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**The Politics of Ideology in Information and
Communication Technologies for
Development**

An African Case Study

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Abbreviations

IMF International Monetary Fund

ITU International Telecommunications Union

FDI Foreign Direct Investment

ICTs Information and Communication Technologies

ICT4D information and Communication Technology for Development

TNC Transnational Corporation

LDCs Least Developed Economies

MDGs Millennium Development Goals

SAP Structural Adjustment Programme

EU European Union

NGO Non Governmental Organisation

SEP Stanford Encyclopaedia of Philosophy

HIPSAA Harmonization of ICT Policies and Rules in Sub -Saharan Africa

CFR Council for Foreign Relations

DFID Department for International Development

WMO World Meteorological Organisation

Abstract

Information and communication technologies have acquired contemporary prominence and are being introduced as new and technologically innovative devices for rapid African development, becoming key cornerstones of the development assistance interventions of the European Union and the G8. But the Dot Force Initiative of the G8 and the various ICT for development programmes of the EU display a modernization and neoliberal approach to development. As a likely consequence, the Africa strategy of Vodafone suggests that this influential transnational corporation is reaping the rewards of a favourable environment for investments, joint ventures and acquisitions created by EU and G8 policy making in Africa. Neo-Marxist critics generally object to the new priority given to ICTs in development and reject the modernization and neoliberal oriented approach inherent in their introduction. For them, dependency and a new imperialism are the likely outcomes of neoliberal development policies. Using critical theory to examine the underlying ideological motivations of ICT for development, this thesis supports the Neo-Marxist critique about the dependency outcome of TNC expansionism, but I argue that both the neoliberal mode of introducing ICTs and the Neo-Marxist opposition to these developments are generally problematic. I recommend that alternative and bottom-up approaches to development should be the preferred ideological basis for ICT for development, transcending the hegemony of neoliberalism and the pessimism of Neo-Marxists.

Key Words: Neoliberalism, Neo-Marxists, Information and Communication Technologies for development, TNCs.

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Contents

| | |
|--|----|
| Introduction..... | 9 |
| 1.1 Selecting ICT4D Actors and Projects | 12 |
| 1.2 Research Questions | 13 |
| 1.3 Thesis Map | 14 |
| 1.4 Literature Review | 15 |
| 2 Theory | 22 |
| 2.1 Ideology and Development Policies and Programmes..... | 22 |
| 2.2 The Historical Background of Development Interventions | 23 |
| 2.3 Critical Responses to ICT4D Policies and Projects | 25 |
| 2.4 Understanding Communal and Individual ICT4D Initiatives | 27 |
| 2.5 ICT4D and Theories of Alternative Development..... | 28 |
| 2.6 Sharing Patterns of ICTs | 29 |
| 2.7 Theory conclusion | 30 |
| 3 Methodology | 31 |
| 3.1 Epistemology..... | 31 |
| 3.2 ICT4D Epistemology: Transcending the Dominance of Structure | 31 |
| 3.3 Critical Theory and ICT4D | 32 |
| 3.4 Critical Approach to Research | 34 |
| 3.5 Methods..... | 34 |
| 3.5.1 Critical interpretive Case study | 34 |
| 3.5.2 Empirical Materials | 37 |
| 3.6 Analysis of Empirical Material | 38 |
| 3.7 Methodology Conclusion | 39 |
| 4 Analyzing the Provisions of ICT4D Projects, Programmes and Initiatives..... | 40 |
| 4.1 The G8 Dot force Initiative | 40 |
| 4.1.1 Origins of the G8 | 40 |
| 4.1.2 ICT4D and Unfulfilled G8 Pledges to Africa..... | 41 |
| 4.1.3 Provisions of the Dot Force Initiative..... | 42 |
| 4.2 Modernization, Dependency and the Dot Force..... | 44 |
| 4.2.1 Opposing Modernization | 44 |
| 4.2.2 A New Imperialism?..... | 45 |
| 4.2.3 A New Dependency through the ICT trap..... | 45 |
| 4.2.4 The Imposition of Western Ideology..... | 46 |
| 4.3 ICT4D Projects of the European Union | 47 |
| 4.3.1 Neocolonialism through Neoliberalism? | 49 |
| 4.3.2 Domination through New Forms of Conditionalities | 50 |
| 4.4 The Vodafone African Strategy: Windfalls of Modernization and Neoliberalism | 50 |
| 4.5 Minor ICT4D Actors | 54 |
| 4.5.1 Inventors and Innovators | 54 |
| 4.5.2 The Feminists | 55 |
| 4.5.3 The Farmers | 56 |
| 4.5.3.1 Market Information | 56 |
| 4.5.3.2 Agric Extension Services | 57 |
| 4.5.3.3 Other Sophisticated Services | 58 |
| 4.6 Interpreting Minor ICT4D Initiatives..... | 58 |
| 4.7 Global Dominance and Local Alternatives | 60 |
| 5 Conclusion | 61 |

| | |
|--|----|
| 5.1 Ideology and Conflicting Perspectives..... | 61 |
| 5.2 Beyond Structuralism..... | 62 |
| 5.3 Minor Actor Initiatives..... | 62 |
| 6 Executive Summary | 63 |
| 7 References..... | 67 |

Introduction

I seek to conduct a critical interpretation of the ideological underpinnings of the ICT4D initiatives, programmes and projects of the G8 and the EU. Vodafone's Africa strategy also comes under critique because its rapid Africa expansion raises questions about the relationship between G8 and EU ICT4D policy making and the expansionism of Western TNCs. Subsequently, the general Neo-Marxist opposition to ICT4D in particular and neoliberal development policies in general will come under the critical umbrella. The neoliberal dominance in ICT4D policy making displays an optimism that is matched by Neo-Marxist pessimism at these developments. Thus, I shall explore the strengths and weaknesses of both standpoints and then introduce some inclusiveness into the debate by analysing the initiatives, programmes and projects of minor and mainly local ICT4D actors namely the feminist portal Womnsnet.com, the African sustainable inventors' platform Afrigadget.com as well as the various ICT4D activities and innovations that enable farmers and rural communities to participate in markets and secure access to information and agric extension services through mobiles.

The focus of this critical interpretive case study is not primarily on the practical implementations of these projects or the discourses surrounding them but rather an interpretation of ideology as acquired from an analysis of the provisions of these programmes. Ideologies are usually set in stone and give rise to a series of actions by holders of that ideology (Utam 2005). Ideology therefore influences the subsequent conduct of the actors involved. I argue that in the immediate matter of ICT4D in Africa, ideological considerations precede and likely determine the formulation of ICT4D policies and govern their implementation. Through the theoretical and ideological reflections I will conduct in this thesis I seek to contribute to establishing a pragmatic way of thinking about ICTs as part of development and therefore influencing the formulation of better policy.

In recent times the media has frequently reported optimistic stories regarding the changes ICTs are making in parts of Africa. Reports such as a rural Kenyan farmer's

use of Google search results to save his potato crop from pests (BBC 2009), and the use of mobiles to turn on water wells in rural Uganda (Mobile Beyond 2010) are announced with surprise and greeted with admiration. The Guardian (2010) even wondered whether mobile phones were “Africa’s silver bullet”, referring to the diverse adoption of these devices in economy and society. Conversely, Al-Shabab’s use of text messaging to intimidate opponents, recruit combatants and organise battlefields is regarded with alarm (BBC 2009). The development industry has embraced the age of ICTs, shifting resources into an increasing variety of projects and programmes that have come to be known as ICT4D. One of the biggest of such ICT4D projects in recent times is the G8’s Dot Force initiative. The harmonisation of African telecoms markets, the promotion of the exploitation of ICT infrastructure in Africa and the deregulation of the African telecoms industry are the main objectives of the EU’s multifaceted ICT4D strategies in Africa.

The EU and G8 justify their new interest in ICT4D by implying that ICTs are new and innovative approaches to rapid African development. There is however little difficulty in concluding that ICTs are not merely solitary devices for transformational growth but are included in packages and programmes of development assistance which contain particular conditionalities and provisions. A careful observation of these provisions reveal an overwhelming desire to deregulate, influence policy making to suit private business and an emphasis on FDIs in ICT infrastructure, all signs of the heavy influence of neoliberal ideology. The prevailing Neo-Marxist opposition to the proliferation of ICT4D projects describe them as essentially compromised by exploitative conditions and ulterior motives and underlined by flawed old approaches such as modernisation or their new manifestations like neoliberalism. Such Neo-Marxists include Cammack (2006) who regards the promotion of capitalist¹ principles such as entrepreneurship, privatisation and a

¹ Cammack (2006) identifies the beginning of a new imperialist project aimed at “making capitalism global”. He maintains that unlike previous capitalist projects this agenda entails not only the expansion of foreign capital into new territories, but the export of the ideas and institutions of capitalism and the market economy involving the creation of both a “domestic entrepreneurial capital class and a market capable of outside penetration”(2006: 2, 3, 6, 7). For Cammack, these developments confirm Lenin’s standpoint that the “installation of a business class, the export of the ideas of the market and the readying of markets for foreign investments constitutes imperialism on a global scale”and amounts to the last stage of capitalism(2006:2, 3, 6, 7). Accompanying this change in the content of capitalist expansion is a change in its leadership which is not directly sponsored by Western states as before, but indirectly controlled through the cooption of the UN and other multilateral agencies under the guise of achieving the MDGs(Cammack 2006). A careful examination of ICT4D provisions will confirm most

reliance on profit motivated business methods as likely to lead to imperialism, and Alden (2003) who questions the G8's insistence on ICT4Ds when there are other development priorities. I shall subject this and other Neo-Marxist critiques to scrutiny, but the central argument I will explore in this thesis is that the overly structural biases of the neoliberal influence on current ICT4D policymaking, programmes and projects and the nature of the Neo-Marxist critique makes them similar in content, leading to their collective neglect of alternative or minority ICT4D viewpoints. In this ideological debate Neo-Marxists in their skepticism² generally do not identify the positive aspects of ICTs, though they adequately expose some of the flaws in current ICT4D projects which they trace to the hegemony of neoliberalism today.

Largely neglected minor and mainly local actors whom I consider to constitute the alternative ICT4D sector are quietly trying to improve conditions of their existence by reflecting on ways of adapting ICTs to serve as tools. These reflections border on the adaptability and flexibility of ICTs compared to previous technological interventions and may give people better opportunities to subvert technology towards their own ways of thinking about development within their own communities. Policy makers in the wider development community can also drive useful insights from these developments.

However, acquiring this more nuanced outlook requires a comprehensive and inclusive critique of the ideologies involved in ICT4D. To this extent, critical theory's comprehensiveness accommodated the diversity of actors under critique and its emancipatory aims will contribute to moving beyond the ideological dogmatism that characterizes discussions on the issue, pointing at new more sustainable and pragmatic directions (Friesen 2008). In the next section I briefly discuss why I chose to bring this particular group of ICT4D actors under critique and not others.

of the problematic aspects of Capitalism Cammack identifies above, such as a preference for private investment, an insistence that poor countries create the "right" conditions for business and entrepreneurship and the heavy involvement of the UN.

²Alzouma (2005: 351) is skeptical, asserting that "the general conditions in which people are living do not suddenly change with the introduction of the internet". Leye (2009: 34) is also cautious, insisting that "as long as the world is marked by gross political and economic inequalities.....development promises through ICTs will not come true" and Alden (2003: 476) demands that bridging the digital divide first requires the resolution of socio economic divides.

1.1 Selecting ICT4D Actors and Projects

Two broad groups of ICT4D actors were initially identified. The historical influence of major ICT4D actors such as the G8 and EU in dictating the development agenda stood in contrast to minor or alternative ICT4D actors whose activities I deem defies this dominant agenda. My objective was to gather a representative group for critique from among these two sides. The selection of actors for analysis was also informed by the research questions that awaited answers from this analysis.

The G8's Dot Force project was launched with a pledge to transform³ the digital future of Africa. It is a prominent ICT4D project that involves the participation of other major institutions like the World Bank and Microsoft as well as individual African governments. The G8 is also a major development partner with unfulfilled commitments to Africa which critics have contrasted to the zeal of the Dot Force initiative implementation (Alden 2003). Further, the Dot Force initiative contains conditions and provisions that bear a striking resemblance to what came to be known as the conditionalities that exemplified the Structural Adjustment Programmes of old, making it interesting to investigate this similarity. My choice of the Dot Force initiative was mainly informed by these considerations.

The EU includes former colonial powers who share a history of economic and political relationships with Africa. The ICT projects and programmes of the EU then become suitable for study given the historical background of unequal trade and exploitation of natural resources. The EU's Africa ICT strategy also includes other major stake holders such as TNCs as part of working committees in addition to various African governments and the Africa union. The combined EU strategy amounts to a comprehensive ICT4D project whose ideological motivations were

³ “Precisely because the digital revolution has the power to transform production processes, commerce, government, education, citizen participation and all other aspects of our individual and collective lives, it can create substantial new forms of economic growth and social development. Therefore, access to, and effective use of the tools and networks of the new global economy, and the innovations they make possible, are critical to poverty reduction, increased social inclusion and the creation of a better life for all”-Report of the Digital Opportunities Task Force (G8 information Center 2004)

worth investigating due to the influence of ideology on subsequent actions and conduct.

Vodafone is an influential global telecoms giant which is actively acquiring national telecoms monopolies in Africa with a self professed expansionist strategy (Vodafone Policy Paper Series 2005). Keenly aware of consumer peculiarities in Africa, Vodafone is also involved in the M-pesa mobile money scheme, a major ICT innovation frequently cited by ICT optimists. I saw it as a suitable representative of the growing interest of TNCs in certain African countries.

I excluded the African Union and individual African governments because they are already subsumed under the ICT initiatives of the G8 and the EU and in both cases occupy a subservient position as recipients of assistance for deregulation and modernization of their ICT sectors. Thus, government policies on telecoms in general and ICTs in particular are subject to change at the instigation of donors. Also, studying government attitudes to IC4D should constitute a separate research effort. The 50 plus countries of Africa individually and collectively give rise new and separate challenges that are not the focus of this study.

Rather than looking for individual NGOs, the portals Afrigagdet.com and Womensnet.com provided access to many of such outfits as well as individuals taking their destinies into their own hands in their communities. These portals thus allowed a comprehensive review of the motivations of a diverse but similar set of little known ICT4D actors.

1.2 Research Questions

Firstly, what predominant ideologies can be established as informing and determining the ICT4D projects and programmes of the EU and G8? On the other hand what ideologies motivate the critical reactions to these policies and projects? Can a reference to the ideological motivations of the G8 and EU allow an understanding of the Africa policy of Vodafone?

Second, what are the consequences of the attachment to ideology that characterizes both support and opposition to ICT4D?

Third, what other approaches to ICT4D defy or undermine the dominant neoliberal approach and the critical Neo-Marxist standpoint? To what extent should alternative approaches to development influence ICT policy making? I begin the task of answering these questions by giving a brief overview of how this thesis will unfold below.

1.3 Thesis Map

The purpose of the literature review that follows is to establish a clarifying perspective by offering a description of the state of the discipline of ICTs in development. This review will also seek to identify areas of the literature that require more attention, helping to deepen the ICT4D debate and improve ICT4D policy. I will then introduce the theory section of this thesis with a discussion of ideology and its role in development strategies. In this section I will also assess the theoretical consequences of ideology in development and the policy outcomes that arise from both ideology and theory. Subsequently, I will present and discuss a methodological approach that is consistent with the identified theory. Here I will argue that critical theory is the most adequate methodological framework for conducting the diversity of ideological critiques that this thesis proposes to do. A methods section where I describe how I gathered, organised and analysed empirical material in the light of the theory and methodology will conclude the methodology section. Next comes the task of analysing the various ICT4D actors. As mentioned already, this is a critical interpretative case study of the ideology surrounding ICT4D projects of the G8 and the EU and the Africa strategy of Vodafone. However, in this section I will also analyse minor ICT4D actors as well as the ICT initiatives of individuals. The concluding parts of this thesis will contain a summary of my main findings and an executive summary. These concluding sections will reflect the main argument I present in this thesis that the neoliberal dominance in ICT policy making is almost as problematic as the Neo-Marxist led rejection of this dominance. Thus, the suggestion that ICTs in development should be seen as social goods and policy should be guided by both local culture and circumstances as well as alternative theories of development will be emphasized at the end. I begin the task of providing support for these arguments and recommendations with a literature review in the section below.

1.4 Literature Review

I was initially inspired to ask the research questions outlined above by a careful perusal of a broad body of literature concerning ICTs in development in particular and development theory in general. This review revealed an outline of the current debate and suggested ways of improving clarity and extending the scope of the discussion. Contributing to a more inclusive and complete ICT4D picture would involve accounting for hitherto largely neglected developments.

Early commentators on ICTs as part of development showed deep optimism. On one hand the historical failure of development policy and political and economic challenges in Africa made depressing reading. On the other hand this optimism was probably fuelled by the potential they saw in ICTs to change this state of affairs. The thinking at this stage anticipated that ICT investments will translate into lavish rewards for an African political economy that had with a few exceptions defied all previous attempts at development. The Scot Report (2004) exemplifies this approach which displayed a descriptive character and attempted to illustrate a wide range of future mobile phone applications which the report suggested could be of benefit to rural Africa. The novelty of ICTs and the lack of data meant that these efforts were restricted to making forecasts of future patterns based on available information. The Scot Report for instance envisaged a series of developments that will culminate in mobiles being adapted to African conditions and combining the features of several devices in the process of that adaptation⁴. Coleman (2005:2) shared the Scot Report's optimism and like the former offered recommendations, but remarkably preferred culture and context in policy formulation to "technological quick fixes". The Scot Report and Coleman did not disclose their ideological preferences, but the nature of their recommendations suggests that they may be regarded as ICT optimists with a belief in the modernization approach, suggesting that a structural transformation of the African political economy could be achieved with the introduction of ICTs. In this sense they resemble more recent advocates of ICTs in development who prefer privatisation, entrepreneurship, foreign investment and deregulation, but to Coleman's credit he called for attention to context. One recent ICT optimist is Versi (2007:11)

⁴ Scot believes that voice will "converge" with digital services and handsets will provide a combination of radio, television, camera, minicomputer (PDA) and phone, and anticipates an outcome where the mobile phone will be able to be adapted to suit African conditions while recognizing that these conditions pose the biggest threat to the realization of the ICT revolution dream (Scot 2004: I)

who describes how mobiles can lead to empowerment and transparency and is also enthusiastic about a continent wide 24 hour TV station that would be available on mobiles. Another optimist, Ferraro (2008), outlines the emergence of online communities in Africa and illustrates how mobile phones are helping to collect important data for community development, provide market access for farmers, and facilitate access to information. ICT4D projects such as the launching of a service that allows farmers to diagnose crop diseases with cell phones in Uganda (Welter 2009), the setting up of a mobile based farmers market information service in Ghana (IICD 2008), and the initiation of a service for weather information and crop insurance on mobile phones in Kenya (Ogodo, 2010; Reuters 2010) are all seen by optimists as evidence for increased suitability of ICTs for African development. These developments are put to use by ICT advocates in a variety of ways, providing support for them to demand more ICT investments while leaving unaddressed the long term outcome of large scale privatisation, commercialization and affordability. More problematically, the assumption is made by ICT optimists that there will be a fundamental transformation of the African political economy by ICTs, but there is a failure to explain how ICTs can resolve lingering and fundamental problems like underdevelopment, poverty and insecurity. The global media has participated in this enthusiasm, adding to the creation of a picture of an apparent ICT fuelled economic revival often based on isolated ICT developments and innovations. In particular, the BBC (2008) believes that mobiles are narrowing the digital divide and boosting development in poor countries.

But such optimism has not sparked as much controversy as the ideological debate generated by the increasing involvement of powerful global actors in ICT4D. One of the leading Neo-Marxist critics is Cammack (2006) who argues that there is an imperialist motive behind the general encroachment of neoliberalism into development policies and projects through the cooption of major UN and other multilateral agencies by major western powers. The critique of Leye (2009) is also broadly Neo-Marxist, centering on the global political decision making that tends to marginalize critical stances against ICT4D projects. Acknowledging the good intentions of ICT4D advocates, Leye points out the historical failure of new technologies like television, the optical telegraph, the radio and the underwater cable to deliver development to the developing world despite the resources and attention

devoted to the modernization effort in the post WW2 period. He therefore sees the preference for markets, liberalization and the pursuit of profits that accompany recent ICT4D projects as unlikely to lead to socially significant development (2009:30). Leye eventually dismisses the ability of new technologies to deliver a structural transformation of African economies contrary to the claims of the ICT advocates because underlying socio-economic inequalities both within Africa and between Africa and the West remain unresolved (2009:34). Wade (2002) regards this sudden interest in bridging the digital divide with suspicion and argues that Africa is in the process of slipping into an ICT trap that will culminate in a new kind of dependency. Alden(2006) and Alzouma(2005) see the need to remind global actors like the G8 to devote their resources to more important and fundamental problems, perceiving the zealous pursuit of ICT objectives by major donors to Africa while other developmental commitments remain unfulfilled as unjustifiable.

Neo-Marxists make very legitimate arguments particularly their rejection of privatisation and the modernization and neoliberalism identifiable in ICT policy making. They point out that these trends risk intensifying present social and economic inequalities and stand to deepen Africa's dependency, adding a dependence on ICT content and infrastructure to the already existing dependence on aid, global manufacturing and services that conceivably result from previous attempts at modernization. Brohman(1995a) regarded as unsuccessful the exercise to present neoliberalism as a reformed and more acceptable approach to modernization and saw in that approach the same shortcomings of modernization that were responsible for its failure, locating the roots of these shortcomings in the attempt to impose grand theories from the European experience into a uniquely African context. Many of the critical stances by Neo-Marxists against ICTs imply that the attempt to transfer markets and ideas about them makes ICT4Ds projects simply miss the essential nature of the African problem. A critical examination of ICT4D provisions will reveal some of the same conditionalities that also characterised previous development packages. To this extent the ICT4Ds projects are not entirely new approaches to development.

But the structural⁵ tendencies of both the policy makers behind ICT4D projects and the Neo-Marxist pessimists leaves one side making grandiose claims about an economic revolution through ICTs and the other side dismissing almost all possibilities of any use coming out of ICTs. Ideology has prevented the emergence of not only a more complete picture but also a pragmatic one. I suggest that ICTs are probably different from previous technologies due to their capacity to be adapted to suit individual needs and the communication over great distances that they provide given their size and portability. For an African population deprived of infrastructure and opportunity, these devices will probably come in useful despite unresolved and legitimate issues of cost, ownership and affordability raised by Neo-Marxists. Figures such as a 60 percent growth rate in new subscribers (World bank 2002) and a cell phone ownership rate of 28 percent (Reuters 2008) suggest a previously unsatisfied need for voice communication being met. Hardship and necessity have given birth to some uniquely African mobile phone innovations such as the “fish detector” invented by a Kenyan that texts fishermen alerting them about the availability of fish in specific parts of coastal waters and the “block and track” ,a mobile phone based vehicle anti theft and tracking system(BBC 2009). Discussions preoccupied with ideology overlook these initiatives which may not lead to a profound economic revival, but undermine Neo-Marxist pessimism as well as offering lessons to major ICT4D actors about appropriate ICT4D introduction.

ICT adaptations and use patterns now emerging in the literature indicate the desire of a populace to make life a little more bearable by a creative use of available technology. Researchers, analysts and bloggers are beginning to respond to the need to study communal and individual adaptations of technology in Africa. Ekine(2010)

⁵ Chilcote(1994: 304) relies on Godelier(1973) to illustrate the “proximity” or similarity between structuralism and Marxism, explaining that Marx uses the concepts of “infrastructure and superstructure” to analyze capitalism: “discovering the internal structures hidden behind its visible functioning”. Thus, for Chilcote, structures are not the same as visible social relations, but an understanding of these invisible structures allow us to “understand visible social facts” (2004:304). These assumptions resemble attitudes and reactions to ICT4D and its likely impact. The behaviour of major ICT4D actors suggest a belief that neoliberal methods will have positive structural results for economies, leading to an general improvement in the standard of living. Neo-Marxists respond to this by suggesting that economic improvement will only follow structural readjustment of the unfair global economy and that ICT4D only perpetuate the inequalities within countries and intensify exploitative effects of the global economy. Thus, both sides emphasize the structures within which action take place, neglecting the visible human factor, which is made invisible by them.

proceeds from the “ends” of communities instead of the “means”, but she admits these “means” have been facilitated by a device with an extensive “range of functionality” (Ekine 2010: xi). De Bruijn et al. (2009) conduct a similar exercise, aiming to understand how communities and individuals are harnessing the power of ICTs towards their own uses within the perspective of the interaction between African societies and mobile technologies. Bates (2010) finds diversity among communities’ adaptations of mobile phones to confront their economic and geographical challenges with these adaptations of mobile phones not escaping the attention of profit seeking TNCs who now study these processes with the objective of responding with appropriate devices and services. The efforts of Ekine, De Bruijn, Bates actually study the ‘what is’ dimension of communal and individual uses of mobile phones and other ICTs. What I seek to offer in this thesis is to consider the normative “what ought to be” questions that may be driving these communities and individuals in their adaptations of ICTs. In their pragmatism and innovation they do not profess to belong to any particular ideology, but their initiatives resemble bottom-up or alternative⁶ approaches to development. The innovation and resourcefulness of minor actors may

⁶ (Willis 2005: 93-111) gives an account of the origin of “bottom up” or alternative development approaches. According to him the rationale behind these approaches was the apparent failure of macro or “top down” policies in reducing poverty. For Willis, the expected “trickling down” of the benefits of economic development to the poor which was the key assumption of macro approaches failed to materialize, while dominant groups of the world and within countries saw most of the wealth and led some development agencies beginning to think about how to direct development policy at the most vulnerable people (Willis 2005)

Starting out as the basic needs approach these ideas evolved to include the promotion of decentralization in decision making further down to the grassroots level, the gradual incorporation of NGOs into development policy implementation, and increasing importance of the concepts of empowerment, participation and social capital, accompanied by NGO attempts to inculcate these concepts in people at the grass roots level (Willis 2005)

Alternative approaches differ widely and there is broad disagreement over which particular approach is most appropriate. While some approaches have been criticized as calculated to put a human face on neoliberalism and are motivated by northern ideas of “progress and development”, (Willis: 2005), other criticisms accuse post development theorists of “constructing a rigid blueprint of the future” in a manner similar to the orthodox approaches they criticize, ignoring the oppressive and hierarchical aspects of vernacular societies and overlooking the benefits of conventional development such as health care and democracy (Kiely 2007).

Given the history of bottom-up approaches, and disagreements over what they actually entail, ICT use patterns and adaptations among local actors and individuals reflect a perception of local needs, culture and circumstances and how these inform attitudes towards the imported technology being adapted. Thus, ICTs may be generating a still evolving meeting of the global and the local which may help facilitate a convergence of orthodox development and “bottom up” or alternative approaches but with local actors enjoying an increased visibility and relevance beyond the structuralism that dominates today.

stem from a desire to be self reliant in response to an absent or incapable central government. Cultural factors likely play a role in the adaptive use of ICTs as suggested by James & Versteeg(2007) who found a widespread incidence of ICT sharing that throws into doubt prevailing figures and ideas about the digital divide. Such uniquely African ICT inventions or adaptations as a wind powered phone charger put the community ahead of the individual (Afrigadget 2008). In this cultural direction, Chabal and Daloz(1999) are convinced about the primacy of informal networks of family, ethnic group and community ,recommending that an awareness of these networks must inform development policies, projects and programmes in Africa. It is possible to assume that new technologies allow families and communities to take their destinies into their own hands in a collective manner, rather than wait for the central government. Thus, I identify a recurring theme of the self sustainability of communities and professional groups like farmers and fishermen emerging in an increasing number of ICT innovations and initiatives.

My contribution to enriching the literature is help clarify the apparent division between Neo-Marxists and the neoliberal approach to ICT4D by showing that they have something in common by virtue of their tendency for structuralism. Also important is the policy outcomes of this divide that prevents both sides from seeing ICTs with a combination of pragmatism and tolerance respectively. In this direction, this thesis will assist in the widening of the ICT4D debate and consequently join in the effort to give a more nuanced picture of ICT4D in two ways. First the weaknesses of the two prevailing sides of the debate will be highlighted. Secondly other previously marginalized actors will be included in the discussion which may culminate in a compromise between the two prior dominant trends. The last remaining Neo-Marxist concern about the ownership of ICT infrastructure and a resultant ICT trap or dependency appears inevitable due to African countries' dependence on FDIs. However, beginning with the theory section that comes next I shall attempt to deliberate on competing theories and approaches and arrive at a more pragmatic theoretical and ideological approach towards ICT4D that will rely heavily on alternative theories of development. In the course of conducting research for this thesis I have sighted scholarship with related but separate objectives. Kyem(n.d.) seeks to combat the digital divide by offering the multiplicity theory as suitable for formulating more effective development strategies that involve a combination of

local and global actors facilitated by ICTs, and McLennan(2010) is a work in progress that applies ethnographic methods to study the effectiveness of projecthunduras.com, a project that aims to provide opportunities for social networking as a way of building human capital for development. Fourati(2009) demands universal access to ICTs, suggesting deregulation and competition as a solution, but leaving unproblematised the equity outcome of complete market involvement.

2 Theory

2.1 Ideology and Development Policies and Programmes

The literature review showed that the opposition of Neo-Marxists to ICT4D projects and programmes outlined in the literature is due to the heavy influence of neoliberal ideology in ICT4D policymaking by major actors like the EU and G8. In this section I will discuss how an abstract ideology is made to reflect in the formulation of development policies and programmes and why ideologues are often reluctant to modify their beliefs. An ideology is defined as “a set a set of basic ideas about life and society, such as religious or political opinions” (Colin 2004:118). Merely professing these basic beliefs mentioned in the definition is insufficient especially in politics and economics, as in religious beliefs, the holder of such beliefs usually seeks to make them reflect in real life. Thus, Utam(2005: 690) sees proponents of ideologies as highly committed to the “distinctiveness” of their ideologies as compared to other “creeds” and are resistant to innovation concerning their beliefs, demanding loyalty from all who profess to belong to the ideology. Given this level of commitment, Utam then concludes that once in politics ideologies move from “philosophical abstractions” to the “greater concreteness of programmes” which represents the ideology’s stance towards “the status quo” (2005:691). One can see evidence of this movement in the nature of development policies and programmes that have been presented as solutions to African developmental challenges. These policies then elicit opposition from opposing ideologies who believe in competing solutions to these challenges. The African experience is defined by the transfer of ideologies from a Western context which is then made to reflect in solutions to African problems.

Tordoff(1992) was preoccupied with the relationship between ideology and development particularly “external constraints” on development such as the dependence of Africa on the industrialized West, the debt burden and its servicing and privatization. Tordoff could have been conducting his study in more recent times. The ideological foundation of the Western world’s engagement with Africa has not significantly altered. The translation of the ideology of capitalism⁷ into programmes and projects for African development has extended into present day ICT4D policies

⁷ See Capitalist

which show a neoliberal character, confirming Utam's observation that ideologies resist change. If ideologies are slow to change, then one can argue that even dominant ideologies like capitalism and the related approach of neoliberalism will be more resistant to reform. The aim of the IMF's structural adjustment programme was to dismantle the patrimonial African state by reducing government expenditure (Herbst1993:3, 4). Reducing government expenditure was a so called conditionality along with privatisation, removal of subsidies and the reduction of tariffs on imports and barriers to foreign investment before loans were extended to poor countries. Laird(2008) subsequently blamed the IMF for the socially damaging consequences of structural adjustment such as high costs of health care which he traced to the emergence of neoliberal economic policies in the Reagan and Thatcher years(2008:378,379). In a similar way recent ICT4D projects are suggested as new approaches and "joint partnership of equals" (EU 2007) while containing provisions that aim to influence the regulatory environment in the direction of business and investment (ITU 2010). This attachment to a capitalist way of thinking and the abiding influence of this thinking in development policy irrespective of the context in which these ideas will be implemented further vindicates the point about static ideologies. The practical consequence of a capitalist orientation to international development assistance is the modernisation approach which has historically been interpreted as influencing the Western world's engagements with Africa. Opponents of this theory have offered the theory of dependency as explaining African dependency and offering an alternative path for Africa to follow. As will be illustrated below, the patterns of development assistance which have culminated in the ICT4D projects of today are grounded in a history of dispute between schools of economics about the best way to develop an economy.

2.2 The Historical Background of Development Interventions

Willis(2005: 33,34) traces contemporary development theories back to political and sociological theorizing in 18th century Europe and subsequently Adam Smith and his preference of a laissez faire approach to markets and limited state involvement and the opposing state interventionist standpoint of Keynes .Willis believes that the stock market crashes of 1929 and the subsequent painful depression was the motivation for Keynes interventionism (2005:34). Institutionalisation to regulate the international capitalist system through occasional interventions from the excess of the

markets led to the formation of the Bretton Woods institutions. Development interventions are similar to the general process of interventionism that began at this point. The European commission funded HIPSSA project has provisions that are similar to SAPs and aim to create “harmonized telecoms markets” in Africa and encourage an “environment conducive to massive investments in ICTs in Africa” (ITU 2010). The economic implication of this usually amounts to the granting of tax exemptions to investors and privatisation. Previous outcomes of attempts at attracting investors by removing tariffs only increased imports and may have led to the persistence of Africa’s structural situation as an exporter of cheap commodities. Thus, Neo-Marxists have accurately related the dependency outcomes of previous interventions to the ICT4D policies of today because the provisions coincide.

New market exploitation could be an objective of development assistance but other motives have historically played a role. Political factors such as the end of colonialism and the advance of communism and the ensuing Cold War provided a pretext for Western development assistance in the form of economic and technological aid to help post colonial countries Kiely(2007: 49). The intended purpose was to deny communism a fertile breeding ground by helping these countries to escape “backwardness and poverty” (2007: 49). The West was thus on a modernization mission in the third world with preconceived notions about these less developed regions. These policies appeared to be influenced by the theorizing of Rostow who propounded a theoretical path from the backward and peasant agrarian traditional society to that of modernization, industrialization and complete development (Rostow 1960) in (Kiely 2007:50). For Rostow contact by the less advanced countries with economically developed countries like the USA could only be to the benefit of the former (Kiely 2007:50). Thus, one can discern a clear path from the modernizing interventions of the past to today’s ICT4D assistance packages. Modernization theory has thus come to stand for one of a number of approaches to development described as “classical traditional” by Potter (2008) and which also include such theories as stages of growth, neoliberal policies, hierarchic diffusion, dualism, top –down⁸ etc. Whether the reason for their imposition was to stop communism in the past or to seek markets today the related approaches of modernization and neoliberalism appear to

⁸ See bottom up

be the preferred mode of development assistance by major Western donors and the international institutions they fund. In response most opposition to ICT4D assume a broadly Neo-Marxist form. I discuss some of these critiques below which generally view ICT4D as facilitating dependency.

2.3 Critical Responses to ICT4D Policies and Projects

Neo-Marxists have raised legitimate concerns ICT4D in particular and neoliberal development policies in general. I argue that the shortcoming of Neo-Marxist opposition to ICT4D helps to indicate alternative ways of introducing ICTs as part of development. Neo-Marxists generally regard ICT4D projects as doomed to failure and consider them the latest in the long line of failed, externally imposed and manipulative policies from the West towards Africa (Alden 2003; Leye 2009). Leye(2009) in particular sees them as ill thought out and likely to perpetuate existing inequalities and injustices, regarding them as representative of the unfairness of global policymaking where decisions are made without African input. For Neo-Marxist critics the structure of the world economy makes ICTs unlikely to make any meaningful impact and likely to further create opportunities for conflict in Africa. This line of critique is similar to the dependency school of development which criticised modernization theory. The import substitution industrialisation that was attempted in some developing countries was a practical outcome of the structuralist economics of Raul Prebisch and Hans Singer who believed that this was necessary for poor countries to escape their unfair status in the global economy which was a relic of colonialism (Kiely 2007). Thus, import substitution industrialisation is aimed at escaping a certain dependency brought about by modernisation approaches. Cammack's criticism of an imperialist agenda in many forms of development interventions by the West in the developing world is shared by Wade (2002) and Brohman(1995a). Whereas Wade singles out current ICT4Ds as likely to lead to dependency, Brothman and Cammack, more than a decade apart, are united in their opposition to neoliberalism in development policy.

However, because modernisation and dependency both support industrialisation and see the world in structural terms, some analysts refuse to see them as different. Thus, while the Dot Force initiative aims for the structural transformation of Africa through

ICTs⁹, Neo-Marxists think this will have the opposite effect due to the persistence of the world economic structure which requires either a reform of this system or home grown solutions. By implication from the assumptions of dependency theory, industrialization must come from within the country, breaking the cycle of dependency. Thus, the imposition of ICT4D from outside runs counter to the basic ideological instincts of Neo-Marxists whose assumptions makes them comparable to dependency theorists of the past. Conversely, the neoliberal influence in ICT4D and the apparent hegemony of this approach in development policy resembles past imposition of modernization by the West. Both sides seem to see structure as a blessing and a curse respectively. Porter places dependency in a family of left wing theories including world systems theory, Neo-Marxism and Dependencia (Potter 2008), but Hertz (2008:8) prefers to regard modernization and dependency as essentially indistinct due to their demand for industrialisation. In making the same point, Kiely (2007) cites the example of a leading development economist like Arthur Lewis who has linked the two approaches in his theorizing (2007:51). In their reluctance to look beyond structural matters, a consequence of their respective ideologies, Neo-Marxists and major ICT4D actors or donors, or IC4D pessimists and optimists are extremely committed to old ideologies, though ICTs are new devices.

I conclude that this dominance of structure in the current debate on the role of ICTs in development reduces the discussion to an either/ or situation and leaves dire consequences in policy terms. The prevailing neoliberal approach that emphasizes private investment, profits and entrepreneurship might intensify current socio-economic divides. This approach is also overly enthusiastic in promoting ICTs as possessing the capacity for significant economic transformation and neglecting priorities such as water and agriculture. On the other hand uncompromising opposition to ICTs might prevent communities from benefiting from the rewards they may present. This situation amounts to throwing the baby away along with the bath water. This section has identified the common weaknesses of the two sides of the debate. Given this background an attempt can now be made to transcend these divisions and suggest a way forward. Guided by recent theoretical attempts to reach integration between agency and structure (Ryan 2006), this thesis will argue that the

⁹ See Transform

ICT4D initiatives of minor local actors could be interpreted as motivated by a desire to resolve structural challenges at the micro, agency and communal level. The ICT initiatives of these actors also suggest other ways at looking at ICTs in development that have theoretical and policy implications.

2.4 Understanding Communal and Individual ICT4D Initiatives

I argue that the shared weaknesses of the neoliberal approach to ICT4D and the Neo-Marxist rejection of this approach are resolved by an understanding of communal and individual adaptations of ICTs. It must again be emphasised that one critical aspect of ICTs that weaken Neo-Marxist arguments about their usefulness concerns their adaptability. In the following sections I will discuss the role of this adaptability in the desire of individuals, communities and local NGOs to resolve their challenges and those of their communities through ICT innovations of their own. An interpretation of this process will rely on identifying the ideals and norms that motivate them by reflecting on and analysing their ICT4D innovations in relation to the environment they emerge from. The Afrigadget.com website relates the experiences of Jan Chipchase who works for Nokia and is described as a design and usability ethnographer. Jan's experiences are documented here : "One of the consistent themes of Jan's message is that in each country he visits there is a booming market of hackers and mobile phone mechanics who are doing all kinds of interesting things. They are taking the designs of the West and applying them to their lives, modifying them and making them work for their local needs. From Accra to Nairobi, there is always a "cell phone alley for you to buy, repair or customize your mobile phone" (Afrigadget.com 2010). Pascal Katana's "fish automation device" exemplifies the ingenious ways mobiles have been adapted (Afrigadget.com 2010). His trap mimics the sound made by fish when they are feeding , succeeding in attracting a good number of fish to the area while an attached GSM device gives local fishermen a call or SMS with directions to the location of the fish(Afrigadget.com 2010). The customizations described above are examples of local solutions to local needs through the adaptation of imported technology. It is difficult to imagine a distant government bureaucrat or foreign donor agencies coming up with such apt ideas. Not only do known theories of modernization fall short of facilitating an understanding of this and similar developments, their imposition from abroad does not aim for or facilitate such outcomes. Neither can Neo-Marxist skepticism towards ICTs be sustained. Crucially,

however, ICTs are imports and this fact appears to give modernization some credit, but this appears to be accidental. Modernization is incapable of delivering such outcomes on purpose. This indicates that the problem lies in the mode of introduction as part of development policy, not the technology itself. Unlike profit minded neoliberal motives of such policies, lower level ICT development seem aimed at solving particular communal problems. At this micro level, activists and small NGOs seem to be responding to the frustration with main stream development and ICTs by their ability to cut down distances and deliver services are becoming valuable tools in this process. Perhaps alternative theories of development may offer a better understanding of these ICT adaptations and how they can provide a positive contribution to development policy.

2.5 ICT4D and Theories of Alternative Development

The policy outcomes of the innovative use of technology by individuals and communities will be further enhanced if theoretical support is found that facilitates the integration of ICTs in development. There has been a recent popularity of development approaches and theorizing that Potter (2008: 69) terms as alternative development thinking which comprises new paths such as bottom-up development, another development, self reliance, neo-populism, basic needs, ecodevelopment and sustainable development. The nature of the ICT initiatives of minor actors is consistent with the pursuit of unorthodox approaches to development. Alternative approaches give priority to the needs of the people involved. DFID first conceived of the M-pesa mobile banking scheme in Kenya as a way of allowing the excluded rural poor to get access to financial, micro credit and banking services (National Archives UK 2007). Despite the term “bottom-up” alternative approaches have not always originated from the communities. According to Parnwell (2008) these approaches were historically presented as solutions to uneven development within countries and as radical answers to the unjust and inequitable consequences of a Western capitalist path to development (2008:111). A deliberate effort was therefore made to resolve these situations through a rural, small scale, even socialist and idealistic approach (2008:111). But this idealist philosophy required the heavy involvement of the state to actualize which merely resulted in the replacement of one structure with another, stifling local initiative and maintaining the exploitative rural elite in power (2008:112). The ICT4D initiatives of community based actors barely depict signs of

radical opposition to the status quo, and unlike previous premeditated state sponsored attempts at bottom-up, ICTs appear to have become part of communities in a spontaneous way, and the individual innovators involved seem to be acting without guidance from formal actors. When people are confronted with a set of challenges, and harbour a notion of self sustainability, ICTs may become tools to facilitate communal agency. By inference, Parnwell appears to confer credibility to the ICT4D initiatives of minor actors by his belief that that real “bottom- up” “emerges from the communities themselves” (2008:113), suggesting that externally imposed bottom-up development should not be described as such. I grudgingly concede some credit to markets for the arrival of technology in villages and small towns in Africa, even though the innovative outcome of this import was clearly not intended. Also, ideas related to markets must be modified to suit African conditions if some of the benefits of technology now emerging are not to be reversed even before a larger section of the population begins to benefit. I will return to how markets can be modified in the concluding parts. ICT adaptability if combined with affordability and access possess the capacity, as the innovation and ingenuity suggests, to allow communities to set their objectives and gain access to vital services in demand in the local community but previously unavailable due to distance. Such services as mobile banking and agricultural price information facilitate the resolution of structural challenges within communities as identified by the communities themselves and not as some ‘city based expert’ prefers to see. Regarding the important issue of access and usage, people in deprived areas have devised adaptive ways of sharing these technologies as the next section illustrates.

2.6 Sharing Patterns of ICTs

James and Versteeg (2007) sought to establish how the digital divide translated into actual phone use in developing countries. They immediately decided that it was better to focus on phone use, rather than phone ownership in any statistical venture because usage is “not limited to owners” as pertains in the Western context(2007:120).Significantly high sharing rates were recorded in Botswana, a relatively prosperous country in African terms, with figures suggesting that 62.1% of owners share their phones with their family, 43.8 % with their friends and 20% with their neighbours .These findings imply that sharing rates in poorer countries will be significantly higher. Communal and extended family interdependence is a survival

mechanism in the absence of state provided welfare. The strategic use of the few available mobile phones in the face of high costs of reload credit and handsets suggests that this interdependence may have extended into phone use. The strategy of “beeping”, where a call is deliberately disconnected before the receiver answers, is widely used to communicate leading to the person being beeped calling back and sometimes “costless” communication takes place through mere beeping (2007:123). Enterprises have sprung up in response to sharing, with Grammeen bank taking the village phone project from Bangladesh to Uganda where already one village phone on average is shared by 70 people (2007:121). If families, friends and communities are willing to share scarce devices, then the willingness to innovate for the common good may also be behind local ICT4D initiatives like the “fish detector”. Therefore better ICT4D policy may be achieved by referring to cultural factors in communities that influence not only such sharing, but the innovation and adaptation that is emerging. As noted earlier there have been calls for the cooption of cultural norms into the making of development policy (Chabal and Daloz 1999).

2.7 Theory conclusion

The policy outcomes of capitalist theories like modernization and neoliberalism have not succeeded in changing the economic fortunes of developing African countries. Such theories are making a policy comeback with regards to ICT4D policies and programmes. Neo-Marxists opposed modernization in the past with their own dependency theory and have identified ICT4D as modernization in new neoliberal clothes. But Marxist oriented development policies have also failed in the past. Though they accurately identify the new neoliberal ICT4D policies as defective especially regarding privatisation and the acquisition of infrastructure and markets, they overlook the increasing use of ICTs by individuals and other small scale actors to meet their own objectives. A theoretical compromise should agree with modernization about the necessity of technology, but reject a solely profit and market seeking approach with powerful TNCs at the forefront. It should also acknowledge Neo-Marxist concerns about the hegemony of neoliberalism, privatisation and neo-colonialism but reject scepticism towards ICTs. This way, ICT4D policy should be guided by alternative bottom-up theories of development that ensure that people can decide use patterns and that cost is not a factor. The diversity of theories involved in this thesis informed my choice of critical theory as a methodology.

3 Methodology

3.1 Epistemology

An ontological position leads to an epistemological perspective and consequently clarifies a methodological procedure. In other words an underlying ontological standpoint describes the researcher's reflections on the essential nature of reality or the world. A conception of the most adequate epistemological access or mode of knowing this reality follows from the identified ontology. Finally, ontology and epistemology reflect in the series of research methods that is relied on to resolve particular research questions. Barron regards ontology as referring to the various constituents of society such as norms, social structures, actors and the relationships between them (Barron 2006:202). The two opposing views on such an ontology are illustrated by Bryman(2008:18) who describes objectivism as emphasizing the stability and independence of social phenomena or reality with the observer's assumptions incapable of influencing or undermining this independence. Constructivism on the other hand denies the objective view and sees social phenomena as subject to influence by social actors and as such in a state of constant revision (Bryman 2008:18). Barron finds positivism to be the epistemological assumption behind the research tradition of scientists close to the objective school of thought while interpretivism as a research approach is shared by those of constructivist persuasion (Barron 2006: 202). In the following section I will discuss my interpretation of how ontological and epistemological issues have influenced attitudes towards ICT4Ds by researchers and policy makers. It will be shown that predominant views have relegated other attitudes to the background. This thesis aims to contribute to reversing that situation. Thus, I will also outline other, more inclusive ways of studying developments in the area of ICT4D.

3.2 ICT4D Epistemology: Transcending the Dominance of Structure

Current critical stances against ICTs in the literature have tended to favour an objective, macro or structural viewpoint to the neglect of a constructivist or agency perspective. This is possibly due to the nature of the actors being analysed who are either seen as beneficiaries or representatives of the structurally skewed global economic system. Also, development partners such as the G8 are seen by Neo-Marxists as harbouring futile and unachievable objectives of structurally transforming African economies through ICTs. The neoliberal and Neo-Marxist ideological

preoccupation with structure leads to extremist positions of optimism and pessimism towards ICT4D. While looking at the structural situation of African countries in the world economy might justify the importance of structural matters and will be adequate in giving an understanding of the G8 and EU and their relationship with Africa, it does not give an accurate and democratic picture of the overall ICT4D situation as mentioned earlier.

In analysing ICT policies and programmes theorising that is wide enough to recognise structure and agency will be the most profitable new line of inquiry. Ryan (2006) seeks to attain a wide methodological flexibility, arguing that structural tendencies can occur not only at the macro level, but at the micro level with agency also being active at both macro and micro levels (2006:5). Bourdieu also arrives at constructivist structuralism as the outcome of his attempt to break down what he describes as the unnecessary barrier between objectivism or structure and subjectivism or agency (Ryan 2006:5). Factors such as the behaviour of TNCs as influential agents at a structural global level and the innovations of ICT inventors who seek to solve structural problems such as gender imbalances at an agency local level requires this widening or integration of analytical lenses. In the following section I will discuss the ways in which critical theory provides this thesis with a comprehensive framework for an ideological analysis of this nature. Friesen (2008) finds critical theory's emphasis on the "interrelated issues of technology, politics and social change" as making it suitable for conducting an ideological critique of E-learning. This thesis shares his use of critical theory to confront and question knowledge that is presented as final and immune to influence by human initiative and to acquire alternative knowledge that is democratic and egalitarian (Friesen 2008).

3.3 Critical Theory and ICT4D

At this stage it is established that widening of analytic approaches consistent with the diversity of actors and theories related to ICT4D research will lead to better knowledge production outcomes and also democratize the discussion. Meeting these democratic and egalitarian objectives demands theory that uses abstract discussions as a foundation for reflecting on day to day life. Creswell (2007) citing Fay (2003) considers critical theory's main objective to be the empowerment of people through a critique of the knowledge and ideological base of society (2007:27). For Creswell, a

critical researcher should assemble methodological tools that succeed in exposing the constraints of gender, race, class, alienation, domination, social struggles and institutional transformations, engaging in social theorizing that leads to an understanding and a reform of social life(2007:27).Thus, critical theory seeks to expose contradictions and conflicts and by this exposure produce knowledge that assists in formulating better policy or deeper enlightenment as a basis for action. The researcher's responsibility is to apply the most appropriate combination of critical methodologies given the research question or the particular contradiction in society or ideological inconsistency that has been identified. Creswell suggests this by stating that critical theory can be defined by the "particular configuration of research postures it embraces" (2007:27).

Making the leap to ICT4D research, this thesis has identified the problematic outcome of the structural biases of ICT4D optimists or neoliberal oriented ICT4D actors on one side and ICT4D critics or Neo-Marxist believers of dependency on the other. Stemming from this, I suggest a theoretically and methodologically more emancipatory and democratic way forward by referring to the initiatives of minor ICT4D actors. In other words, current approaches to studying ICTs in development as well as the strategies of major ICT4D actors will benefit immensely from the acquisition of an integrated and more complete picture if they depart from the constraints imposed on them by ideology. The long term feasibility of ICTs as emancipatory tools should be the subject of a separate effort, but the theoretical possibility can at least be explored. It is not surprising that critical theory originated as an attempt to radically reformulate Marxism (Seidman & Alexander 2001 :2,3) which displayed excessive foundationalism and materialism and seem divorced from any consideration of normative and value laden issues(2001:2). Neo-Marxist critiques may attain full adequacy in analysing development issues, their inadequacy in this instance stems from the adaptability of ICTs. Therefore, social and economic criticism requires a philosophy that goes beyond "foundational frameworks of theoretical traditions" and results in a "blurring of traditions" (2001: 3). Critical theory will help to transcend what Schuurman (2008) called the attitude of modernization and dependency theory towards developing countries as homogeneous. The ICT4D initiatives on platforms such Afrigadget.com show an awareness of what the actors behind see as their needs and makes a strong case for a more inclusive social and

economic debate on ICT4D that will lead to what Creswell(2007) describes as new possibilities.

3.4 Critical Approach to Research

What practical methodological steps does critical theory then give rise to? A tension is apparent in the desire of critical theory to provide a single comprehensive basis for social criticism but which does not materialize in a single methodological procedure, resulting in a plurality of critical methodologies (SEC 2005). However, Fay (1987) & Morrow and Brown (1984) in Creswell (2003:27) imply that the nature of a particular inquiry should govern how a researcher adapts the methodological insights that critical theory offers in response. Critical theory encourages reflexivity and the taking of multiple perspectives (SEC 2005). The theoretical overview of this thesis combines macro structural matters and the ideals behind micro agency related issues as well as an integration of the two. A methodological stance that encourages multiple perspectives facilitates this integration. Thus, the body of methods of this thesis should be flexible enough to accommodate the analysis of a global giant like Vodafone on one hand and a lone ICT inventor in the villages of Malawi on the other. Taking different perspectives means for this thesis possessing an awareness of the various beliefs related to a given problem or situation without assuming a fixed location and without excluding alternative lines of inquiry. I have thus organised a collection of research methods to enhance reflexivity and also address the problem from multiple perspectives. This proceeds from an initial identification of a varied but representative group of actors which grows in complexity into a critical interpretive case study of the ideological underpinnings of projects and programmes.

3.5 Methods

3.5.1 Critical interpretive Case study

The complexity of ICT4D is due to the variety of actors who differ in size and geographical origin and development issue of interest. Deepening this complexity is a bewildering array of critiques this has generated. Thus, despite being engaged in a critical interpretative study, I had to embark on a protracted and difficult process of identifying and selecting the actors that would help me answer the research questions. This process is outlined in section 1.2. However, at a more theoretical and

methodological level this initial effort at identification revealed two broad sides of ICT4D in terms of global actors with developmental interests in Africa and minor mainly local actors and activities. More importantly, this exploratory exercise also displayed the shape of the ideological divide.

Tellis(2007)believes that exploratory studies can begin before the definition of research questions and the setting of hypothesis, but in this thesis it was possible to begin with basic lines of inquiry that are informed by the nature of this subject matter. Empirical material that provided information on origins, aims, objectives, policy statements, public pronouncements and even the relative size and geographical focus of the organizations involved as well as the relationships and conflicts between them was sought from online and library sources. Seeking answers to “what” questions was the primary aim here. For Flick (2003:134), case studies can concern not only persons and communities but also organizations and institutions. The organizations engaged in ICT4D were chosen not as individual organizations but because of their relation to the subject matter, therefore I define this study as a single case study of the ideology behind ICT actor’s programmes and projects, rather than several individual cases of different organizations’ initiatives. Thus, Vodafone’s African policy, the G8’s Dot Force, the EU’s multifaceted approach, Womensnet.com, Afrigadegt.com and various information and financial services to rural farmers constitute a diverse body of institutions and processes whose common denominator is ICT4D. This group comes under ideological interpretation and critique as single case study. In short the exploratory phase led to clarity which allowed critical interpretation to take place.

Flick (2003:134) regards the case study as “the precise description or reconstruction of a case”. The identification of the IC4D actors and their projects during the exploratory phase will now proceed into an in-depth examination for underlying assumptions and objectives. “What” questions were still posed here, identifying and interpreting the ideologies, norms, theories, assumptions and approaches that are inherent in various ICT4D projects, but “How” questions will dominate, relating to an interpretation of how these actors are likely to pursue their objectives given their ideological or normative assumptions and approaches as discerned from their initiatives. These matters will eventually allow informed discussions about the

feasibility of various ICT4D projects in the African context, given a history of failed developmental interventions. On the other hand, it can point to the directions in which ICT4D policies can be made to be more pragmatic and achievable by facilitating the contributions in terms of ideals, norms and aspirations of hitherto neglected constituencies.

Identifying and applying an appropriate case study method for this exercise of interpretation was another critical and challenging task¹⁰. According to Flick, the main problem in case study research is the identification of a case that will fit the research question and the identification of appropriate methodological approaches demanded by the research in the “reconstruction” of the case (Flick 2003:134). Among the typology of case studies offered by Bryman (2008 :56) is the exemplifying case where “the objective is to capture the circumstances and conditions of an everyday or common place situation” (Bryman 2008:58). Thus, a case may be chosen because it “exemplifies a broader category of which it is a member....they will provide a suitable context for certain research questions to be answered” (Bryman 2008:8). Interpreting the ideology behind EU and G8 projects exemplified the institutions whose policies towards the African continent are described as development interventions. These interventions can represent a broader category of development interventions. However, this particular case study goes beyond these traditional development partners to include other far less powerful actors. Therefore this case study can only stand partially as exemplifying general development interventions. A related concern regards whether or not generalisations can be drawn from a case study especially if that case is an exemplifying one. Flick (2003:34) sees the purpose of the case study as helping to make more general conclusions from that single case, in other words the case should represent a more extensive problem and conclusions from it should have implications for studying the broader problem. Bryman (2003:57) thinks that it is not the focus or the aims of the case study for researchers to generalize about their findings, like survey researchers,

¹⁰ This inquiry may bear a close resemblance to an exercise in discourse analysis. However, I concluded that it differs in the sense that this thesis involves investigating the historical and contemporary influence of ideology on development projects and policies. Thus, I do not approach the provisions and stipulations of ICT4D policies as discourses, but as rigid declarations, statements and intentions of policy which contain certain hidden ideologies that I seek to interpret. I am not interested in the conversation between ICT pessimists and optimists, but in their respective ideologies which I seek to expose, critique, and transcend.

with their random samples, seek to do. Instead Bryman regards other matters such as how to intensively analyze a single case so as to be in a position to engage in theoretical analysis as more important: “the crucial question is not whether the findings can be generalized to a wider universe but how well the researcher generates theory out of the findings” (Bryman 2003:57), placing case studies in the inductive camp. This study may be described as situated between the two sides, gathering and analyzing empirical material in an inductive way but interpreting these materials in such a way as to eventually lead to what Odell (2003:163) describes as the disciplined interpretive case study whose purpose is to show that “one or more known theories can be extended to account for a new event”.

However in this particular instance I argue that ICT4D initiatives of minor actors cannot adequately be accounted for by referring to dominant theories and ideologies. Therefore, I will discuss but transcend such theories as modernization, neoliberalism and dependency by comparing alternative ICT4D developments with a cultural and normative environment that encourages self help and interdependence. Bryman(2008:56) acknowledges that a case study can change in character during the course of a study. Both Odell (2001:173) and Flick (2003:34) endorse the creative combination of case study methods to suit a study’s character. From an exploratory beginning to a critical interpretive phase and beyond I have tried to adjust and combine methods to match the demands of the questions being asked and the materials being gathered, organised and analysed. The scope of the thesis is insufficient to build theory, being only restricted to offering policy insights. Below I outline the sources of the materials I relied on to help to answer the research questions and to facilitate the achievement of research goals.

3.5.2 Empirical Materials

Online resources are the primary data gathering sources for this inquiry. The subject matter of ICTs concerns the web, and all major actors had extensive web presence, sometimes running multiple websites for different purposes. The European Union, the G8 and Vodafone have significant web documents relating to their projects, activities, plans and pronouncements on ICTs for development. These global actors also dominate in ICT4D discussions on media websites which convey a sense of

current developments. I have had to rely on websites which essentially serve as platforms where the minor actors report and describe their ICT4D initiatives and projects. This has led me to little know outfits and individuals engaged in significant home grown ICT4D activities. In general blog spots where activists and ICT4D professionals and staff relate their motivations, assumptions, experiences, achievements and failures have been useful in getting a general picture of ICT4Ds in development from a more local perspective. I have tried to place these perspectives in a wider context by relating them to other literature during the critical interpretation and analysis stage. In gathering all these kinds of data, I will be guided by purposive sampling, going straight to the material that will help answer the research question (Flick 2003:34).

3.6 Analysis of Empirical Material

Guided by critical theory methodology to approach the research from multiple perspectives and having assembled the analytical and methodological tools which I deem will help resolve the problem as critical theory dictates, I will analyze, interpret and critique the empirical material with a reference to theorising about the wider social, cultural, economic and political environment. Acquiring an underlying meaning of a phenomenon demands an extensive reference to background knowledge from across disciplines (Flick2003:328). Also, due to the nature of the ICT4D sector as whole, and the form projects are taking, analysis involves a reference to developments in technology, development theory, political science, business and finance. The multiple themes to be derived from this task fits Flick's description of global analysis: "an overview of the thematic range of the text which is to be analyzed" (Flick 2003:328). Global analysis demands extensive background knowledge of the research objective prior to the study and involves a series of steps that lead to the emergence of themes related to the area under study which guides the interpretation of the text and try to prevent the suppression of the content (Flick 2003).I sought this background information from a protracted exploratory phase mentioned earlier. However, both the focus of this research, and the extent of analysis and questions I could pose were constrained by my inability to do field work. This is a limitation of this research which involved tedious adjustments and changes. The nature of the study is also on one hand laden with old theories and on the other hand constitutes new developments in terms of the advent of new technologies and the

activities of minor ICT4D actors. Analysis therefore also involved a combination of the old and the new, the historical and the contemporary.

3.7 Methodology Conclusion

The necessity of a more tolerant methodology that accommodates current developments in ICT4D but has room for initiatives that defy conventional approaches and critiques was suggested. Critical theory was presented as a suitable methodology for a comprehensive social and economic critique of society. However, critical theory offers such flexible analytical tools but imposes its own methodological obligations on the researcher. Aware of these obligations, I apply these tools in analysing the ICT4D projects by various actors in the next section.

4 Analyzing the Provisions of ICT4D Projects, Programmes and Initiatives

4.1 The G8 Dot force Initiative

4.1.1 Origins of the G8

The history of the G8 explains the ideological motivations behind their ICT4D policy making and provides a point of reference for understanding this powerful group's attitude to the world economy and therefore their economic diplomacy and intervention in developing countries. Despite varying accounts about the exact origins of the G8, the general consensus is that the formation of the group is related to the Arab oil embargo and the subsequent economic crisis which affected Western capitalist democracies in the 1970s (CFR 2009). In 1975 President Valery Giscard d'Estaing convened a meeting in France with chancellor Schmidt of Germany meant to be an informal forum for discussing the crisis and preventing future threats to the global economy (CFR 2009). This meeting was also attended by the United Kingdom, the United States and Japan with Canada and Italy joining the following year. Some accounts suggest that president d'Estaing wanted the gathering to evolve into a permanent but informal body for discussing world economic issues (Department of Justice 2004). Observations elsewhere claim that the founding members did not anticipate a permanent outfit beyond the resolution of the immediate economic crisis but over time global events justified its continued existence (Baker & Donadio 2009). It is also suggested that one of the founding objectives was to find a coherent way of dealing with developing countries (Levy 2009). The subject of the communiqués released after annual summits have increasingly veered beyond economic matters (Department of Justice 2009).

The most significant conclusion to be drawn from the nature of the birth of the G8 and subsequent expansion is that this is an informal body of capitalist countries who share a desire to regulate the global capitalist system and prevent economic crisis. This should conceivably safe guard the international markets their economies depend on. How does a belief in capitalism, a role for the global market place and a desire to regulate the global economy translate into development policy towards Africa? It is likely to be TNC lead, profit motivated, market oriented and an overall objective to

impose modernity. I argue that ICTs, among all previous technologies, perfectly allow the G8 to carry out these assumptions in perfect harmony with its history, its ideology and its aims and aspirations as a seeker of new markets. Consequently, though the G8 has been motivated by a modernizing mission throughout its relationship with Africa, it is likely to be even more zealous in pursuance of ICT related modernization because ICTs are technologies that can be imposed and controlled from a distance, allow the conquest of new markets in both hardware , software and content, facilitate the export of cultural products and can seemingly be integrated into almost every sector of economic assistance such as education, health, economy and agriculture. Thus, they are items that can be packaged as development assistance but are actually strategies for market expansion with a profit motive. The capitalist ideology and ICTs are natural bedfellows.

The group also operates through its original informal procedure rather than formality, and member compliance is done by consensus rather than coercion. Therefore, while there have been some disagreements on the Middle East (Channel 4 2006), there have been broad agreement on climate change (Number 10 2005). One could infer from the forgoing that it would be easier for the G8 to reach a consensus when they all stand to benefit, such as the opening of new markets, or to suffer, such as cyber crime and international terrorism. It is likely to be far more difficult for them to agree when debt cancellation is demanded of them. This body's essential nature is related to the circumstances of its founding as a group geared towards mutual benefit through consensus.

4.1.2 ICT4D and Unfulfilled G8 Pledges to Africa

Therefore the G8 has summoned the consensus to embark on ICT4D to the neglect of other development priorities. It has come under increasing pressure to fulfil commitments relating to debt and trade issues that undermine African development (Bank Information Centre 2004). Claiming that ‘‘Africa’s cheque remains unsigned’’, a coalition of African NGOs signed a joint statement prior to the 2004 Sea island G8 summit asking the G8 to broaden the scope of the highly indebted poor countries initiative, to remove inequalities in the international trading system and to increase access to medications required for fighting infectious diseases like HIV/AIDS ((Bank Information Centre 2004). Ahead of the 2007 G8 summit in Heiligendamm, Germany,

the World Bank had cause to criticize the G8: “despite the 2005 Gleneagles Summit, resulting in pledges to increase Africa’s development aid to \$50 billion by 2010, foreign assistance for development programs in many African countries remains essentially flat. Meanwhile, the faltering trade talks under the World Trade Organization’s Doha Round have been another disappointment” (World Bank 2007). More recently, a report from the G8’s own research group analyzing the degree of compliance of commitments made to Africa has indicated the G8 has fallen short with one of the authors stating that: “they talk quite a lot about official development assistance and aid effectiveness. typically in that area the compliance in these commitments is the lowest. The commitments that they make are generally the same ones every year because they weren’t achieved the year before” (VOA 2010). Special interest groups have also attacked the G8’s performance on specific issues. Transparency international has stated that the G8’s failure to meet anti corruption commitments threatens progress on climate change and poverty reduction efforts (Transparency International 2008).

4.1.3 Provisions of the Dot Force Initiative

The G8’s own ideological background, the nature of its decision making and its slow progress at meeting other commitments are reflected in what it hopes to achieve through the Dot Force initiative. The G8 seems to believe that health, economy and agriculture can be made to improve through an ICT4D approach with heavily neoliberal orientations. This shows again a belief, if misguided, that ICTs can deliver a structural transformation of economies, making unnecessary the need for other pledges relating to debt cancellation, health care and poverty reduction. There is a discernable belief in technology in particular and business in general as an apparent panacea.

After the G8 Okinawa summit in 2000 a charter for the global information society was adopted (G8 Information Centre 2004). This charter recommended the formation of a Dot Force task force which was subsequently formed in the same year in November 2000. A secretariat of this Dot Force was established, and membership includes not only the G8, developing countries and multilateral organizations like the World Bank, but private sector TNCs from each G8 country (G8 information Centre 2004). Within a year the Dot Force team came up with a report entitled “Digital

Opportunities for All: Meeting the Challenge” whose main philosophy is driven by the belief in using ICTs for economic and social development (The Dot Force Report 2001). The report reveals a preoccupation with “networks”, “access” “production” “markets” “information” and “knowledge” and proclaims a determination backed by plans of action to introduce these to Africa (The Dot Force Report 2001).The report captures its principles and objectives in the following terms:“Powerful networks are created by increased communication and the exchange of informationBy enabling these new networks to collect and share local knowledge and information, ICT can provide new and more efficient methods of production, bring previously unattainable markets within the reach of local producers, improve the delivery of government services, and increase access to basic social goods and services...ICT can thus help to ignite a virtuous circle of sustainable development” (The Dot Force Report 2001:4).The report then proceeds to spell out a series of tasks to be undertaken such as fostering policy, regulatory and network readiness, support development of national e-strategies ,improve connectivity, increase access, and lower costs, enhance human capacity development, knowledge creation and sharing, foster enterprise, jobs and entrepreneurship, strengthen universal participation in global ICT governance, establish a dedicated LDC initiative for ICT-inclusion, ICT for health care and support against disease, support local content and application development, prioritize the contribution of ICTs in development assistance programmes (The Dot Force Report 2001:4,5). The report however indicates in bold terms, that all the envisaged achievements will materialize if countries adopt what is described as “a pro-competitive policy” and “regulatory frameworks” that will lead to a “dynamic ICT business sector” (The Dot Force Report 2001:11). Further, the membership of the various working group and sub committees includes representatives of global technology TNCs such as Accenture (UK), Hewlett Packard (USA), Tele system (Canada) and Siemens (Germany) (The Dot Force Report 2001). These firms fit the profile of candidates for ICT infrastructure contracts.

Thus, from an ambitious objective that suggests that economies can be transformed by ICTs, the report recommends deregulation and more openness, encourages entrepreneurship and finally forms committees composed of global business giants who are to help implement the provisions of the report. Despite the presence of laudable objectives like e-health, health needs includes the problem of scarce

medicines and one cannot see how ICTs can achieve this outside of pre-existing G8 commitments. I suggest that the report's implication that African problems including health and agriculture are subject to a solution through ICTs is the strongest sign that the G8 is bent on enforcing a modernizing and neoliberal agenda. The deeper motives of the Dot Force will become clearer given the nature of the membership of the implementation teams. A development target such as health care is subsumed under an ICT strategy which includes an e-health aspect that should require massive investments and therefore potential contracts in e-infrastructure. These provisions of the report increase the difficulty of dismissing suspicions that the primary objective is to take advantage of market opportunities and capture a share of the ICT infrastructure that will be a critical feature of a future world economy. Also, the significant influence of profit seeking TNCs is inconsistent with the report's goal of encouraging lower cost, access and information flows. Finally, the ease with which the G8 has reached a consensus and the haste with which it has begun implementation may be predicated on the opening and expansion of markets which may represent the G8's solution to developing Africa. Maybe the business lobbies now have an influence on development policy. Below I have separately outlined the various critiques against the Dot Force in particular and ICT4D in general.

4.2 Modernization, Dependency and the Dot Force

4.2.1 Opposing Modernization

Alden (2006) takes the modernizing approach of the Dot Force to task, regarding as flawed the assumption that the south is "backward" and presenting technology as a way out of this backwardness. Subsequently Alden believes backwardness is then taken as a virtue because its antiquity yields itself to modernization: "However, far from viewing these as impediments to development, technophiles have suggested that these elements actually enhance Africa's readiness to absorb the hardware and software that make up the information revolution" (Alden 2006:461). But modernization entails business opportunities for the moderniser. Modernization exercises of old also involved market exploitation, but if the objective in previous years was to defeat communism through a reduction in poverty, now the objective appears to be one of securing ICT markets. The emergence of India and China as rivals may have increased the stakes. In short, the Dot Force initiative resembles ICT4D policy making through technological diplomacy but involving a business

objective. Alden also argues the emphasis on ICT4D ignores fundamental realities and priorities (Alden 2008). One can identify social and political realities such as insecurity and deprivation in some countries, but the G8 may have failed to realise that failure to help resolve these through meeting its commitments endangers investments through conflict.

4.2.2 A New Imperialism?

The G8 has easily found partners from major UN agencies such as the UNDP and UNESCO who sit alongside major TNCs in the various Dot Force subcommittees (The Dot Force Report 2001). This development appears to be consistent with the suggestion by Cammack (2006) of the coming of a new age of imperialism through the cooption of UN agencies to private capitalist ends. He points out the leading role the UN is taking in promoting the application of business approaches in various initiatives to fight poverty and underdevelopment with agencies such as the UNDP being involved in efforts aimed at “creating an enabling environment for business, making business work for the poor and efforts aimed at using business to try to achieve the MDG” (Cammack 2006:3). He sees these developments as representing both the export of the idea of capitalism and the advance of imperialism in its highest form (Cammack 2006:3), with these agencies seemingly giving it an innocent face. Given the G8’s forceful promotion of policies to encourage private investment, suggestions that there is telecoms neo-colonialism in process are bound to arise. The nature of ICTs and the fact that they entail the export of cultural content makes poor countries vulnerable to a lot more than business expansion.

4.2.3 A New Dependency through the ICT trap

Wade (2002) anticipates a series of developments that are consistent with Cammack’s identification of an eventual imperialism. But Wade’s version of imperialism stems from technology dependence. Wade believes that developed countries and development agencies lack a sound basis for subverting all development efforts towards ICTs, arguing that there is no evidence that investments in ICTs deliver returns above investments in more traditional aid areas and insisting that the leapfrogging potential of ICTs are grossly overstated (Wade 2002). The G8’s relentless pursuit of its Dot Force objectives makes Neo-Marxist accusations of dependency sound legitimate. Under the pretext of a digital divide which Wade thinks is a false divide given income differences, he believes that developing countries are being

forced to “digitize” which is then held as an example of good governance, preparing the ground for more ICT investments. Thus, gradually and inevitably, Wade sees developing countries being driven into a new technological form of dependency, with ICT infrastructure owned by the West, ICT content acquired in the West and ICT user standards set in the West, culminating in a trap that will be the result of endless payments from Africa for a broad spectrum of ICT infrastructure, software and access to data traffic gateways (Wade 2002). Wade’s arguments leads one to reflect on the possibility of a higher and more sustaining form of the current debt crisis, with generations of people in future condemned to paying for ICT services just as current African countries spend significant resources meeting debt repayment commitments contracted decades ago. It is possible to assert that the Dot Force initiative is the first stage of creating this kind of technological dependency trap.

4.2.4 The Imposition of Western Ideology

Brothman (1995a) conducts a profound critique of the deepening impact of modernization theory and neoliberalism in development strategy, refusing to join the acceptance of neoliberalism as an outcome of attempts to resolve the contradictions of modernization and other Keynesian models, rather seeing that approach as inheriting many of the defects of its predecessor. Brothman’s main argument is that every orthodox development framework introduced to the developing world has been “rooted in the historical and social experiences of a few Western societies” (1995:121). Brothman argues that the flaw in such approaches is the attempt to look for solutions for developmental problems by referring to the socio-economic history and experiences of the Western countries, and instead of relying on paths of alternative development that may emerge from developing societies themselves (1995:121). Brothman goes on to blame this situation on the Western social science background of many development theorists with an outcome that lies at the root of many development failures (1995: 121)

Brothman’s critique goes to the heart of the assumptions behind the Dot Force initiative due primarily to the “non contextuality of that initiative” which in effect is proposing to introduce “universal and formalistic” solutions to development that stem from the Western experience, not the peculiar situations of developing countries (1995: 121). Brothman was writing before the age of ICT4D, but the contradictions

inherent in today's ICT4D projects are similar to his critical stance towards externally imposed development policy as a whole. The Dot Force report's apparent faith in technology and business approaches as guaranteed to lead to the rapid development of all spheres of the African economy implies an assumption that Western methods can be imported. This exposes the Dot Force to Brothman's rejection of such ideological impositions that have failed and resulted in hardships in the past (1995:134) and that have excluded non Western discourses that are either critical of Eurocentric notions, or expose their flaws (1996:130). ICT4D policymaking has appeared to arrive at the entrepreneurial and profit minded approach as the way forward, and seemingly put all other development priorities in second place.

4.3 ICT4D Projects of the European Union

The EU's ICT4D strategy involves several separate projects and programmes. The HIPSSA (Harmonization of ICT Policies and Rules in Sub-Saharan Africa) is a joint project of the EU and the ITU which aims "at developing and promoting harmonized policies and guidelines for the ICT market as well as building human and institutional capacity in the field of ICT through a range of targeted training, education and knowledge sharing measures" (ITU 2010). The mission statement of this project reveals the longer term strategic objectives: "create harmonized regional telecommunication/ICT markets with possibility for a pan-African market as well as assist member countries without ICT policies to develop them. Countries with ICT policies will be supported in reviewing and up-dating while striving to harmonize them as regional/pan-African ICT policies..... the project will also address the regulatory challenges facing the beneficiary countries with the goal of creating an environment conducive to massive investments in ICT infrastructure and ICT-enabled applications which the countries will adopt for day to day use in their economic and social activities"(ITU 2010).

Separately, the EU also has set up a group called the ICT EU-Africa Business Forum which at its second meeting in 2007 formed a working group on ICT interconnectivity. This working group on interconnectivity has set up the African ICT observatory with the objective of gathering ICT information for investment decision making (Europa 2010). The ACP Business Climate Facility of the EU with members including Microsoft and UNIDO is a related group which sees the observatory as

critical for furthering a favourable investment climate for ICTs (Europa 2010). A further strand of the EU's ICT policy making is captured in two recently combined projects with one aiming to strengthen cooperation between the EU and Africa in ICT research and the other seeking to improve cooperation on ICT infrastructure between Africa and Europe. These objectives are reflected in the goals of the combined series of conferences spanning 24 months: "to promote and enhance ICT research cooperation between the 2 continents" and to "to promote European e-Infrastructures developments and exploitation in Africa" (Ei-Africa.eu 2010).

Finally, the EU Africa ICT project, a part of the joint Africa-EU strategy, has input from the Africa knowledge economy plan which is a 2005 document prepared by the Africa Union (Europa 2008). This plan is meant to serve as a reference point for resource mobilization for the implementation of AU ICT4D objectives, but its comprehensiveness, covering everything from e-political governance through e-health to e-education, allows donors to select areas that suit their interests, rather than African priorities. Thus, the EU has selected two aspects of this plan for immediate funding namely the Africa Connect project, which aims to give African scientists better access to research and education around the world through affordable broadband capacity, and the African Internet Exchange system which aims to establish an African wide network of local and regional internet exchange points. As part of this plan support is subject to a stipulation by the European commission, as the donor, that initiatives must take place in an environment that supports private sector involvement, and that has a regulatory framework that will guarantee fair competition and provide reassurance to investors (Europa 2008).

The EU's many strategies, policies and programmes belie a remarkable coordination and unity of purpose. The first common theme is a transfer of the institutions of the market economy such as common markets and common policies. The second theme is the export of the ideas of the market economy. The various conferences, business advisory groups and the promotion of joint research seem motivated by this objective. To this extent the various training, education and research programmes seem to be targeted at an influential group of African policy makers and bureaucrats engaged in government telecoms policy as well as those engaged in academia. Therefore, a transfer of neoliberal ideas is strategically accompanied by a transfer of the

institutions of capitalism. These are the vehicles into which telecoms policy making has been captured. One of the founding aims of the EU is to adopt a common foreign and security policy towards the outside world (Europa 2004). This harmonisation of policies and creation of regional telecoms markets appears to be motivated by a desire by the EU to adopt a more common approach and depart from the previous situation of uncoordinated policies by various countries towards various former colonies. More strategically rewarding is the prospect of European TNCs exploiting investment and market opportunities in bigger common telecoms markets rather than small fragmented ones. An important part of the EU's strategy is the various "conditionalities" that have to be met before assistance can be extended. This mainly involves creating a "conducive environment for business and investment" and usually means adhering to the EU's own demands for deregulation, the reduction of taxes or the granting of tax breaks and unrestricted repatriation of profits. A final, apparently minor but critical part of the overall EU plan is the gathering of relevant country information on ICTs for business decision making which can be seen as reducing the risk of poor investment decisions. This may facilitate market segmentation and product differentiation by TNCs and also allows countries that have not done enough to attract investments such as lower taxes to be avoided by TNCs. All the above conditions will eventually create the environment for the EU's own stated intention of exploiting telecoms opportunities and investing heavily in African telecoms and ICTs. Given the immaculately coordinated plan for ICT investments in Africa, one wonders the outcome if a similar effort had been directed at addressing older development challenges like poverty and food insecurity. The overall EU ICT4D strategy is extremely similar to the Dot Force initiative, the minor difference being that the EU has more overtly stated its intentions of exploiting markets. The EU approach is thus vulnerable to many of the critiques levelled at the Dot Force.

4.3.1 Neocolonialism through Neoliberalism?

The idea of creating regional markets for a deregulated telecoms industry which is primed for investment and makes the environment receptive to TNCs confirms Brothman's criticism of dogmatic attachment to capitalism and neoliberalism in development strategy (Brothman 1995a). Brothman's earlier suggestions that the forces of imperialism were set to sweep continent wide are later confirmed by Cammack (2006). The EU strategy of harmonisation of telecoms policies across

borders along with the insistence on a business friendly climate intensifies these fears of a neocolonialist venture through neoliberalism. The training of bureaucrats in ICT policy making and the intense determination to promote ICTs as against other development agendas makes one sympathetic to the claims of Wade (2002) of an ICT trap being in place into which African countries will be lured. Therefore, I find myself concluding that the various Neo-Marxist critics make convincing arguments given the series of developments in the telecoms sector.

4.3.2 Domination through New Forms of Conditionalities

Criticisms against the World Bank/IMF austerity and structural adjustment packages were intensified by the overt imposition of demands on recipient countries to make certain changes in their fiscal and monetary policy. As mentioned earlier these conditionalities persist in both EU and G8 ICT4D policymaking. However, they appear to be complemented by more subtle and hidden conditionalities in the general world economy. In the competition for FDI's developing countries regulate their own behaviour in order to attract funding, leading to a form of self imposed conditionality. Thus, behaviour that is friendly to TNCs and international capital attracts more FDI's. That is implied by research conducted by Addison and Heshmati (2003) who found that countries that democratize and encourage ICT investments attract even more FDI's. Thus, failure to comply with EU and G8 ICT conditionalities will cost a country not only ICT4D projects, but avoidance by FDI's in general. Therefore, pressure to comply and the likely risk of a dependency outcome are significant.

4.4 The Vodafone African Strategy: Windfalls of Modernization and Neoliberalism

It can safely be assumed that the series of coordinated policies and programmes embarked on by the G8 and the EU have as one of their key aims to make the investment climate favourable for TNCs like Vodafone. The market expansion that is desired by capitalist policies cannot be accomplished without the activity of TNCs in global markets after the diplomats have secured the most favourable terms for them. It is important to study Vodafone's strategy and ascertain its consistency to the supposedly altruistic goals of EU and G8 policy such as e-health.

Vodafone is one TNC actively involved in African acquisitions, joint partnerships and ground breaking new service developments particularly tailored to the African market.

The 2005 Vodafone overview regarded Africa as a continent of endless mobile opportunities stemming from the fact that people in Africa relied on mobiles more heavily than in the West due to infrastructure and communication deficiencies, identifying Africa as the fastest growing mobiles market and anticipating market share through investments in telecoms infrastructure and voice communication (Vodafone Policy Paper Series 2005). Unlike the policies and projects of development partners like the G8, Vodafone showed keen contextual awareness, suggesting that the African mobiles context was markedly different from the West with informal use patterns dominating (Vodafone Policy Paper Series 2005). Vodafone therefore saw mobiles becoming a necessity for individuals and communities and as a way forward this overview deemphasized aid, advocating trade and large ICT infrastructure investments in the region, and also called for deregulation and the application of business methods (Vodafone Policy Paper Series 2005).

Vodafone's subsequent African strategy is consistent with the opportunities and challenges it identified in this 2005 overview. In this regard it acquired 70 percent of Ghana Telecom (Telecom Asia 2008) and also secured 50 percent of Vodacom South Africa which analysts interpreted as a strategy to use Vodacom as a vehicle for further African acquisitions and then to consolidate these acquisitions (Independent 2007; Bloomberg 2010). Consequently, Vodafone now controls operations in Tanzania, Congo, Lesotho and Mozambique through its controlling stake in Vodacom which has increased from 50 percent to 65 percent (Bloomberg 2007). Apart from offering conventional voice communication services through mobiles, Vodafone has used this presence across Africa to identify market segments with peculiar needs and develop services aimed at meeting this demand and maximising revenues. One such market segment Vodafone is trying to develop is the B to B (business to business) sector. In this direction Vodafone has presented technology as a transformational tool for businesses and individuals and is advertising its services to businesses as a partner for growth (Vodafone Global Enterprises 2010). As an indication of its overall intentions on the African continent Vodafone recently announced that it was extending the Mpesa mobile banking service to South Africa where it was estimated that 26 million people were without banking services (Vodafone 2010). The opportunities Vodafone saw in South Africa stemmed from figures showing that only 60 percent of South Africans had access to bank accounts in the formal sector as compared to a mobile

penetration rate of 94 percent (Vodafone 2010). Vodafone therefore anticipates a reliable revenue stream similar to the success it achieved with M-pesa in Kenya where it has 6 million customers (Vodafone 2010). In the quest for more revenue Vodafone has lined up Tanzania as the next market for M-pesa, but in all this expansion the firm insists it is engaged in the fight against poverty reduction through the provision of financial services (Vodafone 2010). M-pesa has a humanitarian origin. The concept became operational when DFID agreed to match Vodafone's investment of a million pounds, convincing senior management at Vodafone to give their approval (National Archives UK 2007). DFID's objective was to extend banking services to poor and needy segments of the population but M-pesa has now become a fully commercial service, much depended on by Kenya's urban population to send safe and secure remittances to rural relatives (National Archives UK 2007; Vodafone 2010). Predictably, Vodafone is eager to extend this service across Africa where similar conditions exist for the demand of mobile banking.

The strategic outlook of Vodafone and its conduct on the continent reveal a certain harmony with the goals of the overall EU ICT strategy and as well as the objectives of the Dot Force initiative. The harmonisation of telecoms markets as well as the deregulation of the industry itself appears meant at easing access for TNCs like Vodafone and subsequent cross border acquisitions and mergers confirm this. These trends suggest a realisation of the EU desire to encourage investments and exploitation of African telecoms. These developments also may point to the influence of business lobbies in EU policy making. Current acquisitions can only lead to a future where Vodafone owns critical ICT infrastructure in the region. There is a real prospect of a flow of revenue in one direction if Vodafone and other TNCs intensify acquisitions. The assertion of Neo-Marxists and other critics that the neoliberal enterprise is geared at imperialism and dependency then appear legitimate if control of telecoms amounts to neocolonialism.

The acquisition of telecoms firms by Vodafone inevitably leads to the development of services by the firm to recoup investments. This is where the second major claim of Neo-Marxists that ICTs are not necessities in African appears undermined. Clearly there is a demand for voice communication as a result of the absent or crumbling means of alternative communication. The success of M-pesa also suggests a hunger

for banking services. Vodafone has used its knowledge of the African terrain to develop services for a continental market and the simplified platform presented by ICTs has proven popular among certain consumer segments. The widespread incidence of sharing is likely to enhance the reach of mobile services. Mobiles, from the expansion and product development success of Vodafone, do have a demand in Africa. Nevertheless, Vodafone's single minded pursuit of profits and an ever larger market share, and the commercialization of services like mobile banking raise questions of affordability and provides the Neo-Marxists stance with some support. Neo-Marxist interpretation of the dynamics of the global economy ¹¹ suggest that TNCs seek to profit from meeting the needs of the rich even in poor countries (Hoogvelt 2002). This implies that TNCs are not particularly concerned with income inequalities within countries.

If one then agrees that there is some role for mobiles in Africa, but a wholly business and profit minded approach is problematic, and concedes that even though mobiles can make an impact, total economic transformation will not be one of those impacts, what will be the way forward? In the next section I examine the ICT4D initiatives of individuals, communities and NGOs engaged in adapting mobiles to solve communal problems, and ascertain if new insights can be acquired from these minor actors approach towards ICTs which brings the ideological influence of capitalism and neoliberalism in ICT4D policy making under the most significant critique, while undermining Neo-Marxist skepticism towards ICTs.

¹¹ Hoogvelt(2002) discusses the paradoxical situation where Africa's firms and labour are "alienated" from the global economy, while the elite in Africa are well established within global networks of wealth, power and information and communication technology. Hoogvelt explains that in a global economic situation " where the top quintile of the population has 160 times more income than the poorest quintile ,capitalism expands by creating "consumer demand for the rich rather than meet the needs of the poor" (2002:15, 17). Thus, it is no surprise that telecoms TNCs are rapidly expanding in poor countries. Inferring from Hoogvelt, TNCs activity even in relatively poor countries seeks to meet the demand from the small middle and upper classes, leaving out the vast majority of the people. In a similar line of argument to Cammack(2006), Hoogvelt asserts that dominant nations aid the course of capitalism by creating "international organizations capable of steering the economies of ex-colonies indirectly, safeguarding the interests of foreign investors and generating new patterns of extraction through resource bondage, technological rents, and debt peonage" (2002: 17). Thus, the Neo-Marxist belief in a dependency outcome appears to be justified by current developments. TNC activities stand to create and maintain this technological rent mentioned here, with technological dependency a likely outcome. The domination of ICT policy making by a neoliberal approach and the significant role being played by international organizations and multilateral agencies fits the interpretation by Hoogvelt and Cammack of the current mode of capitalist expansion

4.5 Minor ICT4D Actors

Reports of innovative adaptations of ICTs are just beginning to emerge. Individuals, local NGOs and non-profit organisations are configuring ICTs in diverse ways in response to challenges within communities or problems confronting marginalised occupational or gender groups such as farmers and women. The previous section showed that the wholly business and entrepreneurial approach of neoliberalism was problematic, but at the same time there was a demand for communication and information services in Africa. The ICT innovators and inventors showcasing their output at the Afrigadget website suggests that there is a way to introduce technology that gives some freedom to the end user for a problem solving adaptation. Also, the strategies of feminists at the Womensnet website indicates that ICTs can become valuable tools for marginalized groups to network and coordinate their emancipatory activities. Finally, the various ICT innovations that allow farmers to participate in the formal economy show that vital services and information flows can change the lives of geographically isolated groups. This section seeks to understand the ideals, ideologies or norms of those who have innovated ways of using ICTs to confront problems like poverty, social exclusion or enhance agricultural output which may offer alternative ways of thinking about ICTs as part of development.

4.5.1 Inventors and Innovators

Time magazine named Afrigadgets.com one of its fifty best websites of 2008, describing it as “dedicated to simple, sustainable inventions in Africa” (Time 2008). This website serves as a platform for ICT inventors living as part of communities across Africa who have identified problems in their immediate environment and have modified or configured imported communications technology to solve those problems. If ICT4D is aimed at using ICTs for developmental purposes, then these innovators or inventors constitute legitimate ICT4D actors. There are some defining differences between them and all the previous ICT4D optimists discussed in this thesis. These actors are not aiming at a structural economic and social transformation of the entire economies through ICT4D. Therefore they are not vulnerable to the criticism of Neo-Marxists about the futility of this objective. A second difference concerns the profit motive, which they lack. Instead, they seem to be motivated by self help and communal welfare. Those apparently in most need of cell phones are remote village communities. However it is exactly this group that is deprived of

electricity supply and therefore unable to keep phones charged and running. A rural dweller from Malawi found a way out of this using metal scrap from a scrap yard, a tractor fan, shock absorber, PVC pipes and a bicycle frame to create a wind powered cell phone charger for villagers to charge their phones (Afrigadget 2008). The problem of energy, overlooked by both the Dot Force initiative and the myriad EU ICT4D initiatives, concerns these actors. Another inventor has built a dynamo powered cell phone charger in Kenya which operates by a simple paddling action of riding a bicycle to generate energy for charging the phone which is safely lodged in the cyclist's pocket but connected to the dynamo by cable (Afrigadget 2008; BBC 2009). Afrigadget regards some of these individuals not as inventors but hackers or customizers, describing them as “ taking the designs of the West and applying them to their lives, modifying them and making them work for their local needs” which is part of a trend of cell phone customization that is widespread across the continent (Afrigadget.com 2008). There is also a device for containing dual sim cards in a phone and therefore allowing access to multiple mobile providers (Afragadget 2008). This dual sim card innovation is particularly interesting, suggesting that people are reacting against the differing pricing regimes and differing service quality of various service providers and want the freedom to move between these providers, taking advantage of price differences without switching networks.

4.5.2 The Feminists

Women face social, economic and cultural marginalization in many countries. Though women's access may be constrained as a result, the advent of ICTs has been seen as an opportunity to address the challenges and obstacles women face in Africa. Womensnet is a South African based nongovernmental organisation focussing on the intersection between gender and ICTs, assisting girls and women's organisations and networks to develop ICT content and acquire technologies that help them to achieve their organisational and social targets of enhancing the status and capacity of women in Africa (Womensnet 2010). As a sign of an emerging trend in Africa where ICTs are allowing like minded organisations to interact in an unprecedented way, the website of Womensnet serves as platform for disseminating information and networking between women's organisations, helping to create contacts between gender advocacy and empowerment outfits across the continent, provide resources, information and publicity all with an understanding of the challenges of the terrain (Womensnet 2010).

This would have been impossible without ICTs. Womennet's capacity building includes ICT programming, setting up websites for women's NGOs and for events, projects and initiatives involving gender related activities, generating the content for these websites, advocacy and research (Womensnet 2010). Currently, in line with its vision of assisting NGOs in the challenging African context to become operative, Womensnet is offering "the Base NGO in a Box" to small NGOs. This tool is a virtual mobile office in a small box, containing software for finance, fundraising, project management and collaboration, instant messaging, telephony, web browsing, email, volunteer, staff management, and surveys (Womensnet 2010). It provides all the stools for instant start ups not only for NGOs but conceivably for other rural enterprises.

4.5.3 The Farmers

Peasant farmers are some of the most marginalised sections of the African population. Living in remote outlying areas and relying on rain fed agriculture, their livelihoods depend on a good harvest and the prices they attract from buyers. But it is exactly this most vulnerable of groups who are far removed from markets and beyond the reach of agricultural extension workers. This usually means they are vulnerable to crop disease outbreaks, don't get access to weather information and critically for subsistence farmers, they fall at the mercy of ruthless middle men and women who pay them far less than they would have made on the open market. The conditions in Africa, of an agricultural reliant economy, poor road infrastructure and scarcity of timely information perfectly called for mobile phone ingenuity to confront such obstacles.

4.5.3.1 Market Information

Isolated and poorly served by road communication the people of Murungu in Kenya were practically cut off from the 21st century until the arrival of a mobile phone mast outside the town (Business Week 2007). Now they see mobile phone services as the most significant development in their community in living memory, enabling the farmers in the town to connect to farmers markets and to coordinate their activities with growers' cooperatives (Business Week 2007). Information availability through mobile phones also eased the activities of other members of the community that the farmers relied on such as shop keepers, traders and tailors (Business Week 2007). Poor communications and lack of market information keeps food prices artificially high for consumers and low for famers who depend on the proceeds. A study done in

Niger showed that the arrival of mobile phones reduced price differences across different areas of the country by 15 percent, and allowed traders to respond to surpluses and shortages (Boston Review 2010). The volatility and precarious nature of agricultural produce as well as the instability of markets make farmers particularly vulnerable to lack of information. Farmers used to wait in their farms and villages for the market to come to them, reducing their bargaining power, now across Africa projects are springing up allowing farmers to sell their produce by inviting and receiving bidders on their mobile phones, strengthening their bargaining power (Balancing Act Africa 2010). One of such services is provided by Senegalese company Manobi which offers a trading platform for farmers and fishermen to look for buyers and has signed up forty thousand farmers (Balancing Act 2010). A similar service is run by the Kenyan agricultural commodity exchange and provides information to farmers on their mobile phones which assist these farmers to determine where to receive the highest prices for their produce (MIT 2009).

4.5.3.2 Agric Extension Services

Mobile phones are being used by extension workers located far away to track and treat crop diseases among banana farmers in the forest regions of Uganda (New York Times 2009). Farmer representatives take photos on their cell phones and administer surveys among fellow farmers and this information is then sent wirelessly to agricultural scientists in the distant capital Kampala who then relay advice and remedies to the farmers representatives (New York Times 2009). This initiative is a part of a larger project called the Applelab by the non profit Grameen foundation for fighting poverty in developing countries with mobiles. Applelab describes its own mission as transforming lives by innovating in information access and aims to network with other organisations interested in using information availability to fight poverty (Grameen foundation 2009). Applelab's innovative response to such challenges has won it awards and exposure in international media such as the Economist and New York Times and the attention of academic institutions like Oxford University (Grameen Foundation 2009). One of Grameen foundation's next projects is the Community knowledge Worker Project which aims to train and equip key people in communities to gather information about communities and disseminate information from elsewhere to these communities using cell phones (Grameen Foundation 2009). In Kenya a pilot project by the non-profit company Farm Input

Promotions Africa and the Grameen Foundation has been launched which will alert farmers on their mobile phones about the location of drought resistant beans (Green Business Africa 2009). Another project by the Kenyan Agric Research Institute sends information about the soil to farmers on their mobile phones so they will be in a position to better determine how to match various crops to the appropriate soil types as well as the right amount of fertilizer to use (Green Business Africa 2009).

4.5.3.3 Other Sophisticated Services

More sophisticated value added services are beginning to reach farmers. The Syngenta foundation has found a way of providing crop insurance through mobile phones to farmers in Kenya who pay the premium as part of the cost of buying the seed and receive payments when that particular seed fails due to drought (Gomo News 2010). The World Meteorological Organisation in association with Global Humanitarian Forum (GHF), Ericsson and Zain Telecom plans to deploy 5000 automatic weather stations at cellular sites in various parts of Africa (WMO 2009). This information will then be relayed to users including farmers and fishermen on mobile phones. The partners of this massive project are confident that this will not only lead to higher agricultural output due to better weather information but also save lives from storms and floods (WMO 2009).

4.6 Interpreting Minor ICT4D Initiatives

Brothman (1995b) finds Africa's linguistic, social and cultural plurality deep and complex and attributes the failure of development policy to the imposition of grand theories that neglect social relations, social structure and values. Brothman argues that unrealistic assumptions that suggest that economic growth can trickle down to the entire society, reject context and remove the human factor from the process of development such as neoliberalism will lead to failure (Brothman 1995b :122,123,124). If Brothman's argument holds true, then logically the opposite approach, which the activities of minor actors coincide with, should lead to success on paper. The ICT innovators on Afrigadget.com suggest a new human agency at the local level governed by a cultural awareness of self help and mutual interdependence and informed by local economic constraints. That is, considerations of local needs and ways of improving communal welfare likely inform these innovations. This reflects in the willingness to share with close friends and relatives, innovating selflessly for communal benefit without a discernable profit motive and the willingness of handset

owners to act as points of information for the entire community. The various specialized knowledge intensive projects by small NGOs also portray an understanding of the distinct social, economic, geographical and cultural circumstances of different areas. Unlike dominant approaches like neoliberalism, the human factor is central. Local normative ideals of communal living and self help seem to be the primary motivating factor of ICT4D actors at this level with individual and communal agency being seen as complementary.

At the very beginning of Amartya Sen's "Development as Freedom" he cites individual agency as central to resolving human deprivations, but conversely for him, this agency is "inescapably qualified and constrained by social, political and economic opportunities that are available to us" (Sen 1999: X I). Sen's argument implies that agency is inherent in human beings, but exercising this agency depends on structural factors to a large extent. Though endowed with agency, ICT innovators such as those on Afrigadget.com and other small ICT4D NGOs may not have had the opportunity to activate that agency to the best of their abilities due to limitations of the conditions of existence. The dawn of ICTs has provided an opportunity for those limitations to be confronted. In many parts of rural Africa geographical remoteness alone can ensure that people are far removed vital information, public utilities and transportation links. Deeply aware of the pre-existing constraints of daily life, local ICT innovators stand in a better position to help themselves and their communities. This is because in making attempts to remove these constraints these innovators are also aware of cultural and normative factors of their localities. The desire to provide basic needs at the communal level contradicts the current neoliberal nature of ICT4D programmes and policies which impose formulas. However, one of these formulas, markets may have begun the process that has culminated in the introduction of ICTs to African consumers. These handsets are manufactured by global telecoms giants and current GSM services are run by foreign operators or in partnership with public monopolies, though it must be reemphasized that the mode of TNC expansion is problematic. A reference to Sen's view of the market indicates directions in which the processes of alternative development approaches can be enhanced. Sen argues that the market is not necessarily bad and points out that the problems of the market comes from other "sources" (Sen 1999:142). These sources are political and social inequalities, and the solution is what Sen describes as "greater supplementation

through social and political arrangements'' (1999:142). To the list of social arrangements advocated by Sen such as free basic education, health and better agriculture must be added free access to ICTs. The use of ICTs to remove deprivations such as gender imbalances, lack of weather information, lack of market information and lack of energy for powering mobile devices can contribute to improving living standards if successful. At this level ICTs are used towards social ends and must therefore be seen as social goods in the category of education, health and sanitation.

4.7 Global Dominance and Local Alternatives

In conclusion, whereas global actors and their Neo-Marxist critics exhibit signs of ideological assumptions in their conduct, and TNCs seem motivated by profits, minor actors, non-profit organizations and individual innovators seem to be guided by norms, culture or particular local circumstances. In this way, what will be useful to as many people as possible seems to preside over the individual needs just as James and Versteeg(2009) found that an individual's access to ICTs amounts to family and friends also gaining access.

These alternative developments undermine Neo-Marxist arguments about ICTs in development because these devices possess distinct advantages over previous technological interventions as part of development. These advantages are twofold. First the flexibility of mobiles as compared to other technologies transforms them into adaptable self help devices. Unlike the radio for instance it does not reduce the user to a static object, but provides freedom to improvise, communicate with like minded people and collaborate towards collective benefit. The second more significant aspect of ICTs is that they provide a platform for the delivery of services and information that would have been impossible given the state of physical infrastructure and distance. This provides isolated and neglected rural populations a lifeline to sustainability. However, though the innovative, adaptive and pragmatic use of these technologies by these actors is beginning, ICTs alone cannot lead to a structural transformation of the African political economy as optimists suggest. African countries still need massive investments in health, education, agriculture, and infrastructure and poverty reduction, and the Neo-Marxist concerns about the dependency outcome of major ICT4D investments still stands.

5 Conclusion

5.1 Ideology and Conflicting Perspectives

The initial thesis objective of establishing the ideology behind the ICT4D projects and programmes of the EU and G8 has been met with the identification of the approaches of modernization and neoliberalism as the indisputably dominant forms of ICT4D. The G8 and the EU have launched long term and well organised ICT4D initiatives while many more traditional aid concerns remain unfulfilled. This development reflects the ideological dominance of capitalism and how ICTs fit more perfectly and conveniently into this ideology. ICTs by their nature allows bodies like the EU and the G8 to integrate a capitalist trade policy with development policy which other aid agendas would not have facilitated perfectly. This likely explains the coordination and dedication shown towards ICT4D programmes and projects. The G8 and EU strategy of predicating their assistance on the satisfaction of conditionalities by African countries, another vestige of neoliberal assistance packages such as those from the World Bank and IMF, appear to be working in favour of TNCs like Vodafone who are rapidly expanding their activities and acquisitions in Africa. Thus, G8 and EU ICT4D policy making facilitate an understanding of the behaviour of TNCs, who may be benefitting from the investment friendly climate created by the economic diplomacy of these powerful actors. However, the activities of Vodafone in Africa has demonstrated that there is a demand for voice communication and other value added services such as mobile banking, vindicating EU and G8 policy making in a limited way. But it appears that the belief that ICTs will lead to rapid development and structural transformation of African countries is misplaced. On the contrary it can hasten the creation of an unequal society. The depth of challenges in health, education and poverty cannot be dismissed.

If ideology explains the ICT4D activities of the G8 and the EU, it also explains the critical attitudes adopted towards these activities. Neo-Marxists are at the vanguard of opposition to the overt modernisation and neoliberalism of ICT4D. They suggest that the ideological assumptions of ICT4D are similar to failed past assumptions, and rule out the possibility of ICTs as instruments of economic transformation. Other criticisms centre on the profit seeking and expansionist activities of TNCs and the neglect of

other priorities. The Neo-Marxist response to ICT4Ds is similar to the old dispute between modernization and dependency schools in the past. But none of these approaches managed to resolve African economic problems. In the current ICT4D situation, Neo-Marxists have not accepted the full capacity of ICTs as potentially emancipatory tools, but they make a sustained and legitimate point about an ICT trap or ICT dependency awaiting African countries.

5.2 Beyond Structuralism

The second thesis objective of critiquing the dominant ideologies in ICT4D culminated in the realisation that their mutual attachment to structural matters leaves major ICT4D actors making ambitious claims of transforming economies through ICTs and Neo-Marxists dismissing the feasibility of this and in the process rejecting the necessity of ICT4D. It was concluded that technology is in demand in Africa and was necessary in spite of the problematic manner of introduction and TNC behaviour. Given that TNCs will continue their activities, there was the possibility of a middle way of ICT4D policymaking that avoided unbridled profit seeking, had pragmatic ambitions and allowed the people involved to adapt the technology to their own uses.

5.3 Minor Actor Initiatives

Minor local actors, in seeking to confront livelihood problems through adaptation of ICTs, presented a significant weakening of both the optimistic neoliberal standpoint and pessimist Neo-Marxist attitudes towards ICT4D. Their ICT4D initiatives showed that not only were ICTs necessary in a pragmatic way, but were critical tools for resolving some of the constraints of individuals and communities through their capacity for adaptation. More critically, these adaptations also emerged in a manner that appeared to lack a profit motive, but rather show normative ideal of communal sharing and interdependence. The very brief recommendation from reflections undertaken in this thesis is that governments, aid agencies and donors should look at ways of making ICTs as freely accessible and affordable to the most vulnerable sections of society. They should be seen as valuable tools for development from within communities. Therefore, this thesis suggests that the most suitable ideological or theoretical background for better ICT4D policy making should be theories related to alternative, bottom-up or heterodox approaches to sustainable development with high priority given to local culture and circumstances.

6 Executive Summary

The primary objective of this thesis was to interpret and critique the ideological motivations of what is now known as ICT4D or information and communication technologies for development. This enterprise involved both the ICT4D policies and projects of the G8 and the EU as well as the criticisms that have emerged against these initiatives. The Africa strategy of Vodafone also came under interpretation and critique in order to establish how TNCs are responding to attempts by major actors such as the EU and G8 to influence the creation of a favourable environment for ICT investments in African countries. A final thesis objective was to interpret the initiatives and programmes of minor and mainly local ICT4D actors who operate close to communities or emerge from within these communities. It was envisaged that better policy would emerge from a more inclusive and democratic way of looking at the ideology or norms behind ICT4D.

Representative of the neoliberal oriented nature of ICT4D policy making was the Dot Force initiative of the G8. The EU's varied ICT4D projects and policies towards Africa also showed significant neoliberal influences. On the other hand Wade (2002), who insists that the ICT4D approach is inferior to more traditional development methods, and predicts that increases in foreign ICT investments will lock African countries into a new form of dependency, exemplifies the strong Neo-Marxist opposition to ICT4D. The criticism of Cammack (2006) centers on the UN's involvement in the larger trend of applying business methods and the ideas of the market economy towards the resolution of development obstacles, concluding that these efforts amount to the global expansion of neoliberalism and capitalism which has imperialist outcomes. The thesis found that significant aspects of ICT4D resemble these Neo-Marxist criticisms.

Nevertheless, the thesis also holds that recent discussions related to ICT4D revealed a structuralism shared by the neoliberal approach to ICT4 policies and projects and the objections put up by Neo-Marxists. Earlier, Chilcote (1994:304) had identified the similarity between Marxism and structuralism, which tends to look at economies in their totality, and attempts to understand or diagnose the invisible factors that determine their success or failure. This structuralism results in major ICT4D actors

such as the EU and G8 proclaiming and expecting ICT4D to have a transformational effect on African economies, while Neo-Marxists deny the possibility of such a transformation due to their belief that ICT4D is merely representative of a structurally skewed global economy unfavourable to African countries. These standpoints result in ICT optimism by the former and pessimism by the latter and leads to their collective emphasis on structures and neglect of the human actor. However, the beginning of attempts to look at ICTs from a community centred perspectives also emerged from the literature with Ekine(2010) ,deBrjuin(2009) and Bates(2010) at the forefront. While these researchers described what was actually taking place, the contribution of this thesis was to look at the norms, ideologies or circumstances that may be informing these developments. The literature review ultimately suggested lines of inquiry that will widen the current discussions to include the neglected ICT4D actors and also bring alternative ways of looking at ICTs in development under consideration.

Theoretically, this thesis argued that it was prudent to agree with the dictates of modernization theory about the necessity of technology, but reject or mitigate the aggressive profit oriented and market seeking approach to their introduction by major actors and TNCs. The thesis also shared with Neo-Marxists their concerns about the hegemony of neoliberalism, privatisation and a resultant neocolonialism and dependency but disagreed with their general pessimism towards the role of ICTs in development. To maximize ICT4D effectiveness, this thesis suggested that ICT4D policy should be guided by alternative bottom-up theories of development that put people and their needs, culture and circumstances first. According to Parmwell(2008), bottom-up development originates from the communities themselves. This thesis found that ICTs greatly enhances this process and makes it effective, granting a highly adaptable tool to individuals and communities with which they can express their own ways of thinking. Due to the diversity of theoretical analysis involved, the thesis settled on critical theory as a suitable methodology which was deemed to fit the comprehensiveness of the ICT4D sector and accommodate ICT4D initiatives that defy the current divides. On the other hand critical theory imposed both discretion and a responsibility on the researcher to adjust methods as the inquiry demands (Cresswell 2005). Following Odell (2001:173), the interpretive focus of this thesis involved a combination of methods as the inquiry proceeded as well as a quest for theories to

account for contemporary developments. It was ultimately decided that alternative theories held more relevance in the subject matter than conventional theories like modernization and dependency, but an inclusive reflection on all three groups of theories led to this conclusion.

After the foundation of research questions, theory overview and methodology had been laid, this thesis moved on to introducing and analyzing the empirical cases. These related to a diversity of ICT4D actors ranging from the globally influential G8, EU and Vodafone to obscure ICT inventors on the Afrigadget.com platform, gender advocates on the Womensnet.com website and various information, financial and extension services to farmers. Some of the laudable goals and objectives of the Dot Force project of the G8 and the EU ICT strategy such as expanding ICT access for health, education and agriculture were acknowledged, but ICT4D provisions that sought to create the necessary conditions for TNC acquisition of telecoms infrastructure were identified. Both actors included provisions in their ICT4D policies that encouraged beneficiary countries to deregulate their ICT sectors, encourage privatisation and attract foreign investment, showing a heavily neoliberal bias. The findings of this thesis suggest that TNCs like Vodafone are beneficiaries of this policy influencing effort. The ICT4D initiatives of alternative or minor actors undermine Neo-Marxist arguments about the role of these devices in development because ICTs can be adapted by the user to suit circumstances, culture and needs. These minor actors also lack a profit motive, on the contrary showing a strong desire to benefit the community. An example of this adaptation is the community mobile phone charger in Malawi, which was invented by a villager using PVC pipes and old bicycle frames to create wind energy (Afrigadget 2008). A project that allows distant scientists to remotely diagnose and treat crop diseases through photos of diseased crops taken by farmers with cell phones is another good example (New York Times 2009)

The thesis concluded that rather than the skepticism of Neo-Marxism towards ICTs and the profit oriented neoliberal led way they are being introduced into Africa, their usefulness to vulnerable sections of the population will be greatly enhanced if they are introduced as free or affordable social goods. In this direction, alternative development approaches that emphasize an attention to contextual factors as well as individual and community agency should be the most appropriate ideological or

normative guide for ICT4D policies and programmes. This thesis also suggested that significant economic transformation cannot be achieved through ICT4D alone. Africa needs massive investments in health, agriculture and education to transform and ICTs can only assist in this transformation by facilitating the transfer of vital information and services to isolated communities which promotes a pragmatic and sustainable development.

7 References

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