin varied and was much less significant than expected” (Horst and Miller, 2005: 759). In light of the loosening kinship networks within Kibera, the young people aspire to acquire their own personal wealth and aspirations without the encumbrance of caring for their families of origin. This is an aspiration that was particularly dominant amongst the young women I interviewed. Therefore, the
Kiberans use face-to-face communications and interactions to socialise more actively within their youth groups as opposed to their families or origin. In addition to the influential youth groups, they are also actively engaged in attending public events known as youth forums.

8.3 Youth Forums

The youth forums are events that bring together diverse young people from different villages in Kibera. They are somewhat similar to the numerous youth councils established across England to encourage youth participation. They are comprised of “groups of young people who come together in committees to discuss issues relating to their communities” (Matthews, 2001: 153). In the context of Kibera, the forums are sponsored by international organisations such as the United Nations. On occasions such as the annual world youth day, the young people converge at a public place such as one of the many halls available for hire within Kibera. Another more common venue is a large open field right next to the Kibera District Commissioner’s office. Youth forums present opportunities for the young to share information such as public health information on prevention of diseases and sanitation. Sometimes they also act as venues for them to participate in creative activities such as drama or music. In some of the forums, they watch educational movies and get to socialise freely with each other.

The forums have also been very influential in soliciting the young people’s political support. However, Moha (19) and Diane (20) observed that for some years, the forums had become corrupted by the NGO policy of daily allowances.

Allowances are small stipends that are paid to people when they attend a forum or research meeting facilitated by an NGO or international organisation such as the UN. Francis (28) argued that the allowances “Spoiled people and made them complacent as they would only attend such forums if they were assured there was money or sodas being distributed.” He said the allowance discouraged people from participating in voluntary and necessary drives such as garbage collection or environmental clean ups.

In the run up to the elections that were held during my fieldwork in March 2013, I witnessed a number of youth forums on various subjects. One of the most dominant subjects was peace. Local NGOs in partnership with the government sponsored and held numerous peace forums to sensitise people on the importance of maintaining peace.
and calm during the electoral period. The youth dominated forums included walks to the city centre with banners that displayed messages such as “Sitarusha mawe tena! (I will not throw stones again!).” In one of the forums, 300 young people from the various youth groups in the region converged at the Kibera District Commissioner’s office. The event also brought together various artistes from Kibera who desired to use art to stop the vice of throwing stones as a way of airing grievances. The “procession carrying placards with peace messages walked through Makina and Darajani and ended at Kamukunji grounds” (Brand Kenya 2013: 1).

The various peace forums and campaigns held in Kibera promoted an atmosphere of calm and tolerance. Consequently, the elections held in the area were very peaceful. Therefore, youth forums emerge as significant local information flows for the young people of Kibera. Another complementary source of information flow that plays a conciliatory role in the day-to-day lives of the Kiberans is two fold: Church and school. I incorporate the two in one discussion because the active churches within the context of Kibera are also very instrumental in the provision of educational facilities in the form of schools.

8.4 Church and School

In a case study of private schools in Kibera, Dixon and Tooley (2012: 702) discovered that parents enrol their children in low cost private schools as opposed to free government schools due to perceptions of higher quality in the former. Kihato asserts that Kiberans have a “reverence for education and they will sacrifice almost anything to send their children to good private schools, pay for extra tuition and buy books” (2013: 29). However, in a slight contrast from the evidence relayed by Kihato (2013) and Dixon and Tooley (2012), the young Kiberans who form the sample of this study had made personal efforts to seek out education sponsors. Francis (28) acquired scholarships from a missionary whom he met during volunteer work in Kibera. Some of the young people acquired their early education in free Catholic institutions. One such institution is Christ the King Catholic church in Laini Saba village. The large church was founded in 1974 as an outstation of St Michael’s Catholic Church in neighbouring suburb Otiende. Due to significant growth in membership, the church is now a parish with “four nursery schools, one primary school, one secondary school, a
community library that serves 88 other schools in Kibera and two technical schools (tailoring and hairdressing)” (Christthekingkibera, 2015).

University student Tracy (23) was educated in both the nursery and primary schools at the Catholic Church. During her interview she reported that the Catholics were very good because they followed up very strictly on one’s academic progress. Tracy (23) compared the education they provided with that of the numerous NGOs within Kibera and argued the reason NGO sponsored students had a very high school drop-out rate in comparison with those who attended the Catholic school was that they paid a student’s school fees and did not follow up with the academic progress. The Catholic schools pulled out funding when one dropped in their academic performance so they compelled the students to work very hard. Felista (20) and Pat (20) also confirmed this. They argued that the rigor of the Catholic schools motivated students to work and to aim very high. However, they also noted that some NGOs had very strict systems that ensured the children they sponsored performed excellently in their academic work. The young people all displayed a very positive attitude to education and spoke very highly of their educators and schools. They perceived educational attainment as one of the means through which they can escape the harsh realities of the slum and acquire a better life (Kabiru et al., 2013: 82).

In chapter two, I discuss how education is valued and perceived as a transformative tool in Kenyan society. This is because many desire to use educational attainment to attain social mobility. Aside from the potential for occupational attainment, another reason why the desire for formal education is so high is because Kenya is a “very hierarchical society” where titles such as professor, architect, engineer, doctor and 

mheshimiwa
(your honour) and graduate are perceived very highly (Hofstede, 2015). People are often identified with their academic and professional titles so many in the society desire to acquire such titles through educational attainment. For example, in public gatherings like the Harambees I discussed in chapter four, the master of ceremony may actually invite those who are highly educated to introduce themselves to the rest of the community. It is also not uncommon for a whole village to attend a village member’s graduation ceremony because of the enduring African belief that “when you educate a child you educate a village” (Ezeoke, 2011: 15). In additional to hierarchical recognition in Kenyan society, the non-economic role of education includes the
“acquisition of knowledge about health and well-being, the environment and language so as to be able to communicate” (Hatakka et al., 2014: 2).

The next chapter further explores education as a social conversion factor in the use and appropriation of new media and ICTs. The ability to communicate is something young Kiberans value very much. All the young people I interviewed except shy Norah (18) emphasised that they really desired to learn from others and they enjoy knowledge exchanges. Moha (19) reported that most young Kiberans viewed any form of interaction with a person from outside Kibera as a very important communicative opportunity. Churches like Christ the King Catholic Church complement the work of the schools because they also provide venues for the communicative opportunities and information exchanges they desire. The exchanges take place when the church provides human rights and advocacy services such as pro bono legal aid support and workshops on various topics. It also partners with local politicians in conflict resolution as well as civic awareness and provision of legal aid (Christ the King, 2015). Consequently, it serves as a very important source of local information flow within the community and for the young Kiberans. However, as they mature and go to university they do not always rely on the local churches such as Christ the King as an important source of local information. They go on to engage with other churches outside Kibera. Nevertheless, Church and school remain as foundationally important sources of local information flows in the Kiberan context. Their work is further complemented by another significant source of local information flow in the community: The local community media station Pamoja FM.

8.5 Pamoja FM: Community Radio in Kibera

Pamoja FM was founded in 2007 by Kibera born “Adam Hussein who is a journalist with a lot of experience from the mainstream media” (Nyström and Rosenblad 2012: 12). Community radio is not-for-profit radio produced by and for communities (Lunt and Livingstone, 2011: 164). Community media are normally understood as media that produce content with a specific community in mind. Community can be “conceptualized either in a spatial sense, such as a neighbourhood or a village, or in terms of an identity or shared interest” (Gustafsson, 2012: 258). Rennie (2006: 4) recommends a much broader definition of community media that exists outside of the
state and the market. One that is non-government and non-profit or which may interact with both. Like Gustaffson (2012), she highlights that community is a “sphere outside the state and economy that requires attention, status and resources” (Rennie, 2006: 4).

In the context of Kibera, *Pamoja* FM aims to create a platform to discuss issues that are relevant to and beneficial for the entire community whether old and young, male and female and regardless of tribal belonging (Gustaffson, 2013: 258-259). *Pamoja* is the Kiswahili word for together or unity and there is literature on the powerful role that *Pamoja* FM plays in generating cohesiveness and togetherness (Graesholm, 2011; Nyström and Rosenblad, 2012). A past study of the youthful audience of *Pamoja* FM established that “*Pamoja* FM has a great influence in the community as it is accredited to have changed the citizens way of thinking about tribalism since the post-election violence” in 2007 (Nyström and Rosenblad, 2012: 2).

In the course of fieldwork on February 4, 2013 I visited *Pamoja* FM in Olympic village. The radio station sits at the top floor of a very nice building. At the entrance of the station were numerous branded banners. One of them was a USAID banner whilst the other was of BBC. I identified myself as a media researcher and they were very eager to show me around. One of the youthful representatives claimed that they had 300,000 to 500,000 listeners. At the commencement of the very informal interview he praised the station and its efforts. However, when I asked him about the funding sources, he changed his tone and indicated that community projects like *Pamoja* FM are full of challenges. One challenge he articulated is that the station is registered as an NGO so they cannot sell advertising space to generate revenue. He also accused the management of withholding stipends and payments of all the young employees. In the broader literature on community media, funding challenges such as the ones at *Pamoja* FM are described as prevalent in the running of community radio (Lunt and Livingstone, 2011: 171).

During the tour of the radio station, my guide pointed to the laptops that were in one of the offices and claimed that they had all been forced to use their own personal machines because the manager had refused to buy them office equipment with some

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7 See full discussion on post-election violence in chapter three section on Mobile phones for disaster response: Ushahidi
funding he had received. Due to the many challenges that the staff experience at the station, he said that most of the young workers use the station as a training ground to gain work experience as they look for other jobs in private media companies. In much of the literature on *Pamoja* FM, it is indicated that there is a great and near seamless existence between the station and residents (Nyström and Rosenblad, 2012; Gustafsson, 2013). However, the *Pamoja* FM representative reported that some Kibera residents have grown very hostile to media. This is because Kiberans have a long history of being featured in the broadcast media spaces when the area experiences violence or calamities. Consequently, many residents are distrustful of media coverage. He reported that sometimes residents would vandalise their equipment and refuse their interviews to be recorded unless they are given money. The station features news segments in Kiswahili and plays a lot of reggae music. They also have a partnership with BBC Kiswahili so they broadcast in a daily slot. Radio call-ins to the station are popular and people report various socio-economic issues that affect their lives.

In the course of my semi-structured interviews, only three of the young people I interviewed reported that they actively listen to *Pamoja* FM. Through participant observation trips to Kibera, I established that there is a select group of young Kiberans who rely on *Pamoja* FM for information. However, they do not feature strongly in this study. Nevertheless, *Pamoja* FM is part of the local information flows that are significant in Kibera. In addition to community media, I also probed the traditional forms of media that the young Kiberans were appropriating. All of them were active radio listeners as they listened to the numerous local radio stations such as QFM, Kiss FM, *Milele* FM, Radio Citizen, *Ramogi* FM, Ghetto Radio and One FM. As indicated, two of the young men listened to *Pamoja* FM frequently and another occasionally. However, none of the young women tuned in to *Pamoja* FM. Similarly, all the young Kiberans were TV consumers. The television stations they like to watch are local stations such as K24, Citizen TV, Kiss TV and Nation TV. The young women such as Felista (20), Pat (20), Norah (18) Neema (23) and Karen (21) reported that they love to watch Latin American soap operas (Telenovelas) on the local television stations.

Karen (21) also enjoys watching Afrosinema, which features Nigerian films from Nollywood. Therefore, traditional forms of media such as radio and television emerged as very significant local and informational flows in the context of Kibera and in the
young people’s lives. However, print media consumption emerged as significantly low. The only avid newspaper reader was Coby (24) who managed to read local newspapers such as The Star and Standard newspaper at his office daily. All the other young people reported that they read the physical newspaper rarely as they could catch up on news online. They all attributed the decision not to read the paper to cost and convenience. For instance, Moha (19) argued that it was a waste of time to buy a newspaper when you can like the newspaper pages on Facebook. This is because ‘liking’ a Facebook page ensures you receive consistent updates from the page. Therefore, if it is a newspaper such as the Daily Nation you can receive alerts on your mobile phone once the media house posts news or updates. Susan (28) and Brian (25) also complained that the print newspaper was very expensive and unnecessary because of online sites such as Facebook and YouTube.

Susan (28) lamented, “gazeti ni a hundred bob ama, heh, that’s so high!” (The newspaper is a hundred shillings, or? That is so high).

8.5.1 Cost and Convenience of New Media and ICTs

Once I analysed the whole corpus of the Kiberans media use and appropriation data, I eventually realised that the young people drawn from the villages of Kianda, Makina, Gatwekera, Salama (Karanja road), Ayany and Olympic villages of Kibera were looking for the most cost effective, convenient and timely way to merge their media usage and appropriation. It did not matter whether they were drawn from the higher income Olympic or lower income Gatwekera. Consequently, I interpret this data in alignment with convergence theorist Jenkins (2006: 3) argument that the choice to “converge the old forms of media with the new ones is a user driven event”. Additionally, the findings on the importance of cost and convenience are resonant with the larger body of literature on young people’s usage and appropriation of new media and ICT in both the Global North and the Global South. There is vast research that indicates that young people prioritise low costs and convenience in the use of artefacts such as the mobile phone (Leung, 2007: 115; Wijetunga, 2014; Porter et al., 2012). In the next section of this chapter I discuss more specifically how exactly the young people are using and appropriating the new media and ICTs in their lives. This discussion also answers the first two research questions of the research.
RQ1: Do the young people appropriate new media technology?
RQ2: What forms of new media and ICTs do the young people appropriate?
(Sub question: Which one is the most significant to each individual?)

The communicative ecologies analytical framework places media technologies in the context of all the ways of communicating that are significant locally. Therefore, the diagram on the next page is a summary of the dominant local information flows in the context of Kibera. The proponents of the communicative ecologies framework argue that any new connections and networks (social and technical) that develop as a result of the introduction of individual technologies will be far more effective if they are somehow interconnected with existing, locally appropriate systems and structures (Lennie and Tacchi, 2013; Hearn et al., 2009; Tacchi et al., 2009). Additionally, Lennie and Tacchi (2013: 2000) argue that communication and development cannot be examined independent of the contexts and structures in which they take place. I agree with the scholars’ arguments that it is very important to probe and establish the information flows that are already existent in a research context. Even communicative practices such as gossip and hearsay can be influential forms of local information flows in a context. However, in the context of this thesis, I focus on the most dominant local information flows discussed in the previous section.

Figure 16: Summary: Significant Local Information Flows

![Diagram showing significant local information flows]

*Figure derived from research data*
In chapter one I proposed that it is better to replace the word ICT use with appropriation. This is because the term captures how users meaningfully engage with media. Therefore, the theory of domestication (appropriation) is used as an analytical and evaluative framework encapsulated in six major stages of consumption (Silverstone, 1994; Ward, 2005: 151). In addition to the consideration of meaningful engagement, domestication theorists also acknowledge that users may reject or abandon technologies. This contrasts with much of the ICT4D literature I reviewed in chapter three. The key aim of this thesis is to interrogate the optimism around the use and appropriation of new media and ICTs in the Global South by focusing on the relationship between ICT and the young people of Kibera, Kenya. This people centred ethnographic research explores how the young people appropriate new media and ICTs in relation to development. This is achieved by drawing upon the communicative ecologies framework, the domestication of technologies approach as well as the Capabilities Approach theory of development.

8.5.1.1 Eager appropriation of new media and ICT

It was very interesting to see the domestication theory in action in Kibera. When I first started conducting the interviews I noted a clear and distinctive pattern in their media use and appropriation. The traditional media and forms of communication such as face-to-face communication and radio emerged as significant even as the Kiberans readily appropriated new media and ICTs such as the mobile phone and the mobile Internet. Additionally, their media use and appropriation choices were not fixed and there was potential for them to evolve and change. For example, Moha (19) was an avid user of Facebook when I interviewed him but towards the end of fieldwork he also joined Twitter. It was not possible for me to re-interview the young people but in the event that this should occur, I believe that their media use will be more sophisticated and their tastes will have expanded as they are exposed to newer media forms. However, it is also possible that they can decide to abandon some of the applications and platforms. Therefore, I believe that appropriation provides a more pragmatic lens of how people relate with technology as it facilitates the analysis of changing tastes.

I acknowledge that I present data on the appropriation of new media that is somewhat limited to the particular period in which I conducted fieldwork. In tandem with the last
two steps of domestication of technology, I argue that the mobile phone has been incorporated into the lives of the young Kiberans. Therefore, it is an artefact that has been converted to carry symbolic meaning for them. The young people of Kibera have appropriated the mobile phone because of its technical capacity to facilitate the convergence of technologies such as call facilities, social networking sites and e-mail sites on one artefact. Additionally, they value the mobile phone because it helps them co-ordinate their day to day affairs by compressing time and space for them. They can co-ordinate their activities and network with others at any place provided they have their phone with them and that is why they used words such as *my mobile is my office* and *my personal secretary* to define their mobile phones. In the next section I explore the young people’s access to the most dominant forms of new media and ICTs: The mobile phone and the mobile Internet.

8.6 Mobile Phone and Mobile Internet Access

In the topic guide, there are some key questions that were very useful in addressing the two research questions that guide this chapter. They are below.

**Researcher (me*): What media form do you value the most? If you had to choose?**

**Susan:** *I don’t think I can let go of the phone because of the Internet.*

**Coby:** *I am a very media friendly guy. One, I do a lot of texting on the phone; I do a lot of e-mailing, texting and Facebooking.*

**Researcher: What does your phone mean to you?**

**Coby:** *My phone…. It is my personal secretary. There’s no way I can walk out of the house without my phone. My phone and me are one. (Laughter). I bought it from town at nine K and I am thinking of getting another one. I am on Twitter, Facebook and WhatsApp. I am almost on everything.*

**Jackson:** *My phone is very important, it is my other office.*
The quotes above indicate that the young people value their mobile phones. They reported that the most dominant form of new media and ICT in their lives is the mobile phone. In addition to the quotes above, Liza (25) passionately said, “You can take away everything from me but please don’t take away my mobile phone because of the Internet.” Like the young people discussed in the previous section, Brian (25) also observed that it was the most important form of technology because one can access other forms of media such as the newspaper on it. Therefore, I argue that the mobile phone is appropriated as a socio-cultural artefact in the context of the young Kiberans lives. It has been transformed to become the young people’s personal secretary and office. In the latter section of this chapter as well as the next one, this argument is explored.

8.6.1 Ownership

All the young Kiberans in the sample were mobile phone owners. Eleven young men out of the twelve that I interviewed were smart phone owners. Huawei, Nokia and Samsung were popular choices. Three of the men also had an extra basic phone with no Internet capabilities (a cheap phone popularly known as kabambe in Kenya). In contrast, five of the ten women had smart phones. During times of financial challenges they reported that is was common practice to sell their smart phones or exchange them with kabambes. Like the Research ICT Africa study I reviewed in chapter three, they noted that the “high cost of the initial purchase of ICT equipment was a challenge” (Waema et al., 2007; Waema and Miroro, 2014: 125). However, the flexible data bundles offered by Safaricom mobile network from 2011 were cited to be an incentive for the purchase of a web enabled phone (see figure IV). The young people frequently mentioned that a KSH20 (considerably less than GB£50p) top up could enable them to surf the Internet on their mobile phones very fast.

In addition to the mobile Internet, all of the young Kiberans except Norah (18) had access to computer enabled Internet services in the form of Cyber Cafés, personal computers, work and school computers. As indicated in chapter three, there are no site specific or micro level qualitative studies of mobile Internet usage in Kenya. Yet scholars forecast that the mobile phone is the “technology of choice for developing countries in order to reduce their connectivity gap” (Castells et al., 2007: 245). This is
one of the first Kenyan studies that presents empirical data on how usersappropriate
the mobile Internet contextually. Towards the end of 2013 there were almost “150
million individuals using mobile devices to access the Internet in Sub-Saharan Africa.
That figure is equivalent to an overall mobile penetration rate of only 17 percent of the
total population compared to a global average figure of just over 30 percent” (GSMA,
2014 b: 3). In contrast to the broader region, mobile Internet use in Kenya is high;
there are approximately 16.4 million data users (CA, 2014: 7). As discussed, the key
driver of mobile subscriptions is the “availability of a variety of data bundles that
accommodate diverse income groups” (Ndung’u and Waema, 2013: 1).

In chapter three I have discussed the long process that I had to undergo in order to
acquire site-specific data on Internet enabled phones in Kibera. Mobile phone
companies keep such data confidential. The data I received is incomplete and it clusters
the suburbs in the outskirts of Kibera with the ‘slum’ and ghetto area. However, it
provides sufficient evidence that there are Internet or web enabled mobile phones in
Kibera. After my fieldwork was over, some employees of Safaricom informed me that
they generate a large portion of their profits from M-Pesa transactions and the sale of
data bundles from ‘slum’ areas and informal settlements. Therefore, data is money.
Like Arora and Rangaswamy (2013) who studied the mobile Internet usage in India, I
was surprised by the avid usage of the mobile Internet by the young Kiberans. They
were aware of all the data bundle promotions and would update me on which tariff was
the best. Some of them like Francis (28), Moha (19) and Liza (25) educated me quite a
lot on new media platforms in general. As discussed in chapter six, the data on Internet
enabled mobile phones in Kibera was relayed to me via e-mail documents. After one
year of negotiation with Safaricom staff members, I received documentary data in the
form of two E-mails.

8.6.2 Data Enabled Devices

In the first E-mail\(^8\) communication I received on 7th of March 2014, the Safaricom
representative indicated that there are 1,097,315 data enabled devices in Kibera and
another low-income settlement in Nairobi, Kangemi. They also indicated that the
number of mobile phone service subscribers in Kibera and Kangemi are 3,484,330. The

\(^8\) E-mail communication is presented in chapter six in section on documentary evidence
representative indicated that the data they were able to provide clustered the two areas together. Additionally, the data does not distinguish between the use of a mobile phone for Internet and data access or a mobile dongle device for the same access. However, the Safaricom representative posited that most of the Internet enabled devices reflected in the data were mobile phones. In the context of Kibera, the young Kiberans emerged as avid users of the mobile phone to access the Internet and none of them were owners of a Safaricom dongle. During go-alongs and some of the interviews, they reported that Safaricom dongles were expensive.

After I received the first set of data from the Safaricom representative, I requested for another break down of some of villages of Kibera. The Safaricom representative was able to furnish me with that data in a separate E-mail on 10th March 2014. The representative was only able to provide the data from Gatwekera, Silanga, Olympic, Lindi and Makina villages. One of the distinctive elements of the data in the E-mail document is that the most low-income area village of Gatwekera has a higher number of Internet enabled devices than the higher income Makina village. Gatwekera has 2,331 Internet enabled devices whilst Makina has 2,242 devices. Higher income Olympic has the highest number of Internet enabled devices at 4,735. Some Kiberans are mobile subscribers to other networks such as Airtel and Orange but it was not possible for me to acquire the data from all the mobile service providers. The empirical data presents sufficient evidence that the young Kiberans have access to mobile phones and the Internet.

8.6.3 The Co-ordination of Social Networking with the Mobile Phone

The co-ordination of daily affairs and compression of time and space is part of the broader discussion on contextual mobility that is explored in the literature review in chapter four. In that form of mobility, “ICTs influence the contextuality of interaction in various ways because they afford one diversified modalities of interaction. ICT applications and mediated communication technologies help people to interact easily without contextual constraints” (Kakihara and Sørensen, 2002: 3-4). In the context of Kibera, the young people were appropriating the mobile phone and the mobile Internet for social networking even as they made and received phone calls and text messages. However, in a slight departure from Kakihara and Sørensen (2002: 3-4), I discovered
that there is an environmental contextual constraint that hinders them from appropriating the mobile phone for social networking. As I elaborate even more extensively in the next evaluation chapter, only the highest educated young Kiberans were meaningfully engaging and appropriating the mobile phone for social networking. For example, the least educated eighteen-year-old single mom Norah (18) was the only one who had never used the Internet. Primary school educated Norah struggled to converse in English did not have any friends outside Kibera. In contrast, one of the most highly educated young women Liza (25) was actively using the Internet to promote her videography work. She actively appropriated the mobile Internet facilities on her phone to maintain social ties on Facebook. Unlike Norah (18), she enjoyed a wide network of contacts and social ties drawn from all over the world as well as Kibera.

All the young people use and appropriate their mobile phones and the mobile Internet in the context of a communicative ecology. Consequently, it is very important to present a diagrammatic summary of the communicative ecologies of the most highly educated young woman and man as well as the communicative ecologies of the least educated man and woman. In the next section I present a diagrammatic summary of the above. They comprise the local information flows discussed in the previous section as well as the unique forms of media that the individual Kiberans appropriate in the context of their communicative environments.

### 8.7 Communicative Ecologies of the Young Kiberans

One of the most educated young men, Francis (28) was in the final year of his undergraduate degree. As evidenced in the diagram on the next page, he reported that he had access to vast information flows from both his personal artefacts and the public ones he had access to at university and work. Additionally, he also had very many weak foreign social ties. In order to define exactly what I mean by weak social ties I borrow from Granovetter’s (1973) seminal work on the strength of weak ties. He defines weak ties as acquaintances that are less likely to be socially involved with one another than our close friends (strong ties). Thus, “the set of people made up of any individual and his or her acquaintances comprises a low-density network (one in which many of the possible relational lines are absent) whereas the set consisting of the same individual
and his or her close friends will be densely knit (many of the possible lines are present)” (Granovetter, 1973: 201-202).

Figure 17: Communicative Ecology: University Educated Francis(28)

As I will explore further in the next chapter, Francis is one of the young Kiberans who enjoy a great advantage because he is able to use and appropriate the mobile phone to expand his social ties with those who are outside Kibera. The mobile phone also affords him the opportunity to work from the comfort of his home. He receives calls to co-ordinate meetings with visitors to his NGO in Kibera. Therefore, he is one of the three young people who has gained both economically and socially from the use and appropriation of the mobile phone.
There is very little difference between Liza’s communicative ecology and that of Francis. The two are highly educated and they reside in the higher income parts of Kibera; *Ayany* and *Karanja*. The slight difference in their ecologies is that Francis prefers to appropriate more local media whilst Liza’s media appropriation reflects a desire for more foreign media. Her preference is very similar to that of Susan (28) who studied in an upper income private school in both primary and high school. Susan stated that she found local television and radio media stations very boring as they, “*don’t talk about anything good or sensible or educative*”. Both Liza and Susan had extensive social ties within Kibera and with people drawn from countries such as USA and China. Liza attributed her vast social network to her very vibrant personality whilst Susan attributed this to her volunteer work in an international first aid organisation. Both Francis and Liza also have access to the same ICT artefacts such as a personal computer and Internet enabled mobile phones.
Name: Norah
Age: 18
Gender: Female
Occupation: Assistant at small-scale family owned grocery store
Location: Kianda
Date: November 13, 2013

From the diagram above, it is evident that Norah has very limited information and communication flows in her communicative environment. Unlike the rest of the young Kiberans, she was not in a youth group. Her access to new media and ICT use was very limited. She attributed this to her lack of interest. However, I deduced from her behaviour and analysis of her social background that she was very reluctant to use new media artefacts as she found them intimidating. During the interview she noted that she was not that proficient in English. She also indicated that she dropped out of school when she fell pregnant. She was more comfortable with traditional forms of media such as the radio and television. The stations that she identified as her favourite broadcast their content in local language Kiswahili. After the interview, she said she would attempt to use the Internet.
Figure 20: Communicative Ecoogy: Primary School Educated Tom(22)

Tom(22)

Local information flows in Kibera
- Face to face interactions in the residential areas.
- Church
- Cyber Café visits to use Facebook

Information flows at Work
- Face to face communication with workmates

Home Information Flows
- Face to face interactions
- Radio: Radio Jambo and Pamoja FM

Mobile Phone Use
- Calls and SMS (avid text mesager with two different SIM Cards)

Name: Tom
Age: 22
Gender: Male
Occupation: Any job that is available (hustling)
Location: Kianda
Date: Nov 13, 2013

Tom’s communicative ecology is very similar to Norah’s on the previous page. The only difference is that unlike her, he is an Internet user. He accessed the Internet from the cybercafé and made frequent trips to the café in order to use Facebook. In contrast with Norah, Tom also indicated that he was not a fan of watching television and only watched television when he visited his neighbour. Norah indicated that she valued her mobile phone but used it very occasionally to send text messages and to call. However, Tom valued using his mobile phone so much that he acquired two SIM cards so he could capitalise on the mobile phone offers and promotions offered by the two service providers. From the communicative ecologies presented in this section, it is evident that there is a distinct difference between the higher and lesser educated young people’s new media and ICT appropriation.
8.7.1 *Education as a Leveller*

In the context of Kibera, education emerges as a form of gender and socio-cultural leveller in the use and appropriation of new media and ICTs. This is because there is hardly any difference highly educated young men and women’s new media and ICT access, use and appropriation. I discovered that all the young people in the sample were mobile phone owners. The only difference is that the 12 men sampled had more smart phones than the ten young women. Save for Norah, the young women who did not own smart phones had regular access to Internet services in places such as cybercafés, work and school. As indicated, eleven young men out of the twelve that I interviewed were smart phone owners. Huawei, Nokia and Samsung were popular choices. Three of the men also had an extra basic phone with no Internet capabilities (a cheap phone popularly known as *kabambe* in Kenya). In addition to meaningful access to new media and ICT artefacts, some of the highly educated women also reported that they had extensive social ties like their male counterparts. In the next chapter I extend the discussion on education in order to demonstrate how the appropriation of the mobile phone and the mobile Internet lead to development in the form of expansion of the capability of mobility.
8.8 Chapter Summary and Concluding Remarks

This chapter is focused on the research findings elicited from the first two research questions. The discussions are mainly focused on the findings from the inductive data analysis of 22 semi-structured interviews of 12 young women and 10 young men in Kibera. The communicative ecologies framework is explored in this chapter. Youth groups, youth forums, Pamoja FM, Church and school are presented as the most significant forms of local information flows in the lives of the young Kiberans. The mapping of the ecologies was particularly important in discovering how the young people perceive their youth group memberships in comparison to their families of origin. This is an important contribution to the broader Kenyan sociological literature because it provides evidence that the young Kiberans kinship networks are loosening.

Cost and convenience are identified as key motivators for the young Kiberans to appropriate new media and ICTs. The convergence facilities of the mobile phone present it as a very attractive socio-cultural artefact that they can appropriate into various forms. It emerges as a personal secretary and an office.

There is a distinct difference between the highly educated and lesser-educated young people’s new media and ICT appropriation. What is particularly notable is that education is somewhat a socio-cultural leveller because there is hardly any difference highly educated young men and women’s new media and ICT access, use and appropriation. In the next chapter it will be further explored that it is also a socio-cultural artefact that has become what the Kiberans describe as an important zone of self-expression. Furthermore, the incorporation of the mobile phone in Kiberan society is embodied in the fourth step of the domestication of technologies theory because it has been “incorporated and ascribed meaning” within the context of the young people’s lives (Ward, 2005: 151). The next chapter extends the discussion of the forms of new media the young people appropriate within the context of their communicative ecologies by examining how appropriation leads to the capability of mobility.
CHAPTER NINE: Evaluation of Development in Kibera

In the previous chapter, the significant local information flows in the context of the young people’s lives are identified and explored. Additionally, the most dominant form of new media and ICTs are identified as the mobile phone and the mobile Internet. The next goal in this chapter is to answer the last two research questions this thesis seeks to address. Therefore, the goal is to explore how and why the young Kiberans appropriate the mobile phone and the mobile Internet as well as how this appropriation leads to a capability of mobility. In the previous chapter, it is established that the communicative ecologies of the least educated young man and woman vary from the most highly educated. The research findings reflect that educational status is a factor in the appropriation of new media and ICTs. This is because both the young women and men who were highly educated reported that they had access to a vast array of traditional media artefacts, new media and ICTs as well as social ties.

Within the Capabilities Approach, educational attainment is a conversion factor that enables a young Kiberan to convert a mobile phone artefact and the Internet into a capability set or an alternative combination of functionings. A capability is the “substantive freedom to achieve alternative functioning combinations (the freedom to achieve various lifestyles) and the evaluative focus of the approach can either be the realised functionings (what a person is actually able to do) or the capability set of alternatives he or she has (their real opportunities)” (Sen 1999: 75). Therefore, development is measured as the expansion of the capabilities or freedoms or realised functionings. As discussed extensively in chapter five, Sen (1999: 36) leaves it open for the researcher to establish what capabilities people have reason to value as development. I explored how the open approach can sometimes be a limitation. However, it is also an approach that captures the flexibility and the agency of the individual to choose what they consider to be valuable or developmental.

The concept of “capability also reflects a person’s freedom to choose between different ways of living” (Sen, 1990: 44). In the context of this thesis, the mobile phone has been incorporated and ascribed meaning within the context of the young people’s lives. They appropriate the mobile phone because of the Internet facilities that ease
convergence of technologies such as social networking sites and E-mail sites on one artefact. Additionally, they value the phone because it helps them co-ordinate their day to day affairs by compressing distance, time and space. They can co-ordinate their activities and network with others at any place provided they have their phone with them. In tandem with the appropriation literature reviewed in chapter two, the key affordance is the “connectedness” that the mobile phone presents by allowing them to appropriate the mobile phone artefact yet be “telephonically present” in another place (Palen, 2002: 79).

Conversion

The last phase in domestication of technology (appropriation) that I have also applied to make sense of the data is conversion. It is in the conversion phase that the mobile phone goes on to carry symbolic meaning in the lives of the young Kiberans. The concept of conversion has a two-fold meaning in this thesis. Conversion is the last phase in the domestication (appropriation) of technology lens that has been discussed in the previous chapter. Secondly, conversion factors are utilised to explain why some young people are able to achieve much more than others with their mobile phones. The term is encapsulated in the Capabilities Approach conversion factors that include the “personal, social and environmental factors or characteristics that enable one to convert a resource such as the mobile phone and the Internet into a capability set or an alternative combination of functionings” (Hattaka et al., 2013: 94).

Hatakka et al., (2013) amplify clearly that conversion factors such as high education and economic class matter in the conversion of resources or artefacts into realised functionings or a capability set. They argue that, “conversion factors can both enable and restrict the transformation of resources into a potential functioning (capability set) or the choices made by the users to realize the functioning” (Hatakka et al., 2013: 106).

As a result of the thematic analysis of the 22 semi-structured interviews I conducted, I discovered that the young people have incorporated and then converted the mobile phone into a symbolic artefact in the outside world and the social conversion factor of educational status is identified as a dominant factor that enables them to domesticate (appropriate) the mobile phone into the capability of mobility which is a form of development because they have reason to value it as such. However, the environmental
conversion factor of their place of residence and perceived lower class also restricts their appropriation of the mobile phone for the creation and extension of social ties within the context of Kenyan social networks outside Kibera. Therefore, the digital social media sites they appropriate using the mobile phone and the mobile Internet are “an extension of the socially reproduced segregated spaces that they live and school in” (boyd 2013: 204). Consequently, the contextual mobility that the phone facilitates so well is limited by the existence of the residential segregation they experience offline.

The next section of this chapter is a discussion of how the conversion factor of education has enabled the conversion of the mobile phone into a socio-cultural artefact. In tandem with the domestication of technology (appropriation), I argue that the mobile phone is a socio-cultural artefact that has been objectified, incorporated and converted to an office and a personal secretary. Additionally, the appropriation of the mobile phone and the mobile Internet facilitates the use of social networking site Facebook as an important zone of self-expression. I also argue that the mobile phone has led to an expansion of the capability set of mobility by facilitating the realised functionings of using social networking site Facebook to connect with weak ties and the use of the mobile phone for social co-ordination.

9.1 Education as a Social Conversion Factor in the Appropriation of New Media and ICTs

Educational attainment is one of the “social conversion factors that affect the degree to which a person can convert an artefact such as the mobile phone or the mobile Internet into realised functionings” (Hatakka et al., 2013: 96-97). Education is described as a social conversion factor because Kiberans acquire formal education in the context of a social school, university or college environment. This conversion factor is also related to the personal conversion factor of the young Kiberans ability to be sufficiently literate enough to read, write and use the Internet. This personal conversion factor is embedded within the larger social conversion factor of education because one may attend a school, university or college and be unable to acquire skills to use and appropriate new media and ICT artefacts such as computers, mobile phones and the Internet. A person’s ability to choose between capabilities and “functionings is determined by different personal
(gender, literacy), social (laws, public policies) and environmental (infrastructure, resources) conversion factors” (Hatakka and Lagsten, 2012: 25).

In the context of this thesis, interpretation of the data reveals that educational status and literacy are dominant factors in the young people realising the capability of mobility. Primary school educated Norah (18) was the only one who had never used the Internet unlike primary school educated Tom (22). This is because she preferred conversing in local language Kiswahili and perceived the Internet to be solely English based. The young Kiberans value the ability to be informed and to communicate. For example, Susan (28) argued that the mobile phone was useful as she could educate herself on global news and affairs. Moha (19) also emphasised that it was very important to be updated on global occurrences using the mobile Internet. The young people’s desire for communicative or educational experiences was very high. After the interviews, they would consult me on academic assignments. They often requested for academic books to read and would share with me some academic videos and books. The young people perceived any form of social interaction with a person from outside Kibera as a very important educational opportunity. After the interview sessions, they would take some time to ask me about British culture and were very willing to meet diverse people from Europe and other parts of the world. They would discuss their encounters with curious ‘slum’ volunteers drawn from diverse parts of the world eagerly. Their desire for educational and informative encounters also ties in to the use of the mobile Internet for their expansion of social ties or social networking.

9.2 The Capability of Mobility

As discussed in the previous chapter, weak social ties are “the set of people made up of any individual and his or her acquaintances. They comprise a low-density network (one in which many of the possible relational lines are absent)” (Granovetter, 1973: 201-202). The young people reported they were very eager to mingle and meet with social ties drawn from all over the world so that they could expand their social networks. In addition to the acquisition of knowledge, a significant reason for their desire is that social ties within social networks are perceived as instrumental in helping to acquire opportunities such as employment. It is well established in the Sub-Saharan African literature that many young people across Africa depend on social relationships and
contacts for employment opportunities. Consequently, there are often “blurred lines between personal and economic relationships” because many young people obtain work and live off resources provided by their social kin and friendship networks (Donner, 2008: 148).

Consequently, the mobile phone and social networking sites are potentially useful for the enhancement of weak and strong (core) social ties. However, the generation of the social ties that they aspire to develop and expand is far from a seamless experience. I describe it as a paradox because the Kiberans are in the possession of new media and ICT artefacts that should render the process of social networking to be almost seamless. However, in the course of fieldwork and after the formal data analysis, I observed that the young Kiberans were not actively forming social ties with other Kenyan people who reside outside Kibera. In contrast, they were more likely to develop weak ties with foreigners from diverse social classes. As I conducted fieldwork, the young Kiberans would tell me that I was the first “posh” Kenyan they had interacted closely with.

9.2.1 The Experience of Class

The youth’s description of me as “posh” and themselves as not, is a reflection of their experience and perception of class. Drawing upon Skeggs (1997: 74) relational based conceptualisation of class, it is evident that they measured themselves based on the higher societal position they perceived me to occupy. The classifying of themselves depended upon the classifying systems of others. In the broader sociological literature, there are scholars who argue that class is systematically defined by the researcher whilst others argue that class exists in the experience of the researched (Bourdieu and Wacquant, 2013: 292). In the context of this thesis, class is defined in a Bourdieu (1987) sense but it also incorporates the perceived experience of class in relation to others. It exists in their experience of exclusion based on the perceived lower class they occupy. Additionally, it is the young people’s experience of “social differentiation based on cultural, economic and social capital” (Bourdieu, 1987: 4). The young Kiberans reside in an environment slum with limited access to the cultural, economic and social capital that those in higher income estates and suburbs enjoy. None of the young people reported that they had strong or weak social ties with people drawn from the middle class or upper class suburbs of Nairobi, Kenya. They perceived that they
were excluded from economic, cultural and social capital that those in the upper and middle classes enjoyed.

In the context of this thesis, their limited social ties and social resources that form the essence of social capital are the focus. The essence of social capital is weak and strong social ties (Baron, 2000; Bourdieu, 1987). In the context of Kibera, the mobile phone and mobile Internet are used and appropriated with a desire to engage in social networking and the eventual expansion of social capital through the enhancement of weak and strong social ties. In contrast to the extensive local social ties I expected to discover amongst the young people, particularly with fellow Kenyan people of diverse social classes, the youth reported numerous encounters of local social discrimination because of their perceived lower class, representation and perception of their place of origin and residential area. This is a paradox of mobility because the mobile phone and the mobile Internet effectively compress time, distance and space and affords them “contextual mobility” (Kakihara and Sørensen, 2002: 4). However, the mobile phone is unable to eliminate the socially reproduced divisions based on difference in social class and area of residence that exist offline. I also discovered that the young people were more likely to intensify weak and strong social ties with higher class foreigners or outsiders but not with higher class Kenyans. Therefore, the mobile phone “betrays the difficulty of the social mobility they anticipate because in Kenya ease of communication and social or relational networking do not always facilitate social mobility” (Archambault, 2012: 393).

9.3 The Paradox of Mobility

In Kenya, “who you know matters and the society is based on a relation-based social order” (Wallis, 2013: 93). Therefore, Wallis’s (2011) experience of mobility in China resonates very strongly with this thesis. This is because she discovered that the “mobile phones enabled migrant women to increase their strong and weak ties, but they did not necessarily help them to build connections with those in higher social classes than themselves due to the customary manner in which guanxi networks are built and the rigid class and place-based distinctions that characterize contemporary Chinese society” (Wallis, 2011: 478). Wallis (2011, 2013) builds upon Bourdieu’s (1978) work and establishes that the networks formed in Chinese society are exclusionary and built
upon distinct boundaries based on income and class. Similarly, it is discussed in chapter two that the “hierarchical” nature of Kenya is such that titles such as *mheshimiwa* (term of respect for a Member of Parliament, senator or governor), professor, doctor and engineer are very important (Hofstede, 2015). The titles act as significant markers of difference between those who are learned and those who are not. Typically, these are also people who are in the higher income bracket with well paying jobs. Another significant marker of difference is the place of residence.

According to K’Akumu and Olima’s (2007: 92) description of residential segregation in Nairobi, the low-income social group in ‘slums’ and informal settlements comprises “largely of unskilled people who are mainly engaged in informal economic activities. The high-income social group consists of the elitist business people and professionals who by virtue of their positions in either the government or private sector have managed to purchase residential units in highly secluded localities”. K’Akumu and Olima’s (2007) conceptualisation of residential segregation is dated and the topic is one that has not been researched extensively in Kenya. In contrast to their description, the division between skilled and unskilled people is not one that is necessarily replicated into residential divisions. This is because there are quite a number of skilled and educated Kenyans who live in ‘slums’ and low-income settlements in present times. The explication of the socio-economic structure presented in chapter seven provides sufficient evidence that even highly skilled people may live in a ‘slum’ environment. Therefore, the residential segregation that is in Kenya is largely based on economic capital differences. Those with higher income and vast social ties with other high income people are more likely to live in secluded gated estates and communities than those with lower income and less high income social ties.

Gated estates or communities are “housing developments on private roads closed to general traffic by a gate across the primary access. The developments may be surrounded by fences, walls or other natural barriers that further limit public access” (Grant and Mittelsteadt, 2004: 913). In the urban planning literature, gated communities have been researched in numerous parts of the world such as USA (Blakely and Snyder, 1997), South Africa (Gnad, 2002) Australia (Hillier and McManus, 1994). There is a general consensus that the communities operate as a form of residential and social segregation. The affluent can move to gated enclaves in search
of privacy and exclusivity, and in flight from fear (Grant and Mittelsteadt, 2004: 914). In the urban Kenyan context, it is largely true that the affluent move to gated enclaves in search of privacy and exclusivity.

9.3.1 Residential Segregation in Kenya

In chapter seven I explored how the term ghetto in the African American context emerged in times of racial based residential segregation where different races settled in their own enclaves. In the South African context, residential segregation has been explored extensively with reference to how the Africans were relegated to decrepit areas during the era of apartheid (Wirth, 1928; Hutchinson and Haynes 2012; Anderson, 2012; Christopher, 2005). In that literature, residential segregation is based on existent racial divides within the society. However, the Kenyan case differs as it is based on income differences. In colonial times, Nairobi was clearly divided along racial lines as the Europeans, Indians and Africans were segregated into different parts of Nairobi (Rodriguez-Torres, 2010: 29). Some of those divisions still exist. For example, the Indian community is highly dominant in the Parklands area whereas some Europeans still live in the upper class suburbs of Muthaiga, Red Hill and Karen. The only social change is that high earning socially mobile Kenyans also live in the latter neighbourhoods and have also created newer suburbs in various parts of the city.

Scholars argue that segregation of groups disadvantaged by income and access to resources is likely to accentuate patterns of social polarisation and to inhibit efforts by the disadvantaged to improve their individual and collective conditions. This results in uneven spatial distribution of public services such as schools, access to transportation, healthcare, water and sanitation (Johnston et al., 2003; K’Akumu and Olima, 2007; Agyei-Mensah and Owusu, 2010). As explored in the research context chapter seven, the latter are challenges in Kibera. In the more affluent villages in Kibera such as Olympic and Makina, roads, water services, schools and sanitation are much better than the less affluent villages such as Silanga. Additionally, the residential segregation that the young Kiberans experience inhibits the kind of social ties they can create and enhance in the context of a hierarchical Kenyan society where places of residence and perceived social class are status markers that determine inclusion or exclusion.
9.3.1.1 Markers of difference: Social Class and Place of residence

In the context of the Capabilities Approach, the environmental conversion factor of the young people’s place of residence as Kibera restricts their appropriation of the mobile phone for the creation and extension of social ties with higher class Kenyans from upper class gated communities or middle income housing estates. Therefore, the “digital social media sites they appropriate are an extension of the socially reproduced segregated spaces that they live and school in” (boyd, 2013: 204). Consequently, the contextual mobility that the phone facilitates so well by compressing time and space is limited by the existence of the residential and social segregation they experience offline. The mobile phone and the mobile Internet are particularly useful socio-cultural artefacts in the hands of the educated Kiberans who have already established vast foreign social ties offline. Highly educated Pat (20), Felista (25), Liza (25), Francis (28) and Sam (29) reported that they had vast foreign social ties. For example, slum tour guide Jackson (27) and part time university student Francis (28) described their phones as an office because various foreigners who wanted to visit Kibera often contacted them.

The highly educated Kiberans were able to foster more social ties because they participated actively in Kibera community projects and generated many weak social ties from donor groups such as USAID and international volunteer workers from countries such as Finland, Sweden, USA and Norway. Consequently, their phones enhanced their communicative abilities by helping them to network with their international social ties. Susan (28) had a vast network of international contacts she acquired when she volunteered at an international first aid organisation. Therefore, she liked to use and appropriate her social networking sites such as Facebook, Blackberry Chat and WhatsApp to chat with the weak social ties on her Internet enabled mobile phone. None of the young people had vast social ties with fellow Kenyans from higher classes. Therefore, the “mobile phone facilitates connections and eases co-ordination of activities (McIntosh, 2010; Porter et al., 2010, 2012) but it can also serve to reify one’s position in society even further (Wallis, 2013: 182).

In tandem with the literature review of mobility studies in chapter four, social class and social differentiation emerge as constraints to contextual mobility. Additionally, in the
context of the Capabilities Approach, the young people’s environment emerges as one of the conversion factors that restricts their appropriation of the mobile phone and the mobile Internet for the expansion of their local social ties (Hatakka et al., 2013: 106). Conversion factors can be both enabling and restrictive so education as a social conversion factor enables them to appropriate the mobile phone, mobile Internet and social networking sites but their environment of residence restricts the kind of social ties they can forge and expand locally. The young people’s appropriation of social networking site Facebook reflects the paradox of mobility even further. It is explored in the next section.

9.4 Social Networking: The Appropriation of Facebook

All the young Kiberans except non-Internet user Norah (18) spoke fondly of Facebook. Pat and Felista (20) described it as an important zone of self-expression. Pat (20) who was just about to join a university in USA through a scholarship reported, “I can be myself on Facebook”. Full time university student John (20) asserted, “Facebook has made life easier”. University educated Liza (25) of higher income Ayany used Facebook for economic purposes. She praised the site as it allowed her to “market herself” and attract numerous clients by posting her video productions on the site. She discussed her network of friends with passion and indicated that rivals were using it to spy on her network of friends. “My business competitor likes (Facebook lingo) what I like on the site to try to get my network of friends,” she said. The more educated higher income young people enjoy the new spaces that mobile communications opens for them on social networking sites such as Facebook but they are also in fear of their perceived lower status in Kenyan society. For instance, Liza (25) who praised the site very much also reported that her close friends had problems on the site because they did not want to be identified as residents of Kibera.
9.4.1 Exclusion Based on Place of Residence

Susan (28), Brian (25) and Liza (25) recounted experiences that confirm the practice of exclusion based on places of origin.

“\textit{I have been stigmatized when I was in school. I was in Loreto Msongari, so in form 1 and 2 I used to lie to people when I told people I live in Kilimani (a suburb) and they considered me to be cool. One day I decided to stop lying and I told them the truth and I became the not so cool friend. Hata sikuwa na mabeshte! (I never had friends!) I speak the same English they speak so who cares? One thing I like about Kibera is that we are our brother’s keeper’’}."

Brian (25) also noted: “\textit{Mi Hujivunia nimetoka Kibera, hata nikienda workshop gani, na watu wameng’ara aje nikiulizwa nimetoka wapi mi husema, wanaogopa but it’s okay. (I am very proud that I am from Kibera, no matter what workshop I attend and no matter how smart people are when they ask me where I am from, they are scared but it’s okay’’}."

Brian also reported that in the workshops he attended some people clutched their handbags tighter when he mentioned he was from Kibera.

Liza (25) also noted that, “\textit{Women really fear saying they are from Kibera but I don’t care! When we go clubbing and they have to be dropped by the guys they ask them to drop them at the mall because it’s posh’’}."

Liza (25) also noted that people hide their residential area online and they will use code language to discuss Kibera. For instance, the phrase Lower Karen is used frequently. One would write a status update such as: \textit{Watu wa Lower Karen mpo?} (People of Lower Karen are you out there?) In addition to the fear of the place of origin, some of the young Kiberans perceived the networking site Twitter as useful but intimidating. For example, Brian (25), Moha (19) and Paul (19) observed that the social networking site is much more intimidating than Facebook and is more suited to middle class Kenyans.
Brian (25): “Mi hupenda Facebook sana, kuchat na mabeshte. Mi huona that Twitter ni ya watu wasomi...mi huona hivyo. (I like Facebook very much, to chat with my friends but I see like Twitter is for the learned, the rich, that’s what I feel).”

Moha (19) also noted: “Hyo Twitter ni ya watu serious si ya ujinga mob kama Facebook (Twitter is for serious people not for stupidity or for common people like Facebook).”

Paul (19) observed: “Twitter si ya ujinga, mi huitumia kufuata watu wa maana (Twitter is not for stupidity, I use it to follow people of substance).”

The young Kiberan’s observations are interesting. They perceive Facebook to be an open and friendly space but they regard Twitter as serious and a bit more upper class. Their perceptions that social categories such as class are reproduced in online spaces are resonant with boyd’s 2007 research of white flight in Boston. Boyd (2013: 203) discovered that the white and affluent teenagers labelled digital space MySpace as ghetto so they developed a preference for Facebook to distance themselves from the image of the ghetto and “hip hop lovers”. In the context of Kibera, all the young people above use referents that reflects the social segregation that has been explored in the previous section. They reflect an awareness of the class-based distinctions that characterise their physical context; distinctions that they believe are replicated even when they access online spaces such as Twitter. Regardless of the social tensions they experience offline and online, it is evident that the mobile phone eases communication and facilitates the use of mobile Internet access for networking with existent social ties. This is resonant with a study of middle class Kenyans that has been reviewed in chapter four (Shrum et al., 2011).

9.5 Chapter Summary and Concluding Remarks

This study establishes that the mobile phone strengthens existent weak social ties for the young people in Kibera. In a similar thread, Slater and Kwami’s ethnographic study of mobile phone usage established that youthful Ghanaians use their mobile phone to maintain their existing “kinship, friendship and business networks” (Slater and Kwami, 2005: 1). In the broader literature there is extensive empirical literature that proposes
“Facebook is used for connection and maintenance of existing offline relationships” (Ellison et al., 2007; boyd and Ellison, 2007: 221). In the context of this thesis, the mobile phone eases communication and strengthens existent weak ties. However, the same mobile phone and Internet services do not bypass the young people’s stratified world where who you know and where you live matter (Wallis, 2011, 2013; Qiu, 2009; boyd, 2013). Therefore, this thesis argues that the new media and ICT artefact of the Internet enabled mobile phone has led to an expansion of the capability set of mobility by facilitating the realised functionings of the appropriation of social networking site Facebook to network with weak ties and the appropriation of the mobile phone for social co-ordination because it facilitates convergence of E-mail, social networking sites, phone calls and text messages on one device. These findings resonate greatly with all the studies of the communicative ecologies framework I presented in chapter one (Hearn and Foth, 2007; Slater et al., 2002; Lennie and Tacchi, 2013). They simply reveal that societal and structural offline practices are replicated in ICT use and appropriation practices. There is no indication that the young Kiberan’s use and appropriation of new media and ICT is disembedded from their activities offline. The offline hierarchically structured social categories that exist in Kenyan society are reproduced online. Therefore, the spaces created by new media and ICT use can be treated as continuities of the offline (Wallis, 2011, Miller and Slater, 2000: 5). The next chapter summarises the main research findings and summarises the key points that have been presented in this chapter as well as the first few chapters. A number of issues raised in this chapter are revisited and discussed extensively.
CHAPTER TEN: Conclusion

This chapter unites the research findings explored in both chapter eight and nine. It is a summary of the originality of the thesis embodied in the key findings and implications of the thesis. It presents the conclusions based on the findings and draws out the theoretical contributions. Additionally, the chapter discusses recommendations for ICT and development policy and concludes with the way forward. The ethnographic research reported in this thesis was about the appropriation of new media and ICTs by the young people of Kibera. The 22 young men and women who form the sample of this study are drawn from Kianda, Makina, Gatwekera, Salama (Karanja road), Ayany and Olympic villages of Kibera. The purpose of this research was to establish if the media, donor driven and government optimism surrounding ICT4D and the ubiquitous mobile phone was reflected in the research context of Kibera slum. I purposefully selected a research site that would elicit a great understanding of the research problem.

The research aim of this thesis was to interrogate the optimism about the use of new media and ICTs for development by amplifying the voices of the technology users. The focus on young Kiberans as new media and ICT users is particularly significant for emergent non-Western media audience literature. Based on Amartya Sen’s Capabilities Approach, I set out to establish if there was the existence of capabilities in the research context. In the context of this thesis I borrow from Sen’s (1999: 15) broad definition of development as the process of expanding the real freedoms that people have reason to value. As reviewed, the words freedom and capabilities are used interchangeably by Sen. Therefore, my research objective was to probe the existence of potential capabilities, freedoms or opportunities for those who appropriate new media and ICTs. I also set out to establish if the existence of new media and ICTs in the Kibera context was a capability that helped the young people realise several functionings.
10.1 The Value of this Thesis

M4D (Mobiles for Development) is framed within the (ICT4D) field where “technologies can be designed and woven into social systems in order to bring about positive social change” (Tacchi et al., 2012: 530). In tandem with the scholars who argue for a shift in the direction of ICT4D and M4D research; this study explores the appropriation of the mobile phone and the mobile Internet from a critical, social viewpoint. This is achieved by focusing on the potential role of new media and ICTs in facilitating connectedness through the maintenance and expansion of social ties of the young Kiberans. This thesis also explores the communicative environments of the young Kiberans and potentially contributes one of the first empirical studies to map the communicative ecologies of young people in Kenyan society within the media and communication literature.

10.2 Main Findings and Implications

In this section I address the research problem focus of the use of new media and ICTs for development. In contrast with the media rhetoric and the development agencies literature reviewed on the potential use of the mobile phone for economic empowerment, gains and development, the thesis establishes that the young users did not predominantly appropriate their artefacts as tools for economic development. There is some evidence of the use of the mobile phone to “blur lines between personal and economic relationships” amongst the highly educated young men and women (Donner, 2008: 148). However, the Kiberans predominantly appropriate the new media and ICT artefact for the maintenance of their social ties and relationships within Kibera. In alignment with the domestication of technology (appropriation), I argue that the mobile phone is a socio-cultural artefact objectified, incorporated and converted to an office and a personal secretary by the young Kiberans. Additionally, the appropriation of the mobile phone and the mobile Internet facilitates the use of social networking site Facebook as an important zone of self-expression. Thus, the mobile phone has led to an expansion of the capability set of mobility by facilitating the realised functionings of the use of social networking site Facebook to connect with social ties. Educational status emerges as a significant social conversion factor that enables a resident of Kibera
to convert a mobile phone artefact and the Internet into the realised functionings described.

Contrary to the literature on contextual mobility that argues, “computer mediated communication can serve as a catalyst for mobilizing weakly tied social networks; ICT applications and mediated communication technologies help people to interact easily without contextual constraints” (Kakihara and Sørensen, 2002: 4). Social class and social differentiation emerge as constraints to contextual mobility. In the Capabilities Approach, conversion factors can be both enabling and restrictive so education as a social conversion factor enables them to appropriate the mobile phone, mobile Internet and social networking sites like Facebook but their environment of residence in a ‘slum’ restricts the kind of social ties they can forge and expand locally. The young Kiberans’ environment emerges as one of the conversion factors that restrict their appropriation of the mobile phone and the mobile Internet for the expansion of their local social ties (Hatakka et al., 2013: 106).

Based on the preceding discussions, this study reveals evidence that, the offline hierarchically structured social categories that exist in Kenyan society are reproduced online. Therefore, the spaces created by new media and ICT use can be treated as continuities of the offline (Wallis, 2011, Miller and Slater, 2000: 5). Digital spaces and environments are organised just the same way the physical social environments are. They are a reproduction of the context in which they are embedded (boyd, 2013: 204). This acknowledgment is an original contribution to the Kenyan literature. It modestly captures how one context navigates the appropriation of new media and ICTs as well as the social context of use. As reviewed extensively in this thesis, the discussions on social and cultural outcomes of new media use and appropriation remain very limited in Kenyan media, ICT4D and M4D literature. Additionally, there is a dearth of literature on the communicative environments of people within Kenya as well as the broader Sub-Saharan region.
10.3 Theoretical Contributions

In alignment with the critical realist philosophical foundation that undergirds this thesis, it is evident that human action within Kibera is both enabled and constrained by social structures that reproduce structures within which agents such as the young Kiberans are embedded within (Kempster and Karry, 2011: 111). The communicative ecologies analytical and evaluative framework places “ICTs in the context of all the ways of communicating that are significant locally and it is recognised that any new connections and networks (social and technical) that develop as a result of the introduction of individual ICTs will be far more effective if they are somehow interconnected with existing, locally appropriate systems and structures” (Tacchi, 2006: 5). The mapping of the communicative ecologies and the acknowledgement that communication takes place is the context of a communicative environment is a unique contribution to the Kenyan media literature, ICT4D, M4D and related literatures. The Kenyan studies reviewed in the literature review are focused on the usage of different forms of new media and ICTs in isolation (McIntosh, 2010; Wyche et al., 2013a, Murphy and Priebe, 2011; Shrum et al., 2011). The focus is on amplifying how important the ICT under study is in the context where it is introduced. However, the amplification of the communicative environment serves to map out clearly what other forms of media the young Kiberans’ value and appropriate.

In the context of Capabilities Approach, the focus on restrictive conversion factors is a notion that has not been explored extensively. From this study, it emerges as significant to analyse the dual aspects of conversion factors (Hatakka et al., 2013). Additionally, the way certain conversion factors combine effectively or negatively in the context of study is very significant. For example, in this study, the personal conversion factor of literacy combines with the social conversion factor of education to enable the young people to appropriate new media and ICTs. However, the environmental conversion factor of their place of residence as a residentially segregated area restricts their ability to expand social ties or network with those drawn from higher income areas outside Kibera. Therefore, the combination or dual effect of conversion factors is a strand of the research that should be explored even further within the Capabilities Approach literature. This study is about Kenya in Sub-Saharan Africa but the research findings
are potentially relevant to the other empirical contexts. The theoretical framework of the Capabilities Approach complemented by both the domestication of technology and the communicative ecologies framework are replicable in the diverse Sub-Saharan African region as well as in other parts of the world. The open nature and people centred qualities of the Capabilities Approach render it as a very useful lens for the analysis of how diverse groups of people appropriate technologies for the pursuit of development.

10.4 Areas for Further Research

Chapter three questions the use of new media and ICTs for the pursuit of socio-economic development by presenting the optimistic media and policy literature and comparing it with the growing academic literature. The review highlights the discrepancy between technology optimists and scholars who seek critical answers as to how and why new media and ICTs should be used for the pursuit of socio-economic development. This is because many donor funded ICT4D projects have experienced failure when they are not firmly embedded in the existent communicative environments of the society or institution they are introduced into (Heeks, 2012; Tarus et al., 2015). Based on the findings discussed in this chapter, I argue that it is best for ICT4D practitioners to map out all the significant forms of communication and information flows that are significant in a context before they introduce any new technologies. The young people researched in this thesis observed that they were very open to adopting new forms of technology if they understood how to use them well. I discussed extensively in chapter five that this thesis initially set out to investigate the usage and appropriation of a well-publicised platform Voice of Kibera. However, I had to alter the focus of my research upon realisation that it was very difficult to find users of the platform who were not affiliated with the NGO that sponsored the platform.

The four VOK users who I interviewed as part of the sample eventually stopped using the platform towards the end of my fieldwork. The rest of the Kiberans’ I interviewed reported they had never heard about VOK and argued that when foreigners introduce technologies into their contexts they do not take time to understand their community. Organisations are also very eager to publicise impact and results so that funders can be motivated to keep supporting the projects. In the context of development studies, the
conflict between donor intentions and beneficiaries is well explored. That is why scholars like Chambers (1995) persist in arguing for a people centred view of the implementation of any community projects as opposed to a donor or funder centred view. However, it emerges that not all organisations have actually implemented the stipulations to focus on people first in community projects. In order to successfully implement any community ICT projects, the communicative ecologies framework used in this thesis provides a very formidable way for practitioners to map out what communication and information flows are significant locally and align themselves to complement those flows. However, even as policy makers map out contexts, they should be aware that human beings are unpredictable. They can change their mind about the appropriation of technologies or community projects at any time.

From the review of the M4D literature in chapter four it emerges that there are very limited cases of successful usage of new media and ICTs for economic development in the form of financial gains and profits. Some of the literature reviewed in the appropriation studies chapter one reveals that academics from the Global South are now seriously engaging with the socio-cultural elements of mobile phone and Internet use (Nyamnjoh, 2013a, 2013b). The recent and emergent literature on non-Western media audiences is also more focused on variations within the social context of use (Okon, 2015). This has implications for policy and it is probable that it is time for the field to accommodate the word development in various socio-cultural forms as well as contexts. Like Sen (1999: 15) argues, perhaps it is time that development went beyond growth of GDP and financial gains to be “what people have reason to value.”

10.4.1 A Shift in ICT4D and M4D

Ganesh (2010: 3) argues that ICT4D generally ignores the “diverse ways in which the poor and the marginalised use media technologies in their everyday lives for social networking, entertainment, to produce and participate in intimate and erotic economies, and to express and experience their sexuality, relationships, pleasure and intimacy in ways that could also be considered empowering” in favour of hard development goals such as farmers comparing crop prices via SMS. Like Arora and Rangaswamy (2013: 901) I concur that “if we are to genuinely examine what people in third world countries
or the Global South are doing with ICTs, we need to look at them as typical users and not the exotic and virtuous recipients of new technologies they are often made out to be”.

10.5 The Way Forward

In order to make a meaningful contribution to the media and communication studies literature, ICT4D, M4D, C4D and IS, I propose that the future empirical studies in the Sub-Saharan African context focus research attention on diverse media audiences and their communicative environments. I recommend a transition from the studying of media forms and artefacts in isolation to a greater analysis of the communication and information flows that emerge as significant in various contexts. It is also necessary to build on the emerging non-Western media audiences’ body of literature. Future work can also contribute to the limited media ethnography literature in the Sub-Saharan African context.

Future research can also enhance the critical realist paradigm by retroducing the data collected in the context of Kibera. Retroduction is a mode of inference in which events are explained by postulating (and identifying) mechanisms that are capable of producing them. Therefore, retroduction goes a step further than both deduction and induction because it involves “additional theorizing regarding the existence of entities that may not be represented in the empirical data” (Wynn and Williams, 2012: 800). Such an action can guide development policy in the context of Kibera. PlayStations are identified as significant technologies in the context of Kibera. However, they are not explored in the discussion chapters because this thesis focuses on the most significant forms of new media and ICT artefacts within the context. However, the existence of such cafés in Kibera presents opportunities for the future empirical exploration of the diverse ways in which people appropriate technologies in the pursuit of leisure and entertainment. Additionally, future work can provide some insights on media switching and ideologies within the communicative environments of young Kiberans. There is also a need to interrogate the social media appropriation of the young Kiberans online. Future work can analyse their social media profiles and interactions and
investigate if the mobile phone and mobile Internet enables or restricts performative identities.

10.6 Personal Reflections and Limitations

The greatest personal limitation I encountered was time. Ethnographic methods such as participant observation are very advantageous as they elicit an in-depth research encounter that is very unique. However, because one must get acquainted with the research context, it is a process that can vary from days to months. A researcher is unable to control how people perceive them and cannot compel the researched to facilitate access. I had to contend with minor delays in the study because of negotiation of access. Additionally, the ‘slum’ context presents one with many ethical dilemmas. For example, should I get involved when I meet people who are exploited and when their wages are withheld by people I know? These were not easy dilemmas to solve because they represent the messiness of social life. As the months went by I also felt more confident that I could elicit greater findings and expand my study. However, I was constrained by the real challenges of scope and time. It was not easy to pull away from the field site at data saturation point because I was comfortable and even more curious about the context.

The greatest methodological challenge for ethnographic cases such as this one is generalizability. In chapter six, I reflect on the validity of data collected in this research and argue that methodological and theoretical triangulations have been applied to validate data from the different research methods used. I conclude that the goal of this particular research is to foster a unique analysis of the Kiberan context. The findings in this ethnography may not be generalizable to other contexts but the research methods and theory used are potentially replicable to other contexts.
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Appendix One: The Interview Topic Guide

The topic guide evolved from a focus on VOK to a focus on the broader forms of new media and ICT in Kibera. It is explained in this section.

Research Objectives
To identify the users of the Voice of Kibera mobile platform.
To analyse the process of domestication of the technology.
To identify what the users utilise the platform for.
To establish if there is a capability of voice.

Research Questions
Who are the users of Voice of Kibera mobile platform?
How is the Voice of Kibera mobile platform domesticated?
What are the uses of the mobile version of Voice of Kibera for the users of the platform?
Is there a capability of voice for the users of Voice of Kibera mobile platform?

Due to the difficulty in finding users of Voice of Kibera who were not members of the organisation, the objectives and questions above were later changed to the following in April 2013:
My research was exploratory in nature and the two research objectives were to explore if young Kiberans were appropriating new media technologies and the second one was to explore if the appropriation of new media technologies by the young Kiberans led to an expansion of capabilities or development.
In order to meet the objectives, the research questions that eventually directed the research were:

RQ1. Do the youth appropriate new media technology?
RQ2. What forms of new media do the youth appropriate?
(Sub question: Which form is the most significant to each individual?)
RQ3. How and why do they appropriate the new media technologies?
RQ4. Is there an expansion of capabilities for those who appropriate new media technologies?
RQ5. (What possible form is the capability or capabilities?)
**Biographical Questions**

How long have you lived in Kibera?

Can you describe a typical day in your life?

Share with me what you find most unique about Kibera.

What do you do?

Do you have any hobbies?

What is your age?

Does the use of Voice of Kibera emerge as important in the course of your day?

**Media Consumption**

Do you use other forms of media do you use in the course of your day?

Any reasons why you use these media?

Do your friends and family use these media?

Do you have to share any of these media?

If so, share with me how.

What does your mobile phone mean to you?

Where did you get your mobile phone from?

**Mobile Platform**

When did you start using the Voice of Kibera mobile platform?

Why do you use the mobile platform?

What do you like about Voice of Kibera mobile platform?

Do you also use the website?

Do you access Voice of Kibera from any other source except your mobile phone?

Tell me more about these source/s?

Did anyone encourage you to start using the platform?

If so, who did?

Do you use any other platform similar to Voice of Kibera?

Is it easy to use the Voice of Kibera mobile platform?
Is it important for you to be a participant / user of Voice of Kibera mobile platform?

Have you encouraged your colleagues or family to use Voice of Kibera mobile platform?

What was their response?

Do you think other community members of Kibera will start using Voice of Kibera mobile platform?

Do you share your phone with anyone?

Do you share your access to the mobile platform with anyone else?

Are you excited that Mukuru and Mathare will soon have a platform such as Voice of Kibera?

Why? Or why not?

Do you have colleagues or family there?

Has Voice of Kibera changed any aspect of your life in a positive or negative way?

Tell me how?

Any interesting story you want to share about using the use of Voice of Kibera?

**Usage**

Do you send SMS reports?

If so, what kind of SMS reports do you send the most?

In addition to the SMS reports what else do you use frequently?

Do you think VOK is something you will continue using or will get bored and stop?

Do you have any friends or family that tried using the platform and got bored and stopped using it?

What challenges do you experience with using the platform?

What would you change about VOK?

Do you think the SMS reports are to be trusted?

Do you think VOK can help the community?

How?
Appendix Two: Sample Interview

(10 OCT 2013 at 3:00 to 4:00 with Rythmix (28 year old male)

**Researcher:** Tell me a bit about yourself, what do you do, your hobbies?

**S.B:** Can we start with my name again?

**Researcher:** Yeah

**S.B:** My name is... but most of my friends call me... I am a video editor with Kibera news network founded under Map Kibera trust, I also do camera work, and I am a reggae artiste myself. I also edit music videos for upcoming musicians

**Researcher:** OOh..ok that’s interesting. How long have you lived in Kibera?

**S.B:** I came to Kibera in 2006 from Kawangware.

**Researcher:** OK,

**Researcher:** What village do you live in?

Olympic, I have lived in Kibera since 2006

**Researcher:** What do you like most about Kibera or what is significant for you?

**S.B:** Kibera is very unique in itself, because so many people misunderstand Kibera, a lot of people, even in the media. Even when you see the mainstream media such as KTN or NTV, every time you see a story about Kibera it’s about people rioting, negative news all the time.so there’s nothing positive being highlighted about Kibera. So when we sat down with my friends in 2010 we decided to come up with citizen media as Kibera Network, as a group of young men. SO KNN was not initially under Map Kibera, a group of youths .Then we met this white lady and we were incorporated in Map Kibera.

**Researcher:** Amah..Ok...No ladies?

**S.B:** There were ladies but they pulled out

**Researcher:** Currently do you have any ladies?

**S.B:** There’s currently one, I believe she is part of the team and is being trained

**Researcher:** How has KNN being received? Do people manage to watch the YouTube videos online?

**S.B:** That’s the challenge, many people don’t have Internet access but the few who have it on their phones just use it for Facebook and Twitter so we decided to come up with community screenings. We show our videos in video halls where people watch their favourite movies. Then in between the videos we give our news, whatever we collect. And that is our way of giving back to the community.

Although there’s a challenge of funds because you have to pay for the video halls.
Researcher: Like how much?

S.B: We do pay 200 Shillings for every time we do a short story, because we do short stories every time we add them up to 15 minutes and we pay them 200 Shillings. That’s what we’re currently doing, but were organising to do bigger screenings like in the Kamukunji grounds. Because in the video halls we only attract the youths who are keen on watching movies.

Researcher: So their attention is more towards entertainment than serious news?

S.B: Yes it is..laughter..

Researcher: Do you have any hobbies?

S.B: I am specialising on doing music videos for upcoming artistes then we play them online. But we’re having challenges approaching the local stations, it’s a challenge because when we approach them they only know the Nameless and Jua Kali artistes who are popular.

Researcher: What is your age?

S.B: 29

Researcher: Does the use of Voice of Kibera community platform emerge as important in the course of your day?

S.B: Yes it does, I use it at least once daily.

Researcher: What other media do you use?

S.B: I love writing and reading. I love blogging and I do write a lot, I have my own blog and I write for Voice of Kibera.

Researcher: Do you think there’s good feedback when you blog?

S.B: When I get feedback, the main comments come from international people and that's another challenge.

Researcher: Would you say the young people are more into media than the older people, or is it that the older people are not so keen?

S.B: Most people in the informal settlements don’t have access to Internet but that is changing.

Researcher: But they have mobiles and cybercafés?

S.B: Laughter…that is not the challenge, most people want to go online for Facebook to see what their friends have posted

Researcher: Are you a social media user?

S.B: I use Facebook, Twitter, MySpace and I have an account on YouTube and I balance them. When I started ,I used to be on Facebook all the time but now I have moved to Twitter.

Researcher: Why Twitter and not Facebook?

S.B: I Think guys on Twitter are more serious than Facebook
**Researcher:** MySpace?

**S.B:** That is more for marketing music

**Researcher:** And when you said you love reading, did you mean the newspapers, magazines or books?

**S.B:** I love papers, magazines and books

**Researcher:** Do you buy the newspaper?

**S.B:** No…laughter…I usually go where I can read the paper like in cyber cafes. In fact, I usually buy books more than novels.

**Researcher:** What kind of books?

**S.B:** Novels, At least every month I buy a novel.

**Researcher:** Who is your favourite author?

**S.B:** Both Africans and International authors

**Researcher:** When you said you like Twitter, why is it your favourite?

**S.B:** I am usually the kind of guy who likes his opinion to be heard so I like it, laughter,

**Researcher:** And E-mail.?

**S.B:** I use e-mail regularly

**Researcher:** DO you remember when you opened your e-mail last?

**S.B:** An hour ago

Interruption….when someone walks in to visit him

**Researcher:** You haven’t mentioned music. That’s still a form of media? Any radio station you like?

**S.B:** Homeboyz, But I don’t listen to radio a lot…most of my music I get online and then I download them, and there’s people tunajuana na wao(There’s people I know) they send me music…like there’s some producer I know from Jamaica..

**Researcher:** How do you get to know them?

**S.B:** We just met on social media

**Researcher:** So you just need your laptop?

**S.B:** Yeah..

**Researcher:** TV?

**S.B:** I watch news and my best presenter is Larry Madowo
Researcher: And soaps?

S.B: You rarely find me watching anything other than news

Researcher: Pamoja FM?(a local community radio station)

S.B: Laughter...When there’s time I listen to them

Researcher: So for you we can conclude that Twitter is very important to you and blogging, anything that can get your opinion across.

What about cyber cafe and PS?

S.B: Yeah..laughter...I don’t play PS and I got to the cyber when I want to look for something online. Once every day..

Researcher: Do you share any form of your media? Your phone? M-Pesa?

S.B: I use my phone a lot for Safaricom M-Pesa

Researcher: So your favourite subscription is Safaricom?

S.B: I text a lot and call a lot. Kwa phone utanipata kwa (you will find me on)Twitter.

Researcher: Do you share any form of your media?

S.B: Like sharing information?

Researcher: No, like sharing your phone or television?

S.B: No, not really

Researcher: Is your mobile phone significant to you?

S.B: Yes, very much.

Researcher: More than Twitter?

S.B: Yes.

Researcher: When did you start using Voice of Kibera?

Voice of Kibera Questions

S.B: Like two years ago, but let me say that I was not a consistent user until six months ago

Researcher: What do you like most about it?

S.B: It passes a different message about Kibera

Researcher: So you feel it can change perceptions about Kibera?

S.B: Yes, exactly.

Researcher: Have you encouraged your friends and relatives to use Voice of Kibera?
S.B: Yes I have…laughter…some used it but others did not...

Researcher: Do you think Voice of Kibera has changed any aspect of your life?

S.B: Yes it has, positively ..before I joined Voice of Kibera I never cared about Kibera that much and now it made me realise that Kibera can be better than it is.

Researcher: Any story that was interesting to you when you used Voice of Kibera?

S.B: There was a period when water was a big deal and someone sent a message about shortage of water to the platform and someone who was updating the platform told us to do a story on Voice of Kibera and we managed to do a story on it and something was done.

Researcher: Do you think people will start using the platform with time?

S.B: Yes, if they are told about the advantages.

Researcher: Do you have any friends who use to use the Voice of Kibera and just stopped?

S.B: Laughter…yeah yeah.. they just stopped

Researcher: Do you have any challenges in using the platform?

S.B: I do find time to send reports because I am subscribed to 200 SMS per day.

Researcher: Do you think the information exchanged on the platform is trustworthy?

S.B: You can’t trust it but we do have a team to verify the reports. People have been sending reports that are false.

Researcher: Do you think Voice of Kibera can help the community?

S.B: Yes it can, if the people are explained to the advantages of the platform?

Researcher: I have no more questions but do you have anything you would like to add?

S.B: Maybe you should visit Pamoja Fm.

….casual conversation…..