The Political Economy of Africa's Cyberspace

Understanding How South Africa's Government Policies on Digital Technologies
Are Appropriated, and Influence Development,
at Grassroots Level in
Maputaland, KwaZulu-Natal

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Declaration

I, Sachil Singh, hereby declare that unless specifically indicated to the contrary in the text, this thesis is my own work. It has not been submitted to any other university in complete or partial fulfilment of the academic requirements for any Degree or other qualification.

This thesis is dedicated to the memories of:

Rajpalli, my papli,

Casper, my grandmaster,

Cleo, my teacher and

Jonty, my brother

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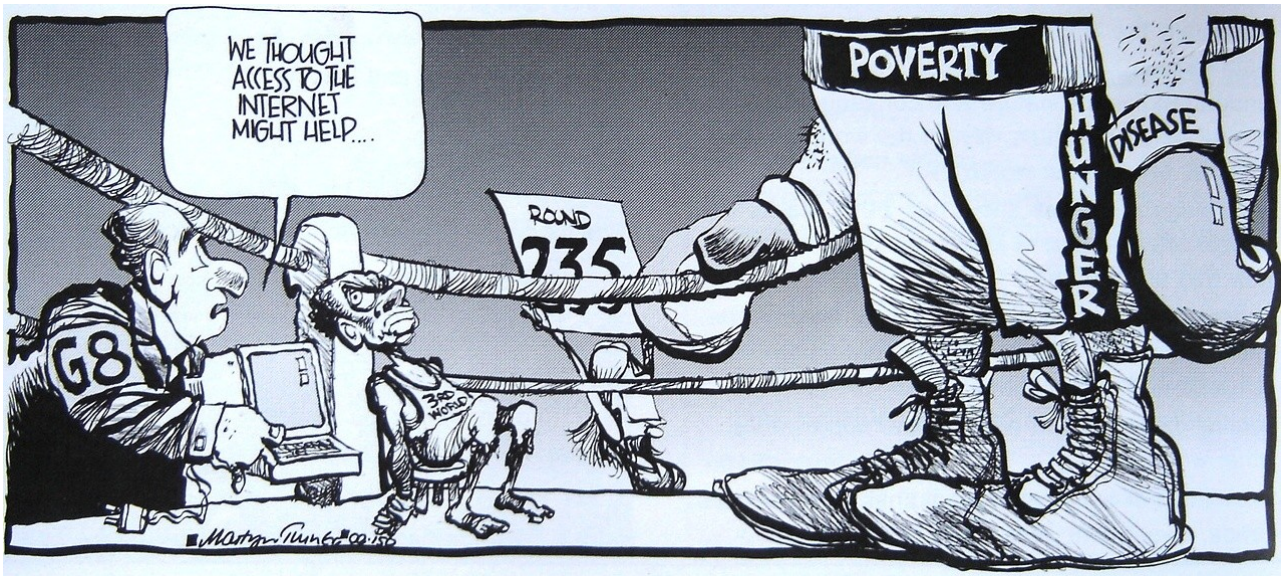

Source: Turner (2002: 32)

Preface

'Reduce the digital divide'[1]

'Halve, between 1990 and 2015, the proportion of people who suffer from hunger'

'In cooperation with the private sector, make available benefits of new technologies, especially information and communications'[2][12]

James Grant (cited in UNICEF 2008), a former Executive Director (1980-1995) of the United Nations Children's Fund (UNICEF), complained, in 1993 that, "[t]he problem is not that we have tried to eradicate global poverty and failed, the problem is that no serious and concerted attempt has ever been made".[3] It is perhaps against this backdrop that the above goals of development should be considered especially since they are held by many countries and international development organisations.[4]

[1] In addition to many countries and other organisations, this is a goal envisioned by the International Telecommunications Union (2006).

[2] The second and third of these slogans are official targets of the United Nations' Millennium Development Goals (MDGs) to end hunger and develop a global partnership for development respectively. The other MDGs pertain to universal education, gender equality, child health, maternal health, HIV/AIDS and environmental sustainability. For more, see United Nations (2008).

[3] Ann Veneman (cited in UNICEF 2008), the current Executive Director of UNICEF has responded to this comment by saying, "Regrettably, that observation remains as valid now as it was in 1993".

[4] There are at least 20 organisations and programmes which are in partnership with the United Nations in support of these, and other, Millennium Development Goals. These organisations and programmes include the World Bank, World Health Organisation, International Telecommunications Union and World Food Programme. For a complete list, see United Nations (2008). The countries which support the MDGs are, generally, those which are the members of these organisations and programmes.

The argument is that if the digital divide[5] is reduced by any measure (as envisioned by the International Telecommunications Union, which also supports the MDGs), if world hunger is halved by 2015 and if the benefits of new technologies are made available to all, development will occur. If a goal is to represent a vision, then it can be said, with respect to the Preface's opening slogans, that conceptualising the idea to *reduce* and not *close*, to *halve* and not *eliminate*, to *make available* and not promote the *productive utility* is to suggest, by implication, that the processes – or tools – in meeting these goals are equally limiting.[6] It is argued that from these (mis)conceptions of goals and tools, in their various forms, emerge inconsistencies, contradictions and implemental shortcomings of policy. While vehement attention to these goals may ensure their statistical achievement, this could detract attention from the inconsistencies and imbalances of that achievement. An example of such a shortcoming is the global reduction of poverty from 28 percent to 21 percent over the 1990-2001 period. Presumably, this is suggestive of progress towards the above MDGs. However, this shadows the *increase* in poverty in sub-Saharan Africa over the same period from 44.62 percent to 46.54 percent (Gambari 2004).

This thesis investigates the reality of such concerns more closely in the 'digital' political economy of Africa. Nestled, more specifically, in the South African 'digital' political economy, the research engages itself on a route of study of such processes within high-technology capitalism. It would seem that the prevalence of such shortcomings, as those noted above, is possibly suggestive of more complex webs of confusion and concerns with implemental realities. These are explored in the rural case studies of the Ndumu and Sicabazini villages in the province of KwaZulu-Natal.

[5] In its simplified form, the 'digital divide' refers to distinctions between countries based on them being technologically 'rich' and technologically 'poor'. Although not always the case, this generally follows the well-known classifications of countries in the global 'north' and the global 'south'. The term is also expanded to refer to those differences between regions, cities and suburbs. This term is described further in section 2.5.2 below.

[6] To the contrary, when declaring the MDGs in 2000, the international community, ironically, pledged to "*spare no effort* to free our fellow men, women and children from the abject and dehumanising conditions of extreme poverty" (cited in Ki-Moon 2008: 3, emphasis added).

Chapter 1

1.1 Introduction

> *The globe shrinks for those who own it; for the displaced or the dispossessed, the migrant or refugee, no distance is more awesome than the few feet across borders or frontiers.*
> (Bhabha 1992: 88)

'*The Information Economy*'. '*The Network Society*'. '*The Digital Age*'. In historical perspective, the technological revolution of present is transforming the social topography of our very existence. This is, largely, facilitated by information and communication technologies (ICTs), which have the ability to store, transfer, process and disseminate data. These technologies include (but are not limited to) radios, televisions, computers, the Internet, landline and mobile telephones. From politics to ideology, from production to management, and from basic literacy to entertainment, leisure and travel, global and personal relations are becoming increasingly dependent on ICTs.

The marriage of these technologies and capitalism into 'high-technology capitalism', as it has come to be known, has facilitated the economic interdependence of international financial markets. This has put a face to globalisation and provided a value to the high-skilled worker in forms which have never before been witnessed (Castells 1996: 201-326; Burnett and Marshal 2003: 128).[1] Precisely because of these associated influences, it has been argued, we have witnessed changes in socio-economic relations and geopolitical realities (Castells 1996; Dyer-Witheford 1999).

These changes have been witnessed in various forms: the collapse of the Soviet Union, in which facsimile machines, computers and video cassette recorders were critical (Teharanian 1999: 4);[2] following the Cold War, the rise of South and East Asia has largely been credited to their roles as e-commerce hubs and high-technology manufacturers (Coe and Wai-chung 2004); and the "golden age" of transnational capital in the 'western' world (Kofi Annan cited in Kovel 2002: 49) was marked most characteristically in the last decade with the DotCom 'bubble' (Ofek and Richardson 2003).[3]

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[1] To the contrary, Rifkin (cited in Tehranian 1999: 66) describes the information economy as leading to the 'end of work'.

[2] Teharanian (1999: 4) makes this point because "technology can empower the social forces already pressing for social change". The role of the ICTs noted in-text, arguably contributed to the new face of former-Soviet Union market arrangements to heeding the embrace of neo-liberalism (Job 2001). Job (2001) goes on to suggest that the accumulating debt of all the 'developed' world is linked to a process which he terms the 'Russification of the West'.

[3] The DotCom or Internet 'bubble' refers specifically to the period from January 1998 to February 2000. During this

Alongside such changes, and perhaps even as a result, the irony of global integration and global interdependence has been its unevenness (Table 1.1 and Figures 1.1 and 1.2). Despite the claim that "[b]y connecting the *world* and fulfilling *everyone's* fundamental right to communicate, we strive to make the world a better and safer place", statistical evidence of the trend to meet such an obligation seems to suggest otherwise (International Telecommunications Union 2008, emphasis added). Illustrated graphically, Figures 1.1 and 1.2 show that although the proportions of Internet users and cellphone subscribers have increased in the developing world over the 1990-2002 period, the balance (particularly with respect to the Internet) largely remains in favour of the developed world. Statistically, Table 1.1 shows how disproportionate these are, especially when comparing Africa with North America. On the basis of these comparisons, it may be justifiable to question the actual *global* nature of the international information economy as one envisioned as anything different to that of Marxists who point to the *transnational* exploitation of labour.[4] Alongside such disparities, an international policy has emerged whereby ICTs, and their possibilities, are offered to developing regions as promoters of development.[5] In the global arena, this has been publicised by both international organisations and developing countries. From the United Nations, World Trade Organisation and World Bank to the G8; from the United States, to Britain and Australia, the connotations of ICTs are cast in view of replication of the economic statuses of the developed world (Ya'u 2004).[6]

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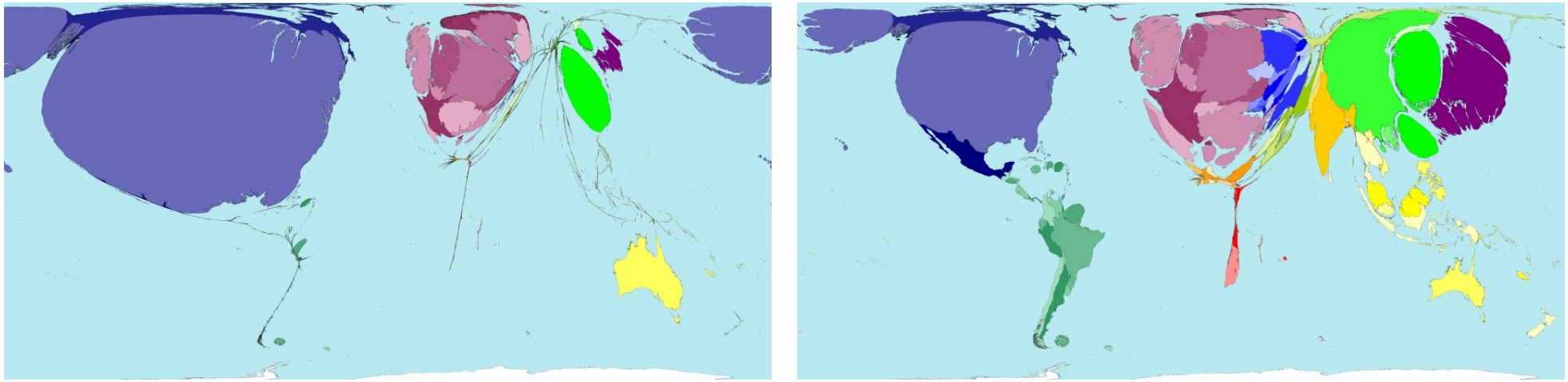
time, Internet sector stocks earned in excess of 1000 percent returns on public equity, largely unparalleled in any other sector (Ofek and Richardson 2003).

[4] In Karl Marx's (1859) *Critique of Political Economy*, he saw in capital the ability to influence all participants in the global economy. However, behind this supposed 'free access' to the capital market are disguised power relations, of – contrary to the liberal beliefs of John Stuart Mill and David Ricardo – exploitative power.

[5] A definition of 'development' as well as an explanation for its use in inverted commas throughout this thesis are provided in section 2.5.1 below.

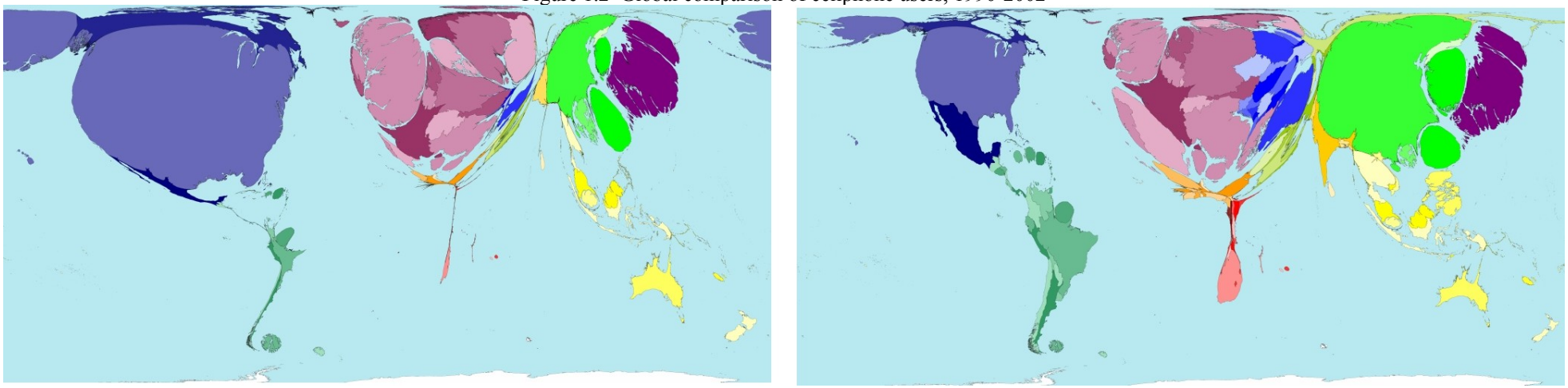
[6] There are, of course, uses for ICTs which do not universally fit this pattern of one-directional flow from 'developed' to 'developing' countries. In fact, Breckenridge (2005: 267, emphasis added) shows that quite the opposite is true with respect to biometric identification: "For the countries considering a move from the decentralised order of paper-based identification to the new world of digital biometrics, *there is much to be learned from a close study of contemporary South Africa*".

Figure 1.1 Global comparison of Internet users, 1990-2002



Source: Worldmapper (2008)

Figure 1.2 Global comparison of cellphone users, 1990-2002



Source: Worldmapper (2008)

Table 1.1 Total numbers of Internet and cellphone users by continent (2007)

	Total No. of Internet Users (2007)	No. of Internet Users per 100 inhabitants (2007)	Total No. of Cellphone Subscribers (2007)	No. of Cellphone Subscribers per 100 inhabitants (2007)
Africa	50 858.9	5.3	270 585.7	28.1
North America	245 000.0	74.4	275 673.0	72.6
South America	129 415.6	26.9	378 980.9	69.7
Europe	331 610.4	41.2[7]	882 648.1	109.5
Asia	569 798.0	14.3	1 475 121.5	37.1
Oceania	15 070.6	44.9	26 912.2	78.9

Source: ITU (2007a)

These trends are certainly emphasising existing, and giving birth to new, faces of international relations through their abilities to both undermine and enhance development. On the one hand, ICTs appear to facilitate hegemonic popular culturalisations (Tehranian 1999: 61). This is through an adoption of high-technology in the developing world on the, largely, informal basis whereby "consumers have rights which non consumers do not share", as John Pilger (1998: 68) describes in *Hidden Agendas*. On the other hand, ICTs are facilitating the transfer of technologies and ideas from developed to developing countries in the spread of a new world information order (Dyer-Witheford 1999; Sklair 1995: 159-162). This is promoted, formally, by politicians and other policymakers (Ahwireng-Obeng and McGowan 1998). In Africa, evidence of this ranges from the north with Egyptian President Mubarak's (1999) prescription that, "[t]o invest in the technological industry is to invest without the least hesitation in Egypt's future" to the south with former-South African President Mbeki's (2001) proclamation that, "[w]e are determined to ensure that [South Africa] moves as speedily as possible onto…the information super-highway".[8] However, in the view of Joseph Stiglitz (1998a), technology transfer is insufficient to bring about development in the developing regions where it is needed most, primarily because of the widespread socio-economic and political realities facing such countries (Duffield 2002).

The rapidity and extent of this embrace beg the question of why exactly it is that historically 'western' technologies have come to be so dominant in the political agenda of the developing world, most notably in Africa. Explanations pertaining to cultural identity have long been overlooked.

[7] This average is possibly lower than some would expect. This is largely because 14 countries in Eastern Europe have averages below 41.2 percent. Those with the lowest are Albania and Serbia with 15.0 percent and 15.2 percent respectively. For a global and country-specific analysis of Internet and cellphone indicators, see ITU (2007a).

[8] David Moore has recently suggested that political 'publicisers', such as these Egyptian and South African leaders, represent the 'organic intellectuals' of society. This is a Gramscian concept, by which Gramsci (1971: 97) means "not those strata commonly described by this term, but in general the entire social stratum which exercises an organisational function in the wide sense – whether in the field of production, or in that of culture, or in that of political administration". For a useful intepretation of organic intellectuals, see Moore (1988).

This is especially because such a suggestion has not been granted much attention by political economists since the discourse of an 'African socialism' was, by and large, dismissed in the 1970s (Powell 2001: 242). As a result, this thesis is concerned with asking: why and when did ICT initiatives take priority in the minds of African policymakers? At what point do these technologies replace or become complimentary to the implementation of developing countries' government policies? How were, and are, these policies appropriated at grassroots level and how do they influence development in this context?

When embracing ICTs for development – whether this includes such aspects as promoting economic growth, reducing poverty, creating employment or improving health care – the improvement of access to and creation of information are often emphasised as the pioneering benefits of this technology (Ayanwale and Adekunle 2006: 17; Hudson 2006: 20; Sen 1999a: 162).

While these benefits are important, sometimes when facilitated by globalisation, they can also side-line the importance of local resources, skills and training (Habib and Padayachee 2000: 259; Moyo 2001: 314-317). To take this further, it also questions, in the minds of authors such as Hedley (1998) and Main (2001), the appropriateness of investing in digital technologies given the countless challenges faced in the developing world.

NEPAD's embrace, therefore, of free-market policies leaves questionable, on some level, the impacts of many of its development policies. This is because "political democratisation and economic liberalisation march together" (Moore 2001: 911). These are two criteria are sometimes cited as necessities for the 'openness' allowed by the possibilities of cyberspace in the 21st century (Ayanwale and Adekunle 2006: 17; Habib and Padayachee 2000: 245). The market arrangement which allows this, of course, fulfils the goal of many ICT policies seeking to increase the usage and accessibility to telecommunication devices (Hudson 2006: 1-15).

The thesis postulates that the 'digital' economy is a complex one requiring greater understanding by ICT policymakers and implementers. Arguably subscribing to views such as Bhabha's (1992: 88), which opened this chapter, it can be suggested that perceptions towards, and expectations of, this economy, are underpinned by an assumed technological determinism which is not always appropriate for socio-economic development (Hedley 1998; Main 2001).

It would seem that lack of clarity between ICTs as *goals* of development and ICTs as *tools* of development is the source of much failure of the development potential of policy implementation. Is the confusion between 'goals' and 'tools' due to technological determinism on

the part of politicians whether this be in the arenas of national, regional or continental socio-economic legislation, policy and rhetoric? Is it simultaneously due to the unbridled impact of modernisation at grassroots level – even in the most rural settings – which instils a 'commodity fetishism'[9] in the end-user?

While there is evidence of the communal sharing of cellphones so that groups can maximise their potential as communicative devices (such as in rural India; Konkka 2003) there is also a growing body of literature which shows how ownership has become a focal point of public fashion and how private ownership promotes individual self-worth (Cohen and Wakeford 2003; Katz et al. 2003; Katz and Sugiyama 2005). As Fortunati (2002) and Fortunati et al. (2003) show, this is sometimes taken to the extent that possession is fashioned as part of everyday clothing. This arguably creates perceptions in the consumer that "...having the appropriate device is not enough; it must also be personalised because ultimately, it is an expression of personal style and way of life" (Oksman and Rautiainen cited in Castells et al. 2007: 160). Evidence of such trends (Fortunati 2002; Ling 2003; 2004), particularly for purposes of social status, is also emerging in Africa. This raises much controversy over its inclusion amidst other concerns such as widespread hunger and poverty (Donner 2005; Hedley 1998; Main 2001). The manifestation of this is explored in the thesis to identify if such culturalisations exist in rural northern KwaZulu-Natal, and if so, how they are framed alongside national ICT policy.

With this in mind, the chapters are divided as follows: To commence with the investigation, Chapter Two outlines selected development theories from the post-World War II era. This provides a general introduction to how ICTs have entered and influence current theoretical discourse and to determine the most useful theory in explanation of African 'digital' political economy. In addition, the chapter provides definitions and analyses of the culture-ideology of consumerism, development and the digital divide.

Chapter Three traces the appropriation of rhetoric by regional African Economic Communities. It also explores their ICT-related policies and questions the extent to which these policies create an environment particularly for the profits of the transnational private sector. Against the backdrop of ICT prescription for development, and the adoption of these technologies in Africa, the continent remains largely burdened by poverty. This potentially sheds light on the actual beneficiaries of ICT introduction.

[9] Karl Marx (cited in Miklitsch 1996: 6) notes, "[t]he commodity appears, at first sight, a very trivial thing, and easily understood. Its analysis shows that it is, in reality, a very queer thing". He argues this, primarily because of the value attached to certain commodities based on 'sign-value' as an indicator of their worth, rather than on use-value. For a detailed study on commodity fetishism, see Miklitsch (1996).

Chapter Four traces the politics of the South African 'Information Society' since political democracy in 1994. It does this in order to pay systematic attention to potential contradictions in government ICT-related policy. The chapter argues that ineffective policy implementation possibly originates from these contradictions.

Chapter Five continues this analysis in the case studies of two villages in KwaZulu-Natal, South Africa: Ndumu and Sicabazini. It does this by paying specific attention to the 'telecentre' concept. In the absence of effective government policy, the topography of local ICT-politics is largely determined by the role of independent organisations and the private sector intervene which intervene in the name of development.

Chapter Six is a brief chapter which draws together the various conclusions of the preceding chapters. It also makes informed suggestions of the ways in which the ICTs of the Internet and cellphones can productively be used to bring about development.

1.2 Why is the topic important?

Castells (1996: 4, emphasis added) argues that in the digital economy, "[p]rophets of technology preach the new age, extrapolating to social trends and organisation the *barely understood* logic of computers…". Partially in response to such a claim, it is believed that the more attention which is granted to academic studies on this topic, and the improvement of dialogue between academics and government policymakers, the better.

Because the focus of this thesis is the complexities of cyberspace, through cellphones and the Internet, it addresses the ways in which these technologies are seen to offer paths towards development in countries of the global south. At the levels of inter-governmental organisations and certain national governments, the attractiveness of digital technologies has manifested in an appreciation that living in the 'information era', aptly, requires the augmentation of existing, and new, development strategies with ICTs. Potentially couched in technological determinism, a study is required to identify the accuracy of this view.

Perhaps the 'barely understood logic' which Castells describes, stretches beyond his limitation to computers. With a possibly limited understanding of cellphones and the internet, different, yet associated concerns emerge in academic literature. In fact, there is an ominous global consistency in the creation, preservation and cognitive processing of information, which ironically,

meets the deterministic standards sometimes preached against by the very people who indirectly promote that ominousness (Goodenow 1996: 197; Hudson 2006; Odendaal 2006). Studies, for example, on the 'digital' economy in Africa (Donner 2005; Powell 2001; Thioune 2003) should not lose sight, as they sometimes tend to, of the fact that "we need to take very seriously the legacy of past structures and mentality while appreciating that identities and economic forms can change radically and rapidly" (Marks cited in Freund 2001: 546). It is precisely because of this that an investigation is needed, not necessarily into historical origins of any sort, as Marks (cited in Freund 2001: 546) suggests, but certainly towards looking more critically and in-depth at realities. This may reveal the extent to which the digital economy does not directly benefit those marginalised communities it is seemingly intended for when interpreted as a tool in development studies.

1.3 Methodology

The purpose of this thesis is to examine the relationship between ICT policy at national level and the effects of government implementation at grassroots level, in rural KwaZulu-Natal, South Africa. The conclusions, however tentative, are based on consideration of the body of existing ICT literature. A perusal of the bibliography will reveal the relative absence of literature on the political economy of ICTs. Despite the fact that literature on ICTs is very limited – either in English or translated into English – in academic discourses, its inter-disciplinary nature demands a respective range of sources. As a result, this thesis is based on a fusion of literature which ranges from the disciplines of political science, sociology and philosophy to information studies, internet studies, economics and management studies. It is the hope that the mix of comparative knowledge across these disciplines will contribute to greater interest in, and far more comprehensive studies than the present one on, the political economy of cyberspace. Further, it is hoped that this methodology will offer a useful analysis and will contribute to the promotion of more thorough investigations into 'digital' political economy.

This thesis makes use of primary and secondary literature. For Chapters 2, 3 and 4 the primary sources are various. They include publications and speeches of African governments dealing particularly with information and communication. In addition to this, the thesis makes use of publications and speeches from the African Economic Community. These include the New Economic Partnership for Africa's Development (NEPAD), the Southern African Development Community (SADC), the Economic Community of West African States (ECOWAS) and the Common Market for Eastern and Southern Africa (COMESA).

The thesis also draws on secondary literature and theories of development, particularly since the end of World War Two to the present. These sources allow for the required engagement with discourses since 1945 as well as with more recent studies of the digital economy. This fusion provides a basis for a unique analysis of political economy, in what is referred to as 'digital' political economy.

1.4 Goals and tools

Cowen and Shenton (1996) argue that when the intention to 'develop' is a response to the question 'What is development?', the actions of that intention are substantiated. On the other hand, "When the question, 'What is intended by development' is *confused* with the question 'What is development?', an intention to develop is routinely confused with an immanent process of development" (Cowen and Shenton 1996: viii).[10] In other words, actions in the name of development are not necessarily reflective of an actual occurrence of development even though it may be believed that this will occur.

A similar methodology is used in this thesis in terms of problematising development. It is argued that the intentions – or tools – thereof can be routinely confused with, in a broad sense, definitions – or goals – of development. When the fulfilment of tools of development are viewed as the completion in a process of development it is not necessarily the case that development has occurred. Possibly in recognition of this, the WSIS (2004: 2, emphasis added) has expressed,

> We are aware that ICTs should be regarded as *tools* and not as an *end in themselves*. Under favourable conditions, these technologies can be a powerful instrument, increasing productivity, generating economic growth, job creation and employability and improving the quality of life of all. They can also promote dialogue among people, nations and civilisations.

The descriptions, as interpreted by the WSIS, of what ICTs can be and can promote are indirect references to the definitive goals of development.

The understanding of 'goals' and 'tools' is developed in this thesis on two vertices. The first is *horizontal* in which the yardstick of analysis is that tools are associated strategies and processes which are implemented by states to achieve specified goals. The assumption is that 'goals' are those aspects of government policy which seek to be achieved because they serve the interests of the public at large or the interests of a specific targeted group of people. 'Tools' are assumed to be the facilitatory policies and processes employed to achieve the respective 'goals' they are targeted at.

[10] Cowen and Shenton apply this to expressions of state policy. It is the attachment of 'development' to the agency of the state which gives definition to *doctrines of development*. This is, incidentally, the title of their book.

The second is *vertical* in which internal processes of the first vertex are bureaucratised with a devolution of tasks. For this, goals and tools, on a less 'macro' level, overlap and are substitutable. To illustrate the vertical vertex, a key policy of the state could be to achieve adult literacy rates of 100 percent for those between the ages of 16 and 65. This would be a 'macro' goal of the state. The tools to achieve this, as developed in national policy, could include better teacher training in primary and secondary schools, the subsidisation of enrolment to such institutions for those who cannot afford it, and perhaps, nationwide e-learning programmes to reach the most marginalised communities. The goal and its associated tools operate, metaphorically, on a horizontal vertex. On the vertical vertex, the national Department of Education may appoint various task teams to implement the above tools. From the perspective of these task teams, the fulfilment of these tools becomes their *goal* even though it differs from the national goal. If the task team appointed to developing e-learning courses and their infrastructure establishes access points in rural areas (such as Internet cafés and telecentres), it becomes the goal of local management to ensure the sustainability of the centre and that it operates in a manner which is conducive to the e-learning initiative. The goal of the person who attends these courses is to become literate. The tool for achieving this literacy is the e-learning course.

1.5 Limitations of study

The shortcoming of many studies on the implementation of ICTs is that they are based on a hypothesis about the causation of development rather than on a general framework for analysing development. As a result, literature on ICTs has a tendency to *explain*, in a narrative sense, what they *can do*, but it falls short in actually *defining* them, in an empirical sense, in terms of what *they are*. This is a shortcoming which is sometimes overlooked in both applied and social sciences. For example, mainstream narrative investigations of ICTs in anthropology, sociology, information and media studies, broadly speaking, contain analyses of ICT content. These include studies on (but are not limited to) cyberactivism (Croteau 2004), cyberculture (Stone 1996), cyberidentity (Turkle 1995) and surveillance (Lyon 2007). For illustrative purposes, studies encompassing these themes are directed at: the Zapatista movement in Mexico which used the Internet for gathering support for social and political justice (Cleaver 1998; Walch 1999); the role of SMS and the Internet in the ousting of President Estrada from office in the Philippines in 2001 (Bagalawis 2001; Salterio 2001); the role of cellphones in mobilising young voters which helped bring President Moo-Hyun to power in Korea in 2002 (Hachigian and Wu 2003); the role of the Internet and wireless communication in the political defeat of the Partido Popular in Spain in 2004 (Rodriguez and de Ugarte cited in Castells et al. 2007: 198-202); and most recently, the role of the cellphone in Barack Obama's

(successful) campaign for gathering support amongst young voters in the United States' presidential elections (Smith 2007).[11]

These analyses into the content potential of ICTs are important to the fields of ICT-based academic literature, but are necessarily separated from the present study. This is because they are distinctly different to, as this thesis shows, technical accounts of how ICTs are conceived as technologies of government policy and shaped by broader political economy. It is the belief, as a point of entry, that only once attention is invested from this perspective, in terms of what ICTs *are*, that their content potential, as a function of what they can *do*, should be explored.

To proceed, attention is granted specifically to the new information and communication technologies (NICTs) of the Internet and the cellphone. This is performed, firstly, for the obvious reason of limiting the scope of analysis since the intention is analytical and not encyclopaedic. Secondly, even though the evolution of these technologies is rooted in decades past (Farley 2005; van Thanh and Jørstad 2005), with their own individual histories, this thesis is limited to their existence in their present forms. It is these forms which are most characteristic of the present digital economy. This is evident, as shown throughout this thesis, in the rhetoric of political leaders, international organisations and the global corporate sector, as well as in the culturalisations of the public in the global information society. Thirdly, in industrialised countries, the telephone proved to be a central factor in the reshaping of urban spaces, the workplace and the home (Castells 1996; Saunders et al. 1994). While the cellphone and the Internet are increasingly looked at as means of hastening such changes in the 21st Century (Ling and Yttri 2002; Townsend 2000; Wellman 2002), they are, in many rural areas, the first kinds of NICTs (Castells et al. 2007). As a result, it seems that they bring with them new social complexities, culturalisations and economic possibilities. It is the landmark potential of NICTs in rural areas which is the final objective of the study.

The preferred approach to this thesis would have been to formulate a mix between government ICT policies, political speeches and legislation, as primary sources, and studies in the confines of academic research, as secondary sources. However, the global escalation in the appropriation of ICTs – particularly in the developing world – is far quicker than the processes involved in performing academic fieldwork, the formal writing of studies based on this, and lastly, publication. While every effort has been made to limit the literature used for this study to the standards of academic rigour, the scarcity of such literature has been limiting. As a result, the

[11] As the election race heated up, particularly in October 2008, Obama's camp introduced. 'The Official Application' for iPhone and iPod touch. This improved public interaction with the campaigners and made updated information about Barack Obama and Joe Biden quickly available.

bibliography has been extended to include information from media reports, private consulting firms, international organisations and a range of credible online authors.

Furthermore, in Chapter 3, which examines ICT policy in Africa, a key limitation is the availability of information. Data and information gathering from national websites proved particularly challenging as some countries do not even have an official (government) online presence (such as Eritrea and Mali). A translator was employed to translate the websites of Francophone countries and regional economic communities. However, it was determined that no government documentation was available from such sources. As a result of this 'dead end', it is assumed to be beyond the scope of this study to delve into French-written academic studies. Because of this, the chapter is limited to the regional economic communities of the Southern African Development Community (SADC) and the Economic Community of West African States (ECOWAS). Less substantial, but interesting, information on the role of the private sector in the Common Market for Eastern and Southern Africa (COMESA) has also been included.

For Chapter 5, it was promised, by an interviewee (government representative), that data serving to confirm various claims by local people in Ndumu would be e-mailed. This data remains necessary to this study. Following the interview, the interviewee was reminded of this via both telephone and SMS. Over the period August-October 2008, six phone calls were made but none were answered. Of these six calls, voice messages were recorded for three. During this same period, 16 SMSes were sent serving as reminders of the promised information. However, none of these were responded to.

1. 6 Case studies

1.6.1 Ndumu and Sicabazini

This section offers an introduction to the chosen case studies of Ndumu and Sicabazini which are the two case studies in this thesis. The village of Ndumu is situated in northern KwaZulu-Natal and is part of ward 16 in the Jozini Municipality. The village of Sicabazini lies approximately 35 kilometres, by road, east of Ndumu. It is Ward 8 of the uMhlabuyalingana Municipality. In 2001, the Jozini Municipality had a population of 184 052, which increased to 207 250 in 2007 (Statistics South Africa 2007). Comparatively, the population of the uMhlabuyalingana Municipality increased from 140 958 to 163 694 over the same period of time (Statistics South Africa 2007). Both villages were once agriculturally self-sufficient. However, drought, politics and socio-economic influences have greatly affected the living conditions of local people. Evidence of this exists in the excessively low levels of access to water and electricity as well as the prevalence

of poor sanitation and healthcare.

Until the mid-to-late 1990s, these regions remained largely unknown to people not in direct or indirect contact with locals. With few landline telephones and no interest from South Africa's mobile telecommunication providers, this part of KwaZulu-Natal remained largely neglected. It was arguably various individuals and P.E.A.C.E. Foundation,[12] a non-profit organisation, which continue to play central roles in facilitating local development processes and in the process, highlighting government shortcomings and failures.

Figure 1.3 Geographical map showing Ndumu P.E.A.C.E. Community Centre and Sicabazini Community Centre

Source: Europa Technologies et al. (2008)

[12] This acronym stands for Planning, Education, Agriculture, Community and Environment. These are the pillars on which the Foundation's actions and activities are based.

Figure 1.4 Ndumu P.E.A.C.E Community Centre, 2 July 2008

Source: Own Image

Figure 1.5 Sicabazini Community Centre, 2 July 2008

Source: Own Image

Because available data from Statistics South Africa's (2007) *Community Survey* provide information for Municipalities, but *excludes* analyses of particular Wards, a range of statistics has been compiled for this study to provide a more recent assessment of living standards in Ndumu and Sicabazini. To do this, a random selection of households was used for the analysis to provide a representative profile of the respective communities.[13] For the study, 20 people, each from Ndumu and Sicabazini, voluntarily agreed to participate. These comprised 14 males and 6 females in Ndumu, and 11 males and 9 females in Sicabazini. According to the United Nations Development Programme (UNDP 2008), 'poverty' includes "not only a lack of income, but also ill-health, illiteracy, lack of access to basic social services, and little opportunity to participate in the processes that influence people's lives". Informed by this, but less specific for the direct purposes of this thesis, income and illiteracy (education) were chosen as the focus amongst inhabitants older than 16 years of age. The following data was compiled and the results are applied to the remainder of the chapter.

Sadly, municipal officers in Jozini and uMhlabuyalingana (the Municipalities within which Ndumu and Sicabazini are, respectively, located) were not helpful in granting interviews for this study. In fact, many scheduled interviews were cancelled upon arrival at the Municipal Offices and promises of official data were not kept. As a result, questionnaires were used for a random sample of the respective local populations. To avoid the impression that the interviewer or the research was judging local people, the questionnaires were offered on a voluntary and anonymous basis. Further, people were only approached by the interviewer if they were in groups. Those who completed the forms were asked to give them to any individual and then to the interviewer. This was done to eliminate any perception that the interviewer was concerned with the identity of the respondents.

[13] The purpose of the study was explained to participants in isiZulu. They were only allowed to participate in the data survey after it was emphasised that this was voluntary and anonymous.

Particularly because of the need to determine the affordability of computer literacy courses for local people, limited financial information was also gathered from the respondents. Because of the sensitivity of such data, great care was taken in its collection. Thus, an emphasis was placed on voluntarism, clarity – in isiZulu – regarding the aims of the study and the protection of identities, even from the interviewer.

In the absence of academic analyses of ICTs in Ndumu and Sicabazini, the research for Chapter 5 is mostly reliant on primary interviews and questionnaires. In addition, this chapter requires official documentation of, and interviews with members from, the South African government, the P.E.A.C.E. Foundation and Vuvuzela Communications.[14] Limitations to Chapter 5 include the representation of Ndumu and Sicabazini citizens. This is because the analysis is restricted, for practical purposes, to 40 people. The results of the study are not intended to, in the absence of additional research based on greater local representation, bear any significance on those local people beyond the limits of this study. Rather, it is hoped to prompt further investigation into these marginalised rural areas. Finally, because the focus of this case study chapter is not to intentionally incriminate any of the local inhabitants or those involved in the development of Ndumu or Sicabazini, pseudonyms have been used in certain cases.

The thesis also draws on secondary literature and theories of 'development', particularly since the end of World War Two to the present. These sources allow for the required engagement with discourses over this period as well as with more recent studies of the digital economy. This is necessary in the attempt to assess the accuracy of development theories in accounting for the socio-economic and political dynamics of ICTs in the villages of Ndumu and Sicabazini in KwaZulu-Natal.

1.6.2 The P.E.A.C.E. Foundation

The P.E.A.C.E. Foundation is an organisation which is involved in the 'development' of both Ndumu and Sicabazini. It was established in 1993 as a non-profit organisation (NPO) and was originally based at the then-University of Natal (now the University of KwaZulu-Natal). It is headed by Dorothy who has held the position of Executive Director since its formation. With a central focus on poverty alleviation in rural communities, the organisation focussed originally on such communities in KwaZulu-Natal and the former Northern Province (now Limpopo) but soon expanded its operations to also include Mpumalanga and the Eastern Cape. The main feature of P.E.A.C.E. 'development' initiatives is the establishment of P.E.A.C.E. Development Centres

[14] The P.E.A.C.E. Foundation and Vuvuzela Communications are, respectively, the non-profit organisation and private company, which are involved in ICT-relate 'development' in Ndumu and Sicabazini.

(PDCs). These Centres are multi-functional hubs which are concerned with such aspects as promoting local economic growth and micro-enterprise, improving municipal service delivery and improving the interaction between the community and local political leaders (P.E.A.C.E. Foundation 2006: 10-23; P.E.A.C.E. Foundation 2007a: 2). All of these are included, holistically, in the five elements which are defined in the P.E.A.C.E. acronym: Planning, Education, Agriculture, Community and Environment. These are believed to contribute integrally to the alleviation of poverty in rural communities because they are "built around the needs and structures of the particular community in which they are developed" (P.E.A.C.E. Foundation 2007a: 2). While doing so, they are seen to improve access to information which educates local people about how to use resources (more) productively. The organisation's efforts towards sustainable regional development have been continuous. This has been carried out in different parts of the country, through its Community Development Centres which have established crèches, information hubs and, amongst other features, set up infrastructure for bakeries, bottled peanut butter, juice-making, sewing, welding facilities and telecentres.

Chapter 2: The Meaning of Development: Theory,[15] Concepts and Definitions

2.1 Introduction

> *...without new information technology global capitalism would have been a much- limited reality...* (Castells 1996: 19)

This chapter traces the rise and fall of selected theories of development since the end of World War II. It is most characteristically since then that development, with its vested interests – most clearly connoted with American hegemony – has come to define the relations between the global north and the global south.[16] Against this backdrop, the evolution of capitalism has come to be intricately associated with technology. It is precisely this relationship which creates a paradigm for new ICTs to be analysed in the social sciences. The association of this relationship with development aid implies a marriage with 'digital' political economy as a field of academic analysis. It is arguably from this marriage that stems a digital divide. This seemingly propels traditional (and gives birth to new) conceptions of the geopolitics of socio-economic disparities into the digital world. To develop a point of entry into the remainder of this thesis, useful definitions are also provided in this chapter.

2.2 Truman's (in)famous 'point four'

Following World War Two, the balance of European global power was clearly shifting towards the United States and the Soviet Union. Having been plagued with Nazism, and also devastated by war, Western Europe arguably had little choice but to heel to the new powers.[17] Its reconstruction commenced, based largely on the theories of the economist, John Maynard Keynes (Leys 1996: 8).[18] In 1947, this reconstruction was stimulated financially through the American

[15] It is argued by Leys (1996: 4) that Hegel and Marx were the "true originators of development theory". The former saw the unfolding of history as a process of 'development' and a "progression to the better" (Hegel 1953: 11). The latter saw 'development' as the succession of modes of production (primitive communalism, feudalism, capitalism and socialism, respectively).

[16] This dichotomy was popularised by the 1980 Brandt Report. The 'north' refers to the world's richest and high-income countries. It is also these countries which dominate international financial systems. The 'south' comprises the world's poorest, middle-income and capital-surplus oil-exporting countries. The Brandt Report was compiled by the Independent Commission on International Development and was chaired by Willy Brandt (a former Chancellor of West Germany). At the time, it was considered as one of the most comprehensive analyses of international development issues. For a critical introduction to the Brandt Report, see Williams (1980).

[17] The United Nations (UN) which succeeded the League of Nations, came into existence in October 1945. The United States was granted the authority to veto any decision taken by the UN . This contributed to the shift in western power from Europe to the United States.

[18] In 1944, the Bretton Woods conference took place. This was mostly to discuss ways in which to reconstruct the international financial system which had been devastated by war. At this conference, it was the views of two key economists which dominated: the American Harry Dexter White and the British John Maynard Keynes. Keynes proposed the introduction of standard world unit of currency called the Bancor. He also proposed the creation of two new institutions to manage international trade. These institutions would comprise of a world central bank and the International Clearing Union. However, with the growth in American political strength, the outcome of the Bretton

Marshall Plan. By 1948, with the Soviet blockade of Berlin, it became clear that the primary politico-economic interests of the global powers was Europe. It is in the "hardly propitious" context, following World War II, and against the backdrop of the looming Cold War, that the notion of developing the 'underdeveloped'[19] – as a concept of global relations – entered international rhetoric (Rist 1999: 70).[20]

On 20 January 1949, newly-elected President Harry Truman delivered his inaugural speech. Given the challenges in global politics, it was clear that this speech would need to address foreign policy very closely. The speech can be broken up into four main points. The first three dealt with the Marshall Plan, the United Nations and NATO. However, instead of being remembered for its first three points – which showed support for the newly-formed United Nations Organisation (UNO), a commitment to European reconstruction and the creation of the North Atlantic Treaty Organisation (NATO) in response to Soviet threats – it has been remembered for point four. This point is labelled by Rist (1999: 70) as a "public relations gimmick" and based on "opportunist deception" (Rist 1999: 70). This point was mostly in reference to the need to assist the 'underdeveloped' world and marked a watershed in broader global socio-economic and political relations. This was not because the implications of the term 'underdeveloped' portrayed characteristic countries as being antithetical to those of the developed world. Rather, it was because of its implications of them being able to achieve similar development to the developed world by subscribing to specific policies. In other words, 'underdeveloped' did not simply point to a state of being, but to something which could be overcome through a process of foreign assistance.

In a broader context, it is important to keep two factors in mind: firstly, against the backdrop of the Cold War, it was strategically useful to offer the benefits which Truman outlined, only to "peace-loving peoples", "free-peoples" and those willing to embrace "democracy" (Truman 1949). Partly for this reason, Rist (1999: 80) argues that the Cold War constituted the 'Third World' as "an ideological battleground of the major powers". Secondly, with the Universal Declaration of Human

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Woods Conference was in favour of White. His proposed creation of the International Bank for Reconstruction and Development (now the World Bank) and the International Monetary Fund began operations in 1945.

[19] The definition of this term varies in academic literature. In fact, as Foster-Carter argues, the variance even sparks a "controversy". Some Marxists, such as Warren (1973) question the very relevance of the term as it detracts attention from the early stage of industrialisation which he argues 'developing' countries are at. Others believe that 'underdevelopment' signifies a 'blocked transition' in that 'developing' countries are caught in an orientation based on export production and import consumption (Amin 1974). To Frank (1969), capitalist development in the 'core' ('developed' world) can only take place with the development of 'underdevelopment' in the 'periphery' ('developing' world).

[20] This is not to say that this concept was invented at this time. Cowen and Shenton (1996: 7) show that it was used by Bourdillon, the governor of Nigeria in an address to the Royal Empire Society in 1937. In fact, even 32 years before, British Prime Minister Bannerman (cited in Cowen and Shenton 1996: 7) said that "We desire to develop our undeveloped estates in this country; to colonise our own country".

Rights signed two years earlier, it was also important to dispel, in global politics, the association of subordination with colonial relations. As a result, Truman's point four made reference to the "human family", and expressed the importance of relieving the "suffering" and "burdens" of such people (Truman 1949). This was in stark contrast to the traditional conception of 'coloniser' and 'colonised'. Whereas that conception often led to traditional liberation struggles of class formation and conflict, Truman's idea of the human family clearly challenged this.

Even though President Truman's speech was made 60 years ago, it is still very relevant to the present. This is because it marked an "opening act of a new era" in which the paradigm of development shifted (Rist 1999: 78). Indeed, as a result of this new paradigm of development being stretched universally, it is argued that foreign intervention gained some ground in terms of its legitimacy. In reality, the paradigmatic shift of this intervention was simply from European colonialism to American hegemony with comparable influences and consequences over the 'underdeveloped' world. Indicative of this, for example, is Truman's mention in the fourth point of his speech of "knowledge and skill" and "modern scientific and technical knowledge" as being needed in 'underdeveloped' countries (Truman 1949). He argued this because of the direct association of these resources with greater production and improvements in standards of living. In fact, that association from the political level it was publicised is mirrored in current perceptions of technology. This is shown through the support which NICTs, in particular, are given by politicians, development institutions and ICT implementers (see Chapters 1, 3 and 4).

2.3 A selected history of approaches to development theory (post World War II)

Development theory, as a term of Western development theorists, emerged in the 1950s (Leys 1996: 5-6). This was particularly in response to transforming and improving the productivity and domestic economic growth of colonial economies (mostly of European powers) as decolonisation approached. However, with much failure in India and parts of Latin America, the initial optimism which had been attached to development theory became increasingly diluted. A response to these failures was heeded by the American Modernisation School.

Some modernisation scholars have expressed, vehemently, belief in the idea that the role of ICTs (such as the radio) was to "implant and extend the idea of change, to raise the aspirations of...people so that they will want a larger economy and a modernised society" (Schramm 1967: 18). This idea formed the basis for the dominance of the modernisation paradigm in studies of development which drew on the use of technology. Broadly speaking, the polarised ideas of 'traditional' and 'modern' in modernisation theory fuelled impetus in many ideas. The clearest was

that for 'Third' and 'Second' Worlds to develop, they needed to follow the politico-economic and value systems of the 'free' 'First' World. Critical to this was the transfer of education and technology to facilitate the diffusion of western grounded knowledge and ideas (Lerner 1967; Leys 1996).[21] The vision of transforming less developed nations into more 'constructive', 'creative' and 'functional' nations (Lerner 1967, Myrdal 1968, Leys 1996) is presently continued, as argued by Schech (2002) and Standing (2000) with focus on the World Bank. By positing itself as a "knowledge bank",[22] it not only defines those parts of the world which lack 'knowledge' (by its own quantitative measures), but it encourages the view of itself as the provider of knowledge (World Bank 2008).

In the 1960s and 1970s, Rostow's (1960) linear growth model and, Lewis' (1954, 1955) structuralist model provided the most dominant economic growth theories with emphasis on 'economic growth' and 'expansive productive capacities'. The former followed a 5-stage model and the latter prescribed the emulation of the global north. However, the links between 'economic growth' and 'production' on the one hand with 'democracy' and 'development' on the other hand were questioned throughout this time for two main reasons.

Firstly, economic growth, by and large, failed to have a 'trickle down' effect to the 'intended' communities and nations (Hunt 1989: 71); secondly, the 1970s brought instability to global economic markets following successive oil crises. Furthermore, countries in Latin America had still not been rewarded with the benefits of development which were attached to American development plans, despite ironically being formally independent for more than 100 years.

Against this backdrop, support for dependency theory – made popular by Andre Gunder Frank – grew in intellectual circles. Its central idea is that countries of the global north (core countries) "actively underdevelop" countries of the global south (peripheral countries) (Graaff and Venter 2001: 77). According to this view, ICT imports from the 'core' to the 'periphery' will lead to further underdevelopment in the latter. This is because ICTs will, accordingly, facilitate an improvement in communication between the 'core' and 'periphery' and, in this way, strengthen the relations of dependence. However, this theoretical relationship seems too deterministic as it would need to argue that the emerging technological paradigm marked by rapid inventions and upgrades, was a *response* to the internal contradictions of capitalism at the time. This is a link which Castells

[21] Beck (cited in Duffield 2002: 1055) suggests that the 'new wars' in many 'developing' countries have arguably been the consequence of attempts at the local refashioning and transformation of neo-liberal globalisation to benefit from its associated 'opportunities'. He terms this, 'reflexive modernisation'.

[22] Former President of the World Bank, James Wolfensohn, first used this term in 1996 in the effort to promote "mainstream knowledge sharing learning" (World Bank 2008).

(1996: 51) argues does not exist. Further contradictory is that while the problem in Dependency is (under)development by a reliance on *inclusion* in the system it describes, the deficiency of development in the 'network society' is based on *exclusion* (Schech 2002).

Nonetheless, the scale of dependency theory's popularity during the 1970s was emphasised with the international development community responding positively to some of its perspectives. This mainly took the form of the International Labour Organisation (ILO) and the World Bank adopting ideas pertaining to the redistribution of growth and basic needs respectively (Leys 1996: 11-12; McNamara 1973: 10-11). At the time, literature which showed the reciprocal relationship between economic growth and economic inequality in countries of the global south became more abundant (Adelman and Morris 1973; Ahluwalia 1976; Paukert 1973;). Seers (1972: 124) comments:

> The questions to ask about a country's development are therefore: what has been happening to poverty? What has been happening to unemployment? What has been happening to inequality? If all three of these have declined from high levels, then beyond doubt this has been a period of development for the country concerned. If one or two of these central problems have been growing worse, especially if all three have, it would be strange to call the result 'development', even if per capita income doubled.

According to Hunt (1989: 267):

> the purpose of development is to provide everyone with the opportunity for a full life, and that meeting basic needs is an essential prerequisite for this...there is also broad consensus that certain basic physical, intellectual and psychological needs are common to all people, and that their fulfilment constitutes an essential precondition for a full life. The most important of these needs are for adequate nutrition, shelter, fuel, clothing, clean water, sanitation, health care, basic education, productive employment...and popular participation in decisions concerning the provision of these needs.

With views of development such as these, widespread interest has emerged in investigating the relationship between ICTs and basic needs (Ayanwale and Adekunle 2006; Arokoyo 2005; Kalusopa 2005).

With the oil crises of 1973-4, and 1976-9, together with an emerging debt crisis from excessive lending (marked most emphatically with Mexico defaulting in 1982), the economies of many developing countries were in disarray. *Simultaneously*, many developed countries were experiencing economic instability, prompted mostly by the economic crisis in the United States' economy (and not directly as a result of the oil crises). As a result, while basic needs continued to grow in popularity, dependency received a counter-revolution from neo-classical economics which

provided a top-down trajectory of development (Moore 2004).

During these years, many technological developments were sprouting either as a result of new inventions or upgrades. These ranged from the inventions of the microprocessor (1971) and microcomputer (1975) to commercially-available VCR machines (1977) to various upgrades in operating system software throughout the decade. One must not assume, as it is sometimes misconceived, that the technological revolution of the 1970s was a response to the internal contradictions of capitalism.[23] He makes it clear that such technological advances were "technologically induced rather than socially determined" (Castells 1996: 52). He goes on to emphasise that within the context of neo-classicism, specifically of the 1980s, technologies' "development and applications, and ultimately its content, were decisively shaped by the *historical context* where it expanded" (Castells 1996: 52, original emphasis). This context praised the free-market (as opposed to state assistance), the 'invisible hand', privatisation and foreign direct investments (FDI) (Toye 2003: 71; Moore 2004: 88). At its core, the neo-classical 'counter-revolution' was based on high fiscal discipline and the free movement of national and international capital (Leys 1996: 7).

The ensuing pessimistic economic environment allowed the IMF and the World Bank to base development assistance, in what became known as structural adjustment[24] conditionality, to countries of the global south. This assistance was based on them accepting the fiscal disciplines mentioned above. Implicit in the free trade, which was a promised benefit of economic policies of liberalisation, was an integration into a global economy with ICTs at its core.

Symptomatic of adopting these economic reforms (in an environment commonly described by many political economists as neo-liberal globalisation) was the international restructuring of telecommunications sectors, mostly through their growth and reorganisation. For example, the call for liberalisation as one of the conditions for aid to countries of the 'south' was contingent on some reforms such as the privatisation of telecommunications sectors. This was rudimentary in

[23] Another popular misconception is that the creation of the United States Defence Department's Advanced Research Projects Agency Network (ARPANET) in 1969 was a measure to prevent a nuclear attack from the Soviet Union. Abbate (2001: 150) dismisses this outright: "This was never the case. The ARPANET was a research network, not a military command and control system; there is no evidence that it was ever regarded as a military target, and far from being secret, the technical details of the ARPANET were openly published". At the same time, however, Edwards (1997: 43-74) shows the role of computers during the Cold War in the United States. He shows that the research for this was mostly funded by military agencies before, during and for years after World War II.

[24] The term 'structural adjustment' was originally used by the World Bank in its 1978 *World Development Report* (1978: 14-15). This was in reference to OECD countries' breakdown of the Multi-Fibre-Arrangement (MFA) and the resulting restructuring of their industries. However, following the rapid increases in developing countries' debt and balance of payments problems, it was thought that the application of this term would be more apt in the latter context (Mosely et al. 1991: 22).

facilitating the networked globe on which global capital would increasingly depend. The effects of policies which ensured that "poverty-alleviation was demoted to priority zero so that the 'structural adjustment' of the developing economies could take place" (Mosely et al. 1991: 22) has been widely explored in politics and economics (Moore 2007; Mosley et al. 1991; Sender 2002; Stiglitz 1998b).

The relationship between the ensuing and predominant economic framework and ICTs was bonded by the support for limited government intervention in public service, by US President Ronald Reagan and British Prime Minister Margaret Thatcher. In an attempt to not fall too far behind the United States and Japan in the electronic sector, 1982 was proclaimed by Thatcher as 'Information Technology Year, IT-82'. With the wedded activities of the 'economy' and 'technology' union consistently improving, Al Gore's proclamation of an 'information superhighway' during the 1992 US presidential elections, received much attention. The aim of this, as defined in the Agenda for Action on the National Information Infrastructure (NII), was to "put vast amounts of information at users' fingertips" (United States Government Department of Energy 1993: 5). Distinctly moving beyond use by the United States Defence Department since the 1960s[25] there was an expansion of network technologies to include the economic development of private and public sectors within the United States and also as part of development strategies for developing countries. This shift towards the use of ICTs in American internal policy and foreign development policy was encouraged through the concurrent emphasis on market liberalism and technological innovation.

With the shift of technological manufacturing to Asia, the emphasis in North America, Northern and Western Europe shifted to creating a sophisticated information-based economy, which would draw on "an elite class of knowledge workers" (Burnett and Marshal 2003: 128). It is arguably from this that sprouted similar energies towards an information-driven economy, particularly since the late 1980s, which would replace the industrial manufacturing alternative in other developed countries. The association between political rhetoric, free-market policies and information technology began to spread through the developed world. Australian Prime Minister, John Howard (1996-2007) (cited in Department of Broadband, Communications and the Digital Economy 2002) identified that:

> [t]he information age represents an opportunity to improve all Australians' living standards and offers us enormous possibilities for the way we live, work, learn and interact. The challenge is to

[25] In 1969, a U.S. Defence Department research agency, the Advanced Research Projects Agency (ARPA), created ARPANET. This was intended to facilitate the sharing of computing resources amongst research sponsors of ARPA, most of whom were based at American universities. In the 1970s, the next generation of networking technologies, the Internet, was born. For a detailed account on the history of the Internet, see Abbate (2001).

> maximise the potential benefits for all Australians, and to enhance our competitiveness as part of the global information economy".

In 1998, Canadian Prime Minister, Jean Chrétien, emphasised the importance of internet access. In his speech, he publicised a new strategy called 'Connecting Canadians'. It was aimed mostly at expanding Internet access in the country, particularly to connect all schools and public libraries via this electronic medium. In addition, this strategy would create 10 000 public access Internet sites in Canadian rural and urban areas (Prime Minister's Office 1999). Romano Prodi (1999), the President of the European Commission (1999-2004), argued strongly that, "[m]odern economies are increasingly knowledge-based, and this is an area where we have a competitive advantage at world level. Encouraging the use and development of information technologies will therefore be a priority for the new Commission". In 1999, efforts were expressed, by France's Chirac administration, to completely deregulate telecommunications in France. This was hoped to, amongst other ambitions, facilitate greater "French presence" on the internet (Blocman 1999).

The idea of this kind of technological attention spread in the economy and politics between these countries, and others, and contributed to the rejuvenation of capitalism (Castells 1996: 201-203). Simultaneously, this encouraged developing countries to further deregulate their telecommunications sectors and, more generally, embrace the economic policies noted above. Following the methodology of the Structural Adjustment Policies (SAPs) of the 1980s, developing countries in the 1990s had to perform specific (re)structuring to 'benefit' from the possibilities of technology transfer. It this precisely at this point that Chapter 3 commences with ICT-related policies becoming increasingly characteristic of African political discourse.

2.4 Culture-ideology of consumerism

Because the culture-ideology of consumerism is not generally discussed in orthodox development theory, it is granted separate attention here. Before even engaging with the relationship between consumerism and capitalism in general, and the culture-ideology of consumerism in particular, it is essential to make specific mention of Trentmann's (2004) *Beyond Consumerism: New Historical Perspectives on Consumption*. This work highlights the significance, historically, of the various interpretations and implications of 'consumerism' as a term based on the *goods* or *services* consumed, *why* they are consumed, and of course, the *consumer.* He explains that because, over the last 20 years, philosophical interpretations of consumerism have been based on modernity as a *subject*. They have, ironically, "followed on a changing assessment of 'modernity', not vice versa, and this theoretical dynamic inevitably had a decisive effect on how consumption and the consumer are portrayed" (Trentmann 2004: 373). While historical

understandings of consumption are necessary to compare the individual, society and state in different regions and at different historical moments (not always for the furtherance of capitalism), this thesis escapes such a complexity.[26] This is because, despite the historical evolution of technology, new ICTs are a modern invention and have, even more recently, been introduced into the consumer markets of the developing world. As a result, the technology transfer of the Internet and cellphones are discussed in this thesis, as being positioned within modernisation theory.

Amid the popularity of the Modernisation School, Wells (1972) began to develop an alternative view to modernisation. He suggested a dissection of this into 'consumption' (increases in developed countries' consumption of material culture) and 'producerism' (increases in the productivity of work in non-consumerist economic sectors). With this dichotomy, he asserted that "development requires the maximisation of producerism" not the "antithetical" alternative (Wells 1972: 47-48). His general categorisation of countries continues today along the lines of high producer-consumer societies, high producer and low consumer societies, low producer-consumer societies, and low producer and high consumer societies.

High producer-consumer societies include countries like the United States, those in Western Europe and South and Eastern Asia. Of these countries, perhaps the most descriptive accounts are to be found on China (Clark 2003), Japan (Holden and Tsuruki 2003) and South Korea (Fowler 2005). There, consumer markets are rapidly growing, to the extent that McGray (2002: 34-35) writes of "Gross National Cool" being the appropriate indicator of assessments on contemporary Japan. High producer and low consumer countries would refer to those such as the former Soviet-Union. There is a growing body of case study literature to suggest that with the invention of modern ICTs, and their usage in those regions which Wells (1972) described as low producer-consumer societies, such societies are becoming low producer and high consumer societies (Burke 1996; Hudson 2006: 13-14; Inusa and Bytheway 2006: 133). This trend appears to be expanding in large parts of the developing world. In some of Africa's poorest countries, the globalisation of commodities and the western culture of consumerism seem to account, at least in part, for why some argue that NICTs are purchased by local people at the expense of other, arguably more beneficial goods and services (Alexander et al. 2006; Arellano et al. 2003; Hedley 1998; Main 2001; Msiska and Chigona 2006). Castells et al. (2007: 59, emphasis added) show that "...because of their association with higher income and education, mobile communication gadgets serve as indicators of *social status* in the context of developing countries, thus adding a peculiar dimension

[26] Stearns (cited in Trentmann 2004: 378) traces the origin of 'consumerism', as is commonly understood as being based on material possession, to early modern China. It was during that time that expensive goods, such as cloth, were purchased as items of luxury for the first time in recorded history.

to the processes of social appropriation". Evidence of this – described by Rafael (2003: 404) as a "display effect" – is notable in the developing world. Examples range from the Philippines (Rafael 2003; Arnold 2000; Strøm 2002) to Rwanda (Donner 2005) to Ghana (Leger 2007). While evidence does point to increases in globalisation and a usually associated consumerism, Rafael (2003: 404) sheds light on other contributory factors. These include the purchasing and ownership of second-hand cellphones, the use of pre-paid services and weak fixed-line infrastructure.

As a result, "it is very easy to see how consumerism can be said to serve the interests of the global capitalist system" (Sklair 1995: 149). The expanding ability for the *global* aspect of this system, described in part by a portion of the title of Dyer-Witheford's 1999 publication – *High-Technology Capitalism* – has allowed for the promotion of the traditional separation of the worker and the means of production. This is because "[t]he specific task of the global capitalist system in the Third World is to promote consumerism among people with no regard for their own ability to produce for themselves, and with only an indirect regard for their ability to pay for what they are consuming" (Sklair 1995: 149). This was described as early as 1979 when Kumar (1979) described the 'communications revolution' as global 'knowledge systems' which began in the 1970s and coincided, intentionally or not, with modernisation thinking. The effects of the training and transfer of 'knowledge' which this school gave to developing countries were described by Nair (1980) as a 'cultural imperialism' with profound effects and consequences for the people to whom such systems and devices were promoted.

It has been argued that the culture-ideology of consumerism is the third prong (political imperialism and economic neo-imperialism being the other two) of focusing attention on the "economic and political consequences of First World hegemony over the Third World" (Sklair 1995: 159). This neo-Marxist conception of the 'powerful' exploiting the 'poor' is used in this thesis as a possible explanatory tool to account for the introduction of NICTs in Africa.

The culture-ideology of consumerism, it would seem, encompasses a wide range of elements in developed world paternalism over the developing world. This includes such elements as cultural and media imperialism transmitted through the media's various forms (Y'au 2004). Although overlapping somewhat, this thesis is concerned specifically with the cultural form. This is analysed from the perspective of it being facilitated by information and communication technologies in the creation of a 'new world information order'. This potentially implicates global imbalances in the production, advertising and usage of technological devices as the root contributors to the contemporary situation of human poverty in developing countries. This is because, as evidence

tends to show, such technologies as the Internet and cellphones, are marketed through social, political and cultural engineering to meet the "material basis for the promotion of a standardised global culture" (Janus 1988: 135).

2.5 Concepts and definitions

2.5.1 What is development?

No single definition of development can do justice to its complexities since, "[i]ts analysis and promotion extends across disciplines" (Leftwich 2005: 573). Indeed, chapters and entire books have been written dedicated simply to interrogating the term (Chambers 2005; Power 2003; Rist 1999).

The 2003 World Summit on the Information Society (WSIS) in Geneva (WSIS 2004: 2), resolved that,

> ...education, knowledge, information and communication are at the core of human progress, endeavour and well-being. Further, Information and Communication Technologies (ICTs) have an immense impact on virtually all aspects of our lives. The rapid progress of these technologies opens completely new opportunities to attain higher levels of development. The capacity of these technologies to reduce many traditional obstacles, especially those of time and distance, for the first time in history makes it possible to use the potential of these technologies for the benefit of millions of people in all corners of the world.

Because of the implied association with human development in this resolution (which exists in different forms as shown throughout this thesis), a definition pleasing to both the concepts of human development[27] and to the ideological paradigm within which that be considered are required.

With the need to adopt a definition which is encompassing of *both* these concepts, a potentially useful definition is offered by Castells (1996: 113), who states that: "By development I mean … the simultaneous process of improvement in living standards, structural change in the productive system, and growing competitiveness in the global economy". However, this does not suit the purposes of this thesis because, as some would argue, in a competitive world – not least one based on a global economy propped by the free-market – human development cannot be improved (Duffield 2002; Moore 2004). Hoogvelt (summarised in Schech 2002: 18), elaborates on this, ideologically, arguing that "development is dead for those who are excluded from the global system, made irrelevant to its high-tech information-driven capitalism both as producers and as consumers". Along this line of thought, Sagar and Najam (1999: 747) ask, "when does development start

[27] The United Nations Development Programme first used the concept of 'human development' in its 1990 Human Development Report (HDR); it opened with the lines "This Report is about people – and about how development enlarges their choices" (UNDP 1990: 1).

becoming 'inhuman'?".[28]

The very idea that something intended to be developmental has a range which, it seems, can stretch to the 'inhuman' is perhaps avoided with such positions as that of Sen (1999a: 241, 1992: 293) in his analyses of human development. In his texts on welfarism, he is insistent on notions of promoting the possibilities for people to live the lives they have reason to value. However, the purposeful ambiguity of such an idea does not question the ideological context may support, or even shape, peoples' 'values'. Similarly, there is no suggestion by Clark (2002: 78, original emphasis) of evaluating the ideological rationality of values (or even of who assesses 'genuine rationality') in his expression that "we must accept any *genuinely rational* assessment of [local] values that local people see fit to provide".

In light of such predicaments, Chambers' (2005: 186) definition of development, implying "good change", is used hereafter. While this is equally neutral or infringing on human development and ideological choices, it does not address the concern of what exactly 'good' is. Nonetheless, with its only specificity being its ambiguity, it is arguably the best suited for the purposes of this thesis. At the same time, however, given the complexities involved in defining development, as well as its contradictions when interpreted by different people, it is used hereafter in inverted commas.[29]

2.5.2 The digital divide and its associated complexities

According to Hudson (2006: 6), the digital divide refers to "…gaps in access to the Internet, both within industrialised countries and between industrialised and developing countries". These gaps are accounted for by the Benton Foundation[30] (2004: 307). They observe that "[t]he simple fact is that poor communities are entering the Information Age far behind their wealthier neighbours".

Rhetoric from ICT-related discourses are abundant with positivist concepts of the digital economy: '*smart* city', '*intelligent* city' and '*knowledge*-based economy', are but three examples (Bunnell 2004: 348; Coe and Wai-chung 2004: 354; Graham and Marvin 2004: 341; Madon 2004:

[28] The most formidable literature on this is arguably provided in the development discourses of the political ecology of capitalism. One of the most devastating with respect to the idea of 'inhumanity' of development is provided by Kovel (2002). He describes catastrophic human consequences in the name of global capitalism in Bhopal, India in 1984.

[29] In *The Anti-Politics Machine*, James Ferguson (199) questions the structure of the development discourse, primarily within the context of Lesotho. He argues that the 'development' aspect of this is faulty. Therefore, he uses the word in inverted commas throughout.

[30] This is an American-based urban social research think-tank.

309; cited in Mosco 2004: 199; Odendaal 2003: 586; Solnit and Shwartenberg 2004: 296). If we are to pause for a moment and consider the first of these terms – 'smart city' – it appears that it contributes in academic literature, whether intentionally or not, to the polarisation of the global economy.[31] Seemingly in contrast to a '*stupid* village', the 'smart' alternative is mostly suggestive of a technologically abundant society (whether pertaining, generally, to a country, region, city, or part of a city), whose characteristics should, implicitly, be aspirations to those who are not 'smart' (Bgoya 2001: 285).[32] On a country basis, this distinction is very often based on the geopolitical trend of 'developed' and 'developing' countries. In terms of cities and villages, this would point to an interpreted technological might of New York, London, Paris, Johannesburg, Tokyo and Melbourne over Mukono (Uganda), Nahar (India), Penglipuran (Indonesia), Ndumu (South Africa) and Sicabazini (South Africa).[33] Although many of these villages do possess ICTs and have even used them for 'development' purposes, the International Telecommunications Union (ITU) (2002) observes that the so-called "new" or "quality" digital divide is not attributable to the lack of equipment or connections but, in its present form, is changing from "basic to advanced communications and from quantity to quality".

A supplementary argument can be made of a '*knowledge*-based economy' (possibly in opposition to an *'information*-based economy'). The distinction between 'knowledge' and information' is not a minimal one. As Leclerc (1999: 80; emphasis added) argues, "*knowledge* possesses a more durable value than that of *information* because it is linked to a structure, to a stable system, to a durable reality, otherwise to an invariable; on the other hand *information* refers to a state of things which are more or less transitory and sometimes evanescent". Hudson (2006: 10-11) argues that because "information...may be shared without being transferred" knowledge is "an organised body of information". The issues which this thesis is sensitive to, at the most extreme level, is the implicit association of 'smart' with 'knowledge' and 'stupid' with 'information'.[34]

In addition to providing understandings and definitions of key concepts, the purpose of this chapter has been to highlight those 'development' theories which are most relevant to 'digital'

[31] Many of the texts cited here offer uni-polar accounts of 'smart cities' and appear to not be intentionally modernist. However, it is by implication that their descriptions are bi-polar, and indeed, deem necessary the pessimistic counterpart to 'smart city' in any analysis of global relations. With this in mind, it is tempting to ask, in the words of Graham and Marvin (1996: 343-344, emphasis added), "how do you translate this technological potential, *or indeed do you want to* – into sustainable applications that actually meet the day-to-day needs and demands of a largely urban society…?"

[32] Duffield (2002: 1052) elaborates on the conventionalism of such a dichotomy with respect to the political economy of war. *Their* wars possess "traits of barbarity" while *our* wars are characteristic of "civility, restraint and rationality".

[33] This is probably emphasised by the expectation that the countries within which these villages are located needs to be provided.

[34] Contrary to this, 'information society' is used in this thesis outside of this argued context. This is simply for ease of reading since the term is somewhat generic in many discourses.

political economy. It has been stated that when ICTs are identified by implementers as necessary to 'development', the context in which they are introduced is seemingly reminiscent of a modernisation paradigm. Within this context, a culture-ideology of consumerism is applied in an investigation of the appropriation of ICTs in African 'development' policies.

Chapter 3: The Appropriation of ICTs in Mainstream African Politics

3.1 Introduction

This chapter examines the adoption of ICTs, as modernising agents, 'developmental' 'tools' and consumer icons, in African politics. Because it is, on a regional level, ICT-related policies and rhetoric which generally play a role in determining these outcomes, these policies are closely examined. The chapter argues that African ICT policy and rhetoric seem to be concerned more with the embrace of the information society and its interpreted connotations, that with the effects and implications of such an embrace. The chapter is divided into four sections: the first examines the role of the digital divide and NEPAD's policy of 'e-readiness', and the remaining three provide an investigation into the regional economic communities of SADC, COMESA and ECOWAS.

The preceding chapters have shown that ICTs have been given much interest, particularly by ICT policymakers and politicians. In fact, many socio-economic and political changes which have been witnessed in 'developed' countries can be traced, on some level, to ICTs (Thioune 2003). Referred to by many synonyms – such as the information, knowledge and digital economies – ICTs facilitate the distribution of data, in constantly cheapening and innovative ways. Despite the trend towards the embrace of ICTs, there continues to be a considerable gap between 'developed' countries and their 'developing' – notably African – counterparts. It is argued that this digital divide limits access to, ownership and use of ICTs. These limitations, in turn, reduce the contribution of these technologies to 'development', including the creation of wealth, reduction of poverty and other 'development' indicators (Sen 1999a: 162; Ayanwale and Adekunle 2006: 17; Hudson 2006: 20).

Perhaps it is not necessarily these limitations which must be directly addressed, but rather the seemingly questionable ways in which ICT benefits are appropriated by African politicians. Further, it is argued that this appropriation allows for transnational companies (both African and otherwise) to market, and profit from, ICTs with limited evidence of Africa escaping the poverty and other humanitarian crises which it continues to face. It is argued that "[m]any initiatives have been taken at the international level to support Africa's efforts to develop communication infrastructure and services that are connected to the world information highways" (Thioune 2003). However, this 'connection' matters little when its benefits are not forthcoming. On this, Thioune (2003) does concede that "the links between development and the use of ICTs are yet to be clearly established [with] results from Africa". While the adoption of ICTs may reflect basic economic forces of supply and demand, the market efficiency which this satisfies is not necessarily linked to

"the needs of the poor, who have very weak purchasing power" (UNDP cited in Thioune 2001).

3.2 Digital divides and 'e-readiness'

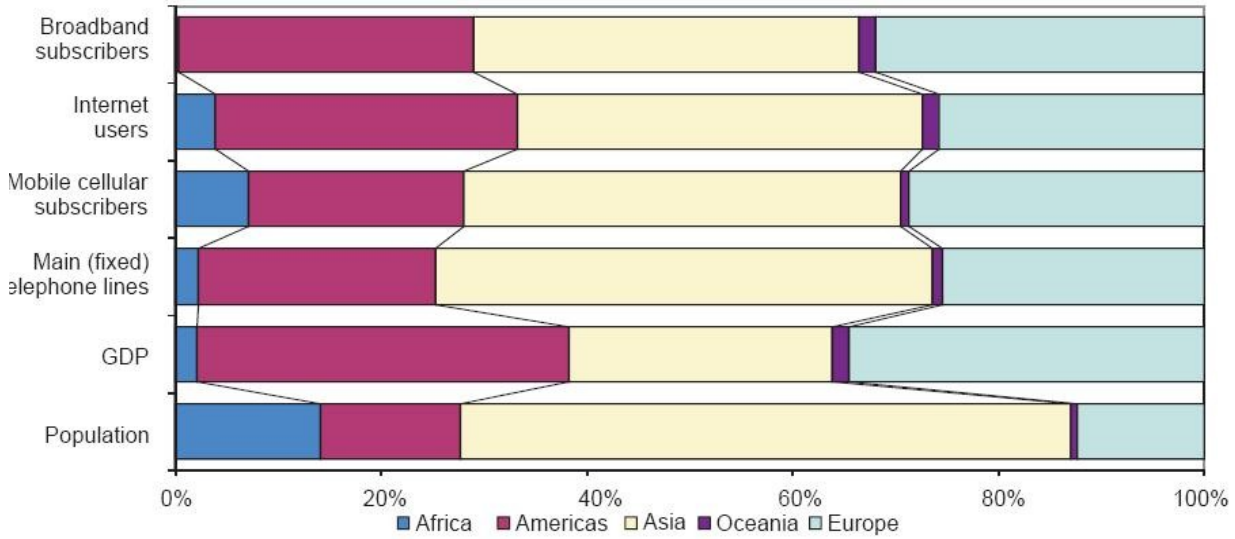
The e-Africa Commission was created as the NEPAD Task Team responsible for Africa's ICT sectors. It was launched on 14 September 2002. Its mandate was to create an ICT strategy for NEPAD – regarding policy and infrastructure – and to conceptualise measures to deal with the legal and regulatory aspects of such a strategy (bridges.org 2003: 2).[35] The Commission justifies its dedication to resolving the digital divide because of ICTs' "crosscutting *impact* on all aspects of human life" (bridges.org 2003: 2, emphasis added). Such a claim is, by implication of the associated link between the digital divide and a positive 'impact on human life', in reference to a paralleled relationship between being technologically 'rich' and socio-economic betterment.[36] On this basis, bridging the digital divide is constructed by emulating technologically 'rich' cities, regions and countries. This seems to shift focus from questioning and interrogating *how* Africa is disadvantaged from being technologically poor, to a presupposition that Africa is disadvantaged *because* it is technologically poor.

As the diagram below illustrates, it is only Europe and the Americas which show proportions of the ICT indicators (listed on the vertical axis) as being greater than the percentage size of their populations, in relation to the rest of the world. Africa and Asia illustrate the opposite, with the clearest indicator being the virtually non-existent broadband subscription in the former. It seems that such evidence, by implication, contributes to the basis for the e-Africa Commission's argument that the digital divide is the cause of negative impacts on human life.

[35] bridges.org is a non-profit organisation which works with governments and the private sector in Eastern and Southern Africa. In addition to this, the company is involved in international technology policymaking for the World Economic Forum, New Partnership for Africa's Development, G8 Digital Opportunity Task Force, United Nations ICT Task Force and the Glocal Forum.

[36] This is not to suggest that human life is limited to socio-economic characteristics. A useful starting point to the complexities of improving human life is Sen.

Figure 3.1 Broadband, Internet, mobile and fixed line indicators in relation to GDP and population size across continents (2006)

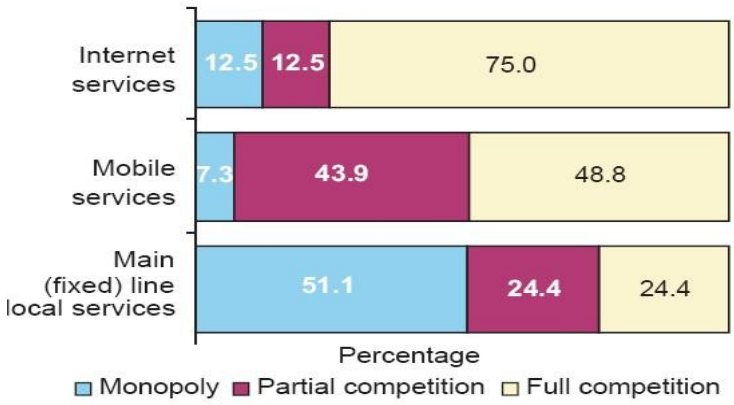


Source: ITU (2007b: 1)

From the desire which has been expressed by African leaders and their regional economic communities to reduce the digital divide for 'development', it seems that if such negative impacts are to be found, they would lie in evidence directly linking hunger, poverty, famine and civil war, for example, to the comparative absence of technology. However, this seems inaccurate when considering that such concerns plagued Africa even before the appropriation of NICTs. In fact, a well-known economic historian of Africa, Bill Freund (2001: 546), has shown that these have historical causes and origins. The e-Africa Commission seems to, rather awkwardly, position ICTs, or the information society more broadly, as the origin of present African concerns.

Arguably, the most influential element of African Economic Communities' positions toward ICTs is shaped by NEPAD's promotion of 'e-readiness'. This process has received much input from the UNECA-promoted National Information and Communications Infrastructure (NICI) and the African Information Society Initiative (AISI). The impetus which these participants have given to the digital economy serves two main interests. Firstly, that of broader African incentives toward national, regional and international market competition. From Figure 3.2 it is clear that the most competitive of those included are fixed and mobile telecommunications. The second interest which this serves is, as a result of the first, the "greatest economic and social benefits" to African countries (bridges.org 2003: 8). The relationship between market competition and such benefits is questioned by some authors (see Chapter 2). To the contrary, its potential has culminated in the "unanimous agreement among Africa's leaders and pan-African structures on the benefits that ICT can bring and the impact they can have on a wide range of development issues" (bridges.org: 2003: 7).

Figure 3.2 Levels of Internet, mobile and fixed line competition in sub-Saharan Africa (2006)



Source: ITU (2007b: 4)

Convincing African leaders, key policymakers and regional bodies of this in the first place is not difficult. This is because the kinds of benefits to be derived from the digital economy are evident in the simultaneous growth rates and usage of ICTs in countries of the 'developed' world. For example, COMESA (2008a) has expressed its enthusiasm for "an information society in the footstep of the developed economies". One of SADC's (2004a: 51) aims is to mirror the 'developed' world's 60:1 proportion of knowledge-based workers to other workers. Of course, both views overlook the fact that these statements are in reference to economies already fully-fledged in digital market operations. Illustrative of how unrealistic these aspirations are, some member states do not even have fully-functional government websites (Ivory Coast and Mauritania) while such websites of other member states do not even exist (Eritrea and Mali). In attempts to overcome the comparative imbalances with 'developed' countries in the digital economy, Africa's Economic Communities have been, in collaboration with NGOs and transnational corporations, taking steps towards the 'digitalisation' of their economies. Spearheaded by NEPAD's 'e-readiness', Africa's regional bodies and economic communities have shown their intended steps to move in this direction.

Despite the promotion, the world over, of ICTs and their necessity to life in this era, the very concept of 'e-readiness', its implications and assumed interpretations are problematic on various levels. bridges.org (2003: 6) defines it as "how ready a country is to gain the benefits offered by ICT in terms of policy, infrastructure and ground-level initiatives". The very identification in this definition of being 'ready', as the initial step of efforts towards the information society, assumes some kind of supportive foundation to embracing the information society. In complete contradiction, the state of African telecommunications infrastructure is by bridges.org's (2003: 57-81) own admission, generally weak. The organisation even concedes that it this infrastructure is, in some cases, non-existent. This exposes a vulnerability. Despite vehement ICT promotion at a

policy level, "the people of sub-Saharan Africa, especially those living in rural areas, *do not easily understand* how ICTs will provide them with their basic needs for livelihood such as food, access to basic health care, shelter [and] clean water" (Mutula 2005: 124, emphasis added). Perhaps more illuminating of this is Dode's (2007) analysis of e-governance[37] in Nigeria. He identifies the country's embrace of digitised social service delivery as nothing more than "*lip service*" (Dode 2007: 381, emphasis added). This is because the country remains with a "poor state of accompanying infrastructure", including, but not limited to "adequate supply of electricity and the development of human resource capabilities of the populace" (Dode 2007: 380).

Such shortcomings do appear to offer a connection with an association of 'e-readiness' and 'benefits'. The implicit assumption is that being 'ready' is directly connotative of the 'successful' or 'beneficial' implementation of 'development' initiatives. In other words, being 'e-ready' and supporting the reduction of the 'digital divide', it would seem, point to ends in themselves in African ICT policy and rhetoric. They do not appear to point to a required level of infrastructural investment which countries should attain in order to become 'ready' to proceed along the 'information superhighway'. Is the mere possession of technology to seemingly elevate a country or region's information 'richness' a sufficient achievement of 'development'? Is the possession of ICT infrastructure and statistically improving a technological image in the global arena the end point of measuring achievement? Some would argue so (Wade 2004; Mbarika 2002; Kenny 2002). This is especially likely with consideration of the rapid growth of mobile cellular subscription in Africa, which increased by 55.3 million in 2006 alone, and by 44 million Internet users in the same year (WEF 2002: 6).

While the concept of a Task Force is potentially productive, there are concerns with the ways in which the 'e-readiness' assessment continues to be performed. The most critical is the country bias in choosing which countries to assess. According to bridges.org (2003: 8-9), this is based on countries' existing levels of 'development', which arguably, plays a role in determining the ease (and hence, willingness) of assessment. In their view, "e-readiness assessment is not used effectively overall" (bridges.org 2003: 8). They argue this because countries such as Egypt and South Africa have been assessed nine and seven times respectively while far poorer and impoverished countries – believed to gain most from this programme – have not been assessed at all (bridges.org 2003: 8-9). The organisation reveals that:

> 23 of the 54 countries had never been assessed for e-readiness at all. The fact that 43 percent of Africa's countries have never been assessed means that those facing the most severe problems also

[37] This refers to the trend, in the information society to replace traditional state bureaucratisation of its citizenry, with more participative social service delivery facilitated through digital means.

> do not have access to some of the key tools for comparison that might help them put ICT to work in their countries. (bridges.org 2003: 9)

3.3 Regional steps toward an information society

3.3.1 Southern African Development Community (SADC)

The Southern African Development Coordination Conference (SADCC), as it was initially known, was formed in 1980. It represented the alliance of nine majority-ruled frontline states in the region: Angola, Botswana, Lesotho, Malawi, Mozambique, Swaziland, United Republic of Tanzania, Zambia and Zimbabwe. Its original aim, as developed in the Lusaka Declaration, was that of "coordinating development projects in order to lessen economic dependence on the then apartheid South Africa" (SADC 2007a). This was expressed in the motto: 'Towards Economic Liberation'. In 1992, in Windhoek, five additional members joined the economic community: the Democratic Republic of Congo, Madagascar, Mauritius, Namibia and South Africa.

Continuing the 'e-readiness' incentive provided by NEPAD, SADC (2007b) has outlined its efforts towards "[b]uilding a self-sustaining process with the positioning of the community as an effective participant in the information and knowledge-based society – i.e. transition from e-readiness to e-participation." This clearly moves beyond NEPAD's initial views on how the digital economy can be used as a 'tool' for African development. This is because the assumption is movement from being 'ready' to encouraging citizenry and local governmental involvement. SADC outlines the process of this transition with the classification of three different groupings. The first level is the 'fundamental level'. This refers to those countries which cultivate positive attitudes towards ICTs and possess basic ICT strategies and policies. These compliment the required infrastructure such as basic telecommunications, electrification, human resource development and capacity building. South Africa, Mauritius and Seychelles are identified as taking the lead in terms of such infrastructure, with Botswana and Zimbabwe at the opposite end of the spectrum. The second level is the 'middle level'. This identifies those SADC countries which show clear progression from their levels of ICT policy to their increases in possession of certain ICTs such as personal computers. It is only South Africa, Mauritius and Seychelles which are classified in this category. The third level is the 'advanced level'. This refers to those countries which have incorporated digital technologies into mainstream economic activities. It is only South Africa which is identified in this category (Ramsamy 2003).

This model is important in terms of its potential to identify different countries according to different levels of ICT integration. However, it fails to account for those countries which have shown limited steps towards ICT strategies and policies. While it can be argued that it is difficult to

assess progress in countries where ICT-related progress hardly exists, SADC (cited in Ramsamy 2003, emphasis added) recognises the "diverse nature of our *Member States* in the area of ICT". Despite this, the Executive Secretary of SADC, Praga Ramsamy (2003) only identifies the above three countries in his description of the model. Furthermore, SADC (2007b) has itself, ironically, acknowledged that "[t]echnological innovation is a key factor in the development and competitiveness of the regional economies, which leads to wealth creation and the improvement of living standards". In addition, the regional group notes the importance of ICTs in the "contribution to poverty reduction and eradication; development integration; balanced and *equitable* development; integration into the continental and global economy; sustainable development and gender equality" (SADC 2007b, emphasis added). With only South Africa categorised in the 'advanced level', perhaps more has to be done to assist other counties to develop ICT-related infrastructure. Despite the consistent notion of developing an inclusive information society, there does appear to be a void in SADC member states' 'e-readiness'. If its political rhetoric and regional policy are to have any significant correlation with its ICT-related actions, perhaps efforts must be invested in addressing the *regional* digital divide before addressing the *international* variety (Muchanga 2004, SADC 2007b, WEF 2002: 8).

This seems necessary because the motivation for ICTs points only to their benefits, but not to the process of developing the ability of member states to embrace such benefits. This possibly offers an explanation as to why SADC does not classify, or have a category for, those member states other than the three levels mentioned above. Perhaps this also suggests the need to address the contrasting perceptions towards ICTs within SADC. Despite the regional economic community's positivist interpretation of the digital economy, it admits, in its ICT Declaration, that amongst some members, there is a "*reluctance* of acceptance for ICT culture and innovations" (SADC's 2007c, emphasis added). One such example is Zimbabwe, where President Robert Mugabe has downplayed the benefits of ICTs. This is because "while ICTs can be used as a tool for development", his priority, as ironic as it may seem given the present socio-economic climate in that country, is to "put food on the table and provide shelter" (Mugabe cited in SADC 2004b). Irrespective of a suggestion that member states have the right to prioritise ICT-led 'development' below other forms of 'development', entertaining such individuality contradicts SADC's (2007b) intention of creating an "inclusive" ICT-based society (Muchanga 2004). With this in sight, one needs to question the *kind* of information society that SADC envisions. This is especially necessary since South African president, Thabo Mbeki recognised that the information society offers "the possibility, which we must seize with determination and enthusiasm, to put *our region* on the information super highway" (Mbeki 2000, emphasis added).

SADC values the need to "[s]trengthen...governments' capacity to develop effective policy and regulatory frameworks to create conducive environments to ensure market development and public participation in the information and knowledge-based society" (this, of course, in spite of member reservations of joining such a society) (SADC 2007b). Just a few words before this excerpt, SADC emphasises that it must "shift gear in order to move *beyond* the current emphasis on backbone infrastructure development towards addressing structural bottlenecks such as: Reinforcement of citizens' connectivity and ability to effectively use ICT" (SADC 2007b, emphasis added). In the face of the widespread absence of backbone infrastructure in the region, SADCs commitment to this infrastructure is questionable. This is mostly because it seems to show a desire to benefit from the process – or 'tools' of 'development' – before even entirely ensuring the accomplishment of its stated 'goal' of 'development'. This confusion is all the more worrying because SADC's (2007d) own report of its progress towards an environment conducive to widespread ICT implementation notes that, "in practice at the strategic level, no serious implementation [has] taken place". In fact, this lack of commitment contradicts SADC's (2007b, emphasis added) aim which is that "[t]he application of ICT in the public sector [with respect to e-government] must go through a process of re-engineering to ensure that *existing inefficiencies* are eliminated".

In many cases, such inefficiencies within SADC apply to telecommunication infrastructural weaknesses. They are not individually classified in a model of some sort, let alone in the above three-level model. This failure could be addressed by making room, in its ICT model for the 'advanced level' to feed back to the initial levels as this may provide necessary support and experience in terms of policymaking and strategising. This will reduce SADC countries' dependence on South Africa's infrastructure in the medium-to-long term. In addition, it will promote the regionally-desired (at the level of regional policy) "balanced, and socially equitable information and knowledge-based society" (SADC 2007b). As a simple illustration of the need to refocus attention in basic infrastructure, Muchanga (2004), SADC's Deputy Executive Secretary, points towards:

> The lack of conducive infrastructure as a basic fundamental prerequisite for the development of ICT; The lack of regional harmonised policies for ICT; The low proportion of electrified households across the majority of the countries in the region, with only two SADC countries close to 100 percent electricity penetration and the rest of the countries below 50 percent; Affordability, due to lack of financial resources, is a key issue to address when considering all aspects of universal service. There is still a very low Personal Computers (PC) penetration in the SADC region with two countries at a little over 120 PCs per 1,000 people. The other countries have a

> range of 2 to 60 PC per 1,000 people; Poor telecommunications facilities with low fixed line tele-density, with the majority of SADC countries having fixed line tele-density of below 5 percent of the population; Low access to Television (TV) and Radio in the SADC region with the majority of countries having less than 20 percent of their population access to TV and less than 60 percent to Radio; and, High illiteracy levels in the SADC region with the majority of Member States having a population of school going children of 25 percent and tertiary students of less than 5 percent" (Muchanga 2004).

Taking this into account, SADC's (2007c) Declaration on ICTs recognises that the Community "needs a coherent regional policy and strategy on Information and Communications Technology...that promotes sustainable economic development, technology and bridges the digital divide within the Region and the rest of the world" (SADC 2007c). It has no doubt advanced in these respects. However, more effort is required to translate policy and strategy into catalysts for using ICTs, firstly in the horizontal form (see Chapter 1), as 'tools' of 'development'.

3.3.2 Common Market for Eastern and Southern Africa (COMESA)

COMESA was formed in 1994 as a successor to the 13-year-old Preferential Trade Area (PTA), which had existed since 1981. COMESA was formed "as an organisation of free independent sovereign states which have agreed to co-operate in developing their natural and human resources for the good of all their people" (COMESA 2008b). The regional integration which this refers to, together with the creation of a customs union and the promotion of trade liberalisation, is believed to promote the economic prosperity of all its 19 member states.[38]

COMESA has signalled its economic intentions and movement toward economic integration and trade liberalisation. Within this context, it has highlighted that its group's social and economic development must be "underpinned" with ICTs (COMESA 2008a). To this end, it has developed various policies and regulatory frameworks to assist towards the direction of an information society. In its ICT policy documents (COMESA 2008a, c), it groups key driving factors which are required for its creation of such a society. These factors are:

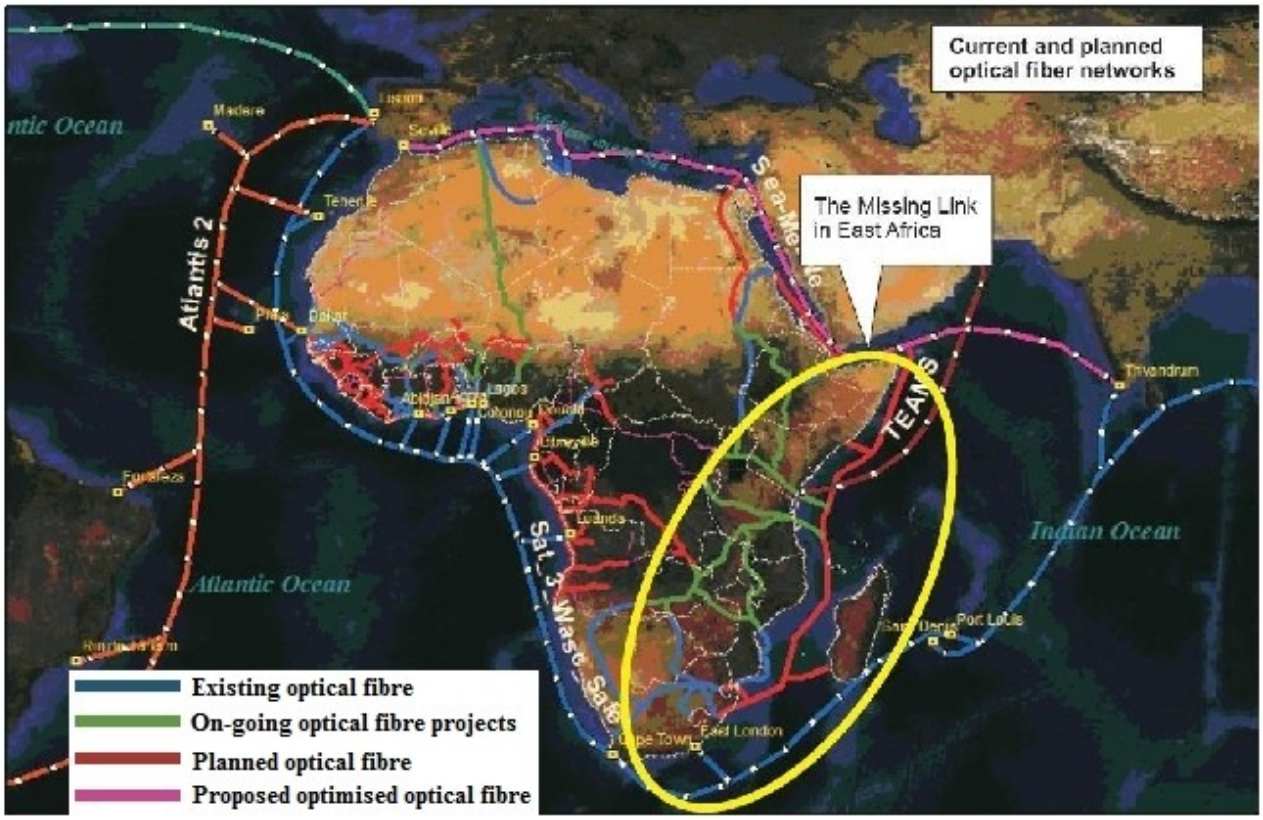
> a) A facilitative policy, legal and regulatory framework; b) Encourage research and development in ICTs; c) Investment capacity of network and service providers; d) Technology challenges; e) Management of competition; f) Recognition and development of skills in ICTs; g) Affordability of users; h) Universal service/access; i) Awareness and literacy of population and potential users; j) Human Resources Development; k) Mainstreaming of gender and other empowerment issues to

[38] COMESA's member states are: Burundi, Comoros, the Democratic Republic of Congo, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Libya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Zambia and Zimbabwe.

ensure inclusivity, internalisation, participation and achievement of the right to communicate by all; and j) Effective participation in regional and global e-governance. (COMESA 2008c)

If it is indeed the absence of the above driving factors which "inhibits the development and application of ICTs in COMESA", as the body explains, then what of basic ICT infrastructural development (both technical and social) on which many of these factors rely (COMESA 2008a)? Most COMESA member states are deprived of, political and social peace, undamaged telecommunications (due mostly to war), specialised personnel, sufficient and adequate ICT-supportive electrical power (alternatively, even sustainable infrastructure to support wireless connectivity) and combinations of these (bridges.org 2003: 57-81; ITU 2007c). Perhaps the greatest of all such infrastructure requirements is that up to the end of 2007, 85 percent of all African Internet bandwidth traffic was diverted through Europe to its final destination. This is particularly a problem in East Africa which lacks any direct link to the global Internet backbone of fiber-optic cabling.[39] The proposed NEPAD broadband East African Submarine Cable (EASSy) is only set for completion in 2009 (ITU 2007b: 15).

Figure 3.3 Optical Fibre Network in Africa



Source: ITU (2007b: 15)

[39] According to a study by the NEPAD e-Africa Commission in 2004, Africa still lacks 52 040 km of backbone infrastructure necessary for Internet broadband: 15 950 km in central Africa, 2 200 km in northern Africa, 19 330 km in western Africa and 145 060 km in eastern and southern Africa (ITU 2007b: 15).

It is only outside of the above key concerns that the necessity of backbone infrastructure is recognised. COMESA (2008a) does acknowledge that a "major capital injection, far above current trends", is required for the "scaling-up and modernisation of ICT infrastructure to...meet current and future demand for national, regional and global ICT services". Despite this, it gives little urgency to this problem elsewhere. Although COMESA (2008a) articulates the need for financial resources for ICT-related infrastructure, this is not always forthcoming. The key reason is simply that it fails to, by and large, commit to the channelling of these resources towards infrastructure development.

The absence of this infrastructure has allowed the private sector to benefit. This is mostly achieved through COMESA's creation of an inter-regional mobile cellular market. Certain mobile service providers, such as Celtel, have offered customers in Uganda, Kenya and Tanzania borderless cellular phone usage at no additional cost to local charges. In 2007, this was expanded to Congo, Gabon and the Democratic Republic of Congo (ITU 2007b: 11; Celtel International 2007). Other service providers, such as MTN, began to do the same in 2008. The argument can certainly be made that such private sector initiatives, at the simplest level, promote a wider spectrum of communication. Furthermore, they reduce the burden of individual states within COMESA to expend resources on ICT infrastructure. However, these initiatives also seem to undermine the regional authority of COMESA (ITU 2007b: 11). The worrying signs of ICT corporatisation are already evident. For example, in a recent study on cellphones in Rwanda, it was found that a large number of participants possess these devices for "style" and "social status" (Donner 2005) – ideals not apparent in the ICT policy of *any* African regional community. In that country, it is even the poorest – often found in Africa's rural settings – who are keen to own cellphones (sometimes more than one per person) as accessories and "social signals" (Varbanov cited in Donner 2005: 4). This symbolises the embracing of an emerging lifestyle associated with technology (Donner 2005: 4). It seems possible, therefore, that the embrace of the information society in this context, and the 'tools' employed to reach COMESA's broad ICT 'goals' are questionable.

COMESA's (2008a) belief that "to reduce the information gap" it must "improve information capacity in its society" must be considered with greater care. This is mostly because if the private sector is left to its own devices, the information gap it seeks to reduce could actually expand. This could happen as companies search for means of generating greater profits. These means are not always conducive to reducing the digital divide or to resolving the broader suggestions of human development outlined by the WSIS (2004: 2) in Chapter 2.

3.3.3 Economic Community of West African States (ECOWAS)

The Economic Community of West African States is a regional economic community of fifteen countries. It was founded in 1975. Its mission is to be the "sole economic community in the region for the purpose of economic integration and the realisation of the objectives of the African Economic Community" (ECOWAS 2007). This includes fields such as industry, transport, telecommunications, energy, agriculture, natural resources and commerce.

ICT-related information on this Economic Community is limited. Therefore, this section primarily serves to enhance understandings of the environment in which ICT policy will be shaped if ECOWAS, as a Community, is to consider such policy with greater priority.

In the face of the recent escalation in digital devices in Africa – most notably the cellphone and (to a lesser although still substantial degree) the Internet – people are very quickly subscribing to digital communication. Generally, this is often for social purposes such as entertainment and online dating (Hale 2003). As shown in Table 3.1 below, mobile telecommunication companies have identified the cellphone market as a highly profitable sector. The dominance of these companies in West Africa is clear with three in the top 10 listed companies operating in Nigeria.

Table 3.1 Top 10 mobile communication operators in Africa in terms of national subscribers

		Subscribers			*Mobile revenues*		
		Total ('000)		*Change*	*Total (million USD)*		*Change*
Rank	*Operator*	*Dec-05*	*Dec-06*		*Dec-05*	*Dec-06*	
1	Vodacom (South Africa)	17'600	21'800	23.9%	2'451	2'661	7.9%
2	MTN (South Africa)	10'235	12'483	22.0%	2'632	2'859	7.9%
3	MTN (Nigeria)	8'370	12'281	46.7%	1'740	2'053	15.2%
4	Glo Mobile (Nigeria)	9'000	11'000	22.2%	…	…	…
5	Maroc (Morocco)	8'237	10'707	30.0%	1'375	1'627	15.5%
6	Djezzy (Algeria)	7'109	10'531	48.1%	1'074	1'531	29.8%
7	Mobinil (Egypt)	6'696	9'267	38.4%	928	1'114	16.7%
8	Vodafone (Egypt)	6'125	8'704	42.1%	878	1'243	29.4%
9	Mobilis (Algeria)	4'908	7'476	52.3%	341	…	…
10	Celtel* (Nigeria)	5'400	6'400	18.5%	1'777	1'381	-28.7%
	Africa	**83'680**	**110'649**	**32.2%**	**13'196**	**14'469**	**8.8%**

Note: * For 2005, the subscriber figure of the former company Vmobile reflects the value of May 2006. As the original revenue covered seven months, the five months revenue of Vmobile has been included. 2005 revenue has been estimated taking into account the Vmobile's five months revenue.

Source: ITU (2007b: 10)

Another company in West Africa which build profits from both cellphones and the Internet is TradeNet. Arguably responding to ECOWAS' (2007) "promotion of joint ventures by private sector enterprises", it works in unison with aid organisations and programmes which co-operate with the regional body. TradeNet is a Welsh-owned company based in the region, which provides access to agricultural food prices. In the absence of the technology which it provides, this information would not be available. Its DotCom millionaire and founder, Mark Davies, began a software company in an old gas-bottling plant in Accra in 2000. This allows buyers and sellers in West African countries to indicate, via cellphones and the Internet, who they are and what agricultural products they wish to sell or buy. The company has set up an Internet café, called BusyInternet, in the Ghanaian capital, from which market information is captured electronically and puts prospective buyers and sellers in contact. Because this information is sent via SMS to all subscribers free of charge, TradeNet earns it profits through advertisements which are included in the text messages.

TradeNet was conceived as part of the Market Information Systems and Traders' Organisations of West Africa (MISTOWA) project which receives funding from USAID's West Africa (USAID/WA) mission (AfricanLoft 2007a; MISTOWA 2008). In addition to the estimated $200 000 which it provided, Davies invested $600 000 of his own money into the TradeNet initiative. It is along these lines that *The Economist* (2007: 38) defines this project as an "aid project". While this initiative is hailed for its efforts towards economic 'development', its actual benefits to the region – both immediate and medium-to-long term – can be disputed. One of the examples flagged as illustrating the success of this initiative was the sale of organic fertiliser between one person in *Yemen* and the other in *Nigeria*. While such an example illustrates the reality of the possibilities of private inter-regional and continental economic activity, there are various concerns with this. Firstly, such economic activity contradicts ECOWAS' promotion of *regional* trade. Secondly, TradeNet does not take into consideration the issue of transport. Even if market participants agree on relative pricing and use electronic information to identify the quickest and cheapest transport arrangement, transporting the produce to the buyer, given Africa's poor transport infrastructure can be exceedingly costly (WEF 2002: 7). As a result, it is arguably this kind of infrastructure into which resources should be invested – whether directly for broader ICT 'development' or otherwise – before engaging in and promoting intra-regional trade. Failure to do this has the potential to limit cross-border trade to a limited few.

The success of Trade Net is questionable for three reasons. Firstly, because TradeNet is privately owned, there is potentially a time lag between the realisation by governments, the Economic Community or USAID/WA of the success of its initiatives. Not only will this time lag

impact on stagnation with respect to advances in ICT policy and implementation, but will also be too long for TradeNet's profits to be maintained. At the extreme, this could result in the termination of TradeNet's operation simply because of a lack of returns which would be a retreat from whatever progress such a company makes in terms of ICT 'development' in the region. While companies, by definition, rise and fall during processes of economic 'development' and processes of accumulation, TradeNet is the only such company in the region. Therefore, if it is to, hypothetically, dissolve, the negative impact on this emerging market would be substantial. If Davies' decision not to expand into Senegal and Burkina Faso is anything to go by – because initial returns were lower than expected (Hale 2003) – then this hypothetical situation is a very real possibility. In fact, by Davies' (cited in Hale 2003, emphasis added) own submission, "I'm excited by *new* frontiers and the *first wave* of development, not [by] sticking around to grow a career".

Secondly, on a horizontal level, mistaking 'tools' for 'goals' promotes a determinism that using ICTs, and creating environments for their use, is separate from ICT-related infrastructure and support. If focus is to be placed – by profit makers, the public and regional policymakers – entirely on the service which TradeNet provides. This could detract attention from infrastructural development which would be essential for the company's continued existence. Dode (2007) highlights this concern with a Nigerian example. As a country in which TradeNet operates, and in which e-governance is promoted by the government, the overlooking of ICT-related infrastructure, and its consequences, are very apparent:

> [E]lectricity generation and supply in the country is unreliable. Apart from Abuja, the Federal Capital Territory, where electric power supply from Power Holdings Company of Nigeria (PHCN) is guaranteed for many hours in a day, the picture is the opposite in other parts of the country, worst hit being the Southern parts of Nigeria. Most of the rural areas are not connected to the national grid; hence, such places record a 'no-light situation'. Another resource deficiency is personnel: by this, we mean the percentage of Nigerians who are not only computer literate but are regular users of the Internet. (Dode 2007: 380-381)

Thirdly, ICT policy is leaning in a clear direction. This direction appears to allow for the persuasion of the private sector in commencing with its identification of target markets *before* the solid creation of national or regional ICT laws. It seems that this environment is, as discussed with respect to cellphones in Rwanda above, creating a culture-ideology of consumerism. Dode (2007: 380-381) supports this with the claim that "[i]n the 21st century Nigeria, access to the Internet is treated as a status symbol available to the few that can afford its cost of installation and servicing. Others have to patronise cyber cafés to do their transactions, in the big cities".

3.4 Conclusion

Africa's overarching ICT policies are determined by NEPAD's assessment of countries' 'e-readiness'. There are endless problems with this. These range from the very implication of this concept to the ways in which assessments are conducted. This method, in effect, looks favourably towards those countries which show a willingness to embrace the information society. This is largely irrespective of their (un)certainty on *how* to go about such a process. On this basis, there is a determinism with which African leaders and economic communities promote the necessity of benefiting from ICTs as 'tools' of 'development'. Yet, against this backdrop, movement towards a digital economy in Africa seems to overlook, whether intentionally or not, the various infrastructural requirements for ICTs.

One of the central reasons for this is the growing role of telecommunication companies in Africa. Nobel prize-winning economist, Amartya Sen, (1999a: 140) argues that, "the forces of economic exchange and division of labour are hard to resist in a competitive world fuelled by massive technological evolution that gives modern technology an economically competitive edge". Therefore, without greater control by regional economic bodies, fixed and mobile telecommunication companies may reduce the possibility of regional ICT policy (whether currently or in the future) having any bearing on the 'development' of local people. Further problematic is the concern of uneven regional growth and national distribution of technology. This is resulting in ICT benefits being largely sporadic and somewhat uncoordinated. One of the reasons for this is the emerging encouragement given to the private sector to introduce ICTs to Africa. With the need to identify profitable target markets, the instruction of *how* to use cellphones and the Internet, for example, as a "key weapon in the war against world poverty" are increasingly sidelined (WEF 2002: 6).[40] Initiating ICT-related policy to fight poverty must be conceptualised by countries and their regional African bodies and not telecommunications companies. This is because the latter most likely have a central concern with increasing subscriber bases.

The urgency of this is a real concern. With the Internet and cellphone markets in the 'developed' world at near-saturation, the incentive for transnational companies to enter African markets is that much higher (ITU 2007b: 10). Therefore, while specific economic policies have brought with them rapid movement towards the usage of ICTs in Africa, this has largely been against the backdrop of limited ICT policy. This is supported by Alhassan (cited in Donner 2007:

[40] In a debate during the World Summit on the Information Society in Geneva in 2003, Senegalese President Abdoulaye Wade, proposed the creation of a 'Digital Solidarity Fund' to help bridge the digital divide. However, this idea was dismissed by developed countries with the justification that sufficient funding is available through existing aid sources. The Economist (cited in Wilson III et al. 2005: iii) also disagrees with of the formation of such a Fund because "markets work better".

20-21) whose work raises concerns over the effects of Ghana's market liberalisation in the mobile telecommunications sector. He argues that policy dialogue on ICTs is narrow-focused and limited to 'economic fundamentalism'.

ICTs continue to be publicised, by those African Economic Communities which have been discussed in this chapter, as symbols of 'development' rather than 'tools' in the processes of alleviating social ills such as poverty. This misidentification allows these Communities to *compete* with 'developed' economies, at least on a superficial level, of participating in the digital economy. Even in Africa's poorest countries, owning a cellphone and accessing the Internet has already attached itself to a particular social standard. In the absence of fully-committed regional efforts toward an information society a likely irreversible culture-ideology of consumerism will continue at the benefit of the private sector.

Chapter 4: The South African 'Information Society'[41]: Problems with Policy, Legislation, Rhetoric and Implementation

4.1 Introduction

This chapter critically examines the politics of the information society in the 'new' South Africa. Since the dawn of political democracy in 1994, information and communication technologies (ICTs), such as fixed and mobile telephones and the Internet, have been identified by government as critical to various forms of development. As a result of the perceived importance of ICTs, it is essential that government's 'goals' are met by relevant 'tools' in its attempts to achieve those 'goals'. However, it would seem that government rhetoric is more reflective of deterministic interpretations of the potential of ICTs than it is of systematic and methodological undertakings of how to actually achieve its policy objectives. This potential inadequacy is examined in terms of its implemental implications for both government and those in 'need' of its policies. The latter is, perhaps more aptly, referred to as material consumers of a global culture.

The emergence of ICTs in the 'new' South Africa has followed a path mostly paralleled to the growth of political democracy since 1994. The centrality of ICTs to the Reconstruction and Development Programme (RDP)[42] was made very clear with its identification as a key feature in meeting the 'goal' of "basic needs" (Government Gazette 16085, sections 1.3.6 and 3.6.3). Similarly, the Growth, Employment and Redistribution (GEAR)[43] policies classify ICTs as necessary 'tools' in adding to the "quality of life in communities" (Roux et al. 1996: 16). They also seem to contribute to an "increase in...social and community living standards" (Roux et al. 1996: 21). During this time, however, it has been acknowledged that the RDP and GEAR policies have largely failed to deliver on promises of a more equitable society (Bond: 2000, 2004; Desai: 2004; Habib and Padayachee: 2000). Indeed, wealth continues to be in the hands of an elite minority. South Africa ranks 121st out of 177 countries on the Human Development Index (HDI) (UNDP 2007: 231). The trend of this index in South Africa has been downward since 1995 and decreased by 4.67 percent over the 2000-2005 period (derived from UNDP 2007: 236). Worryingly, unofficial

[41] This title should actually read '*Part* of the South African 'Information Society'. This is because the chapter does not claim to holistically discuss the South African information society. While it does examine the broad implications of this society, its specificity is limited to, as noted in Chapter 1, cellphones and the internet. Any text which claims to offer a comprehensive account of the South African information society, should also include other ICTs such as biometric identifiers. Perhaps such a text should emphasise biometric identifiers *more* than the ICTs discussed in this thesis since they have a history more particular to South Africa which spans over 100 years (Breckenridge 2005: 270).

[42] The RDP comprises integrated policies based on meeting basic needs, developing the country's human capital, building the economy, democratising the state and improving foreign direct investment.

[43] GEAR is market-driven and seeks to, as the name suggests, address social and economic needs of those who were oppressed during apartheid.

unemployment stands at over 40 percent (Mbeki cited in Fin24: 2007).[44] Despite the apparent lack of impact of ICTs on development indicators, the ANC government continues to embrace them. Following the association of global capitalism and ICTs which has been explored in academic literature (Castells 1996; Dyer-Witheford 1999; Singh 2008: 17-28), it would not be unrealistic to position South Africa's embrace of these technologies within the realm of global capitalist trends. Such trends are explored by Habib and Padayachee (2000: 246), in terms of their ideological reality, as being "the result of the ANC's particular perception and interpretation of the balance of economic and political power, at both the global and local level".

Based on this, the purpose of this research is to question the levels of clarity, consistency and coherence of how ICTs – as 'tools' of development – are directly linked to government's broader socio-economic 'goals' of development. To do this, the research is divided into three sections. The first provides a very brief history of how the information society has emerged as a dominant aspect of present political discussion and discourse. The second examines, separately, the attention invested in telecommunications in the form of national legislation and policymaking and in the form of government rhetoric and policymaking. Finally, the culmination of the implemental and effectual consequences of all the above are explored in the consumer market of South Africa's privately-owned mobile telecommunications sector.

4.2 The emergence of the 'information society' in South African politics

The presidency of F. W. de Klerk over the 1989-1994 period brought with it increases in the already growing divisions in the ruling National Party. These divisions had both political and economic effects. Politically, they marked one of the final factors in the history of apartheid which led to the regime's demise and the transition to a Government of National Unity in May 1994.[45] Economically, the transition which this referred to (although evidence of this transition was already evident earlier in the 1980s) was movement from a mostly state-led market arrangement to a growing free-market, which had direct and immediate influences on the political and economic structure of the telecommunications sector. These were most obvious, as Benjamin (2001: 89-97) shows us, in three forms: the introduction of the privately-owned mobile telecommunications

[44] Official unemployment stands at 23.1 percent (Statistics South Africa 2008: v). The difference between 'official' and 'unofficial' indicators is that the former includes only those who were searching for employment up to seven days before the most recent census. The latter expands this to include those who had been searching for employment for the four weeks prior to the most recent census.

[45] This is not to dismiss the justifiable arguments that global economic pressures toward economic liberalism played central roles in dismantling apartheid. In fact, this is even more likely when considering the different stances taken by the ANC in its anti-apartheid struggles compared to its ideological framework post-1994 (Habib and Padayachee 2000; Bond 2004).

duopoly of Vodacom[46] and MTN[47] in 1993, the emphasis of market-led telecommunications in the RDP, and the privatisation of Telkom.

Therefore, by the time political democracy was a South African reality following the iconic 1994 elections, the "impressionist" socio-economic focus of the ANC government was arguably already underway (Habib and Padayachee 2000: 245; Maphatane 2006: 30). The distinctive role which ICTs played in this was very clear from the attention given to them in the 1994 ANC election manifesto (ANC: 1994a), the Reconstruction and Development Programme (ANC 1994b: section 2.8) and later, the Under-Serviced Area Licenses (USALs). The RDP was very specific on the direction of telecommunications towards universal access in every household:

> Telecommunications is an information infrastructure and must play a crucial role in South Africa's development programmes. The RDP aims to provide universal affordable access for all as rapidly as possible within a sustainable and viable telecommunications system; to develop a modern and integrated telecommunications and information technology system that is capable of enhancing, cheapening and facilitating education, health care, business information, public administration and rural development, and to develop a Southern African cooperative programme for telecommunications. In terms of the RDP, telecommunication services must be provided to all schools and clinics within two years. (ANC 1994b: section 2.8)

By 1995 the growing emphasis on telecommunications and the use of NICTs, led to the appropriation of the concept of an information society in South African political discourse. Then-President Nelson Mandela and then-Deputy President Thabo Mbeki were the initial mainstream promoters of this in the country, with clear reference beyond the generic concept of 'telecommunications' (van Audenhove 2003: 3). The initial thrust to their vehement support for this took place a year into political democracy with Mbeki's (1995) speech at the G7 Conference in Brussels and Mandela's (1995a) speech at the International Telecommunications Union's (ITU) Telecom Conference in Geneva. While emphasising different forms, both were clear on the ways in which the information society, or the information age, are linked to South Africa's macro socio-economic policy. This primarily took the form of Mandela's (1995a) emphasis on the importance of democracy, integration and the elimination of the digital divide, while Mbeki (1995) concentrated on economic competitiveness, culture and reconstruction and development (van Audenhove 2003: 3). Therefore, it can be argued that the various angles from which the information society was handled was indicative of the deliberate attention it required in the South African case of a

[46] Vodacom's initial ownership percentages were: 50 percent Telkom, 35 percent Vodafone UK and 15 percent South African Rembrandt Group.

[47] MTN's initial ownership percentages were: 30 percent M-Net, 30 percent UK Cable and Wireless, 30 percent NAFTEL and 10 percent Transtel.

racialised past. Furthermore, in Nelson Mandela's (1995b) address to the General Meeting of Urtna in Johannesburg, he drew comparisons between domestic and international disparities: "How is this [global] village organised? The spectre of a privileged few setting the cultural agenda for the world's majority is very real. If we allow this to happen, then the potential of new technologies to build bridges will have been wasted". Emerging from a traumatic history of racialised oppression, it seems likely that the introduction of the information society in political discourse took forms of both friend and foe: friend because of the possibilities it presented to macro-economic global integration and local development; foe because of the possibility of the digital divide further entrenching the predicament of social engineering of which apartheid was the architect (these are discussed in further detail later in this chapter).

In the earliest years of political democracy, a fusion of labour, business, civil society and government in the form of the National Telecommunications Forum (NTF) proved essential to the promotion and development of telecommunications-related legislation in South Africa. It is arguably this mix of participants which contributed to legislation sensitive to addressing the country's history. These participants, as well as Pallo Jordan (then-Minister of Posts, Telecommunications and Broadcasting) formulated a discussion document which became the Green Paper on Telecommunications.[48] Those involved initially reached little consensus, but later agreed on the future of the economic arrangement of telecommunications, especially with respect to Telkom. This culminated, in 1996, in the emergence of the South African Telecommunications Regulatory Authority (SATRA) and the Universal Service Agency (USA).[49] Emphasis was placed on these not being in competition but on them working together to best address the issue of universal service in South Africa (Ministry for Posts, Telecommunications and Broadcasting 1996: 9). This was targeted as a prime focus specifically because of the unequal access to telecommunications which was inherited from apartheid. As a result, the USAASA sought to "promote the universal and affordable provision of telecommunication services" throughout South Africa, with subsidies provided by the Universal Service Fund (USF) (Republic of South Africa 1996: 10).

With the finalisation of the 1996 Telecommunications Act (Republic of South Africa 1996),

[48] South Africa's legislation process follows the British model. The first part of that process is the creation of a discussion document called a Green Paper. It raises the issues of concern brought to light by policy discussions. This is followed by the drafting of the government's position on the issue through various drafts called Bills. When this becomes official, the final Bill is passed by parliament, the resulting White Paper is signed by the President and the Act becomes law.

[49] By 2001, the name of the USA had changed to the Universal Services and Access Agency of South Africa (USAASA), mainly to eliminate any confusion associated with the 'USA' acronym of it being an agency funded by the United States of America. For consistency, the latter is used hereafter.

it was decided that the liberalisation of the market and the privatisation of Telkom would bring in much needed investment and skills both to Telkom and to the sector in general. The necessity of economic liberalisation, together with its promotion of investment and skills, was seen as a solution to two factors. Firstly, the excessive debt which Telkom had accumulated, and secondly, the Department of Posts, Telecommunications and Broadcasting's need to meet the required roll-out of infrastructure, particularly in disadvantaged areas. The implementation of the 1996 Telecommunications Act and the corresponding roll-out of telecommunications which this referred to commenced, generally, over the 1997-2000 period, primarily with the creation of 'telecentres'.[50]

Sensitivity to socio-historical realities were emphasised by Pallo Jordan's successor, Jay Naidoo, during his 1996-1999 tenure in office. It is largely his three-pronged focus which gave much impetus to shaping South Africa's ICT positions at the time. The first was the identification of socio-economic progress which he viewed as directly linked to the possibilities of ICTs. The second element was the interpreted association of ICTs with the basic functioning of social and economic activities. By this association, he foresore productive influences on healthcare, education, rural development, youth development and also improvements in social service delivery. Thirdly, Naidoo highlighted the importance of maintaining an up-to-date technology resource base in order to promote global competitiveness (van Audenhove 2003: 5-6).

By the end of Naidoo's term, the emergence of the information society in South African political discourse was clearly a reality in its permanency in both policy and political discussion. While this trend continued, the arrival of Thabo Mbeki to the Presidency in 1999 as well as his choice of new Minister of Communication, Ivy Matsepe-Casaburri, resulted in the formulation of new and supplementary ICT policies and legislation. It is these which are now dealt with.

4.3 Contradictions within political processes and discourses around the issue of 'goals' and 'tools'

4.3.1 Legislation and policy

When the Green/White paper process towards the 1996 Telecommunications Act was underway, the issue of a regulator was largely absent from these discussions. This possibly indicated that the management of telecommunications was prioritised *below* the urgent attention given to addressing the effects of apartheid which created telecommunication imbalances, particularly in black rural areas (Ministry for Posts, Telecommunications and Broadcasting 1996: 9; Benjamin 2001: 93; van Leijden and Monasso 2006: 22; Government Gazette 16995). What is

[50] This term is used in South African ICT policy to refer to the points of access which offer services (such as telephone, facsimile and Internet usage) to impoverished people. This is dealt with, in detail, in Chapter 5.

most striking, in terms of legislation, policy and implementation, is that compared to Broadcasting which had the Independent Broadcasting Authority (IBA) created in 1993, the changes to the telecommunications sector had no introduction of guiding legislation, regulatory frameworks or co-ordinated policy until 1996. Although seemingly a short time differential this could account, partially, for why the Telecommunications Act fell short in many respects despite its advancement of the interests of improving nationwide access to telecommunications. Clause 65.4, for example, states that the USF is to be "administered by the Agency subject to the control and in accordance with the instructions of the Authority" (Republic of South Africa 1996: 53). However, the delegation of responsibilities between the Department of Communication[51] (DOC), SATRA, the USAASA and the operators was not clear, and sometimes overlapped. For example, the lack of clarity on the functions of SATRA and the USAASA resulted in an indirect dual granting of responsibility to them to oversee the obligatory roll-out by the telecommunication operators.

The problem this presented to the DoC was two-fold: firstly, due to the lack of clarity and common goal, by the end of 1996 Jay Naidoo was reconceptualising the ideas of what function the USAASA should fulfil; secondly, the confusion at the time seems to have fuelled competition between different departments to develop public use of ICTs in their respective development policies independently of each other. Indicative of this fact that "there was contestation between a number of departments to be seen as championing this new area", the Department of Arts and Culture and the Department of Science and Technology were beginning steps towards a project examining the future prospect of the ICT sector in the Foresight Project (Benjamin 2001: 99). At the same time, the Department of Trade and Industry commenced research into its South African Information Technology Industry Strategy. It was arguably a partial response to this which motivated the Department of Communication to conceptualise the 'goal' of providing 3000-5000 telecentres to under-serviced areas. It seems, however, that many of the initial aims of the USAASA and the Department of Communication's info.com programme (a programme intended to showcase the possibilities of ICTs to government) were emotionally based on historical imbalances of access to telecommunications rather than on setting achievable 'goals' for its initial roll-out. As a result, "ambitious" 'goals' such as those concerning the number of telecentres to be constructed were likely to have only been conceptualised because of the looming digital divide (van Audenhove 2003: 19). This was highlighted by the evidence that once the difficulties of fulfilling the initial promises were encountered, it was too late to prevent the ensuing "crisis" of juxtaposed policy and implemental shortcomings (van Audenhove 2003: 19). This was the result of,

> serious problems with the implementation of...policy. This was true for all sectors relating to ICTs,

[51] Throughout the official documentation of this department, it refers to itself as the 'Department of Communication' *and* as the 'Department of Communications'. For the sake of consistency, the former is used hereafter.

> but particularly for the telecommunications sector...the [national] regulator did not succeed in developing a proactive policy geared at the development of the telecommunications sector or more generally directed at universal service in support of social development. van Audenhove (2003: 19)

Because of this, by May 1998, the USAASA's Universal Computer Project which sought to deliver on the promise of telecentres, was closed down by the DoC. In addition to the growing costs incurred by the Project, growing tensions with the USAASA led to its further exclusion from mainstream actions, activities and meetings of the DoC (Benjamin 1999: 102).

With Mbeki victorious in the 1999 presidential elections, the resignation of Minister Naidoo from politics and the appointment of his successor, Minister Ivy Matsepe-Casaburri, the face of the South African ICT sector changed in focus. This was primarily because the new Minister was less focussed on universal access than was Naidoo which arguably hampered the progress of the already dwindling success of the USAASA. It was only later that year, with the implementation of the 'Telecentre Implementation Plan' of David N. Townsend and Associates, a private consultancy firm, that the actions of the USAASA changed. It became less focussed on the direct implementation of telecentres (which had proven too costly for the DoC) and more on three other outcomes. These included electronic training, education and public awareness of the importance of ICT literacy.

This was evident in the USAASA's influence in the license obligations of fixed and mobile operators. It promoted universal access to public telephones in schools and hospitals, especially in the poorer parts of the country. These were initially formalised in the Telecommunications Act (1996). Although protected from competition for local and international voice communication in the fixed line sector for a period of five years beginning in 1997, this did not reduce its obligations. Telkom had to install 2.69 million new lines (60 percent of which were to be in disadvantaged areas), provide telecommunication services to 3 204 villages, install 120 000 public payphones and provide access to 20 000 'priority customers' (such as community centres, clinics and schools). However, the Telecommunications Act (1996) made no mention of the affordability of telephone lines to local consumers (Republic of South Africa 1996). This accounted for the 50 percent to 70 percent rate of disconnected lines as consumers were unable to pay their accumulating phone bills. Benjamin (2001: 109) shows that in the first three months of 2000, the company had disconnected 223 386 lines. Importantly, because of the nature of Telkom's license conditions, disconnections did not negatively impact on its license obligations.

Despite the unsustainability and lack of success of these license obligations in many cases

(van Leijden and Monasso 2005: 22), the initial roll-out figures of the fixed-line operator greatly exceeded those of Vodacom and MTN. On one level, this was because "from a legal perspective, universal service is defined as individual access to basic telecommunications at the level of the household via the *fixed* network" (van Audenhove 2003: 21, emphasis added). On another level, the mobile communication duopoly enjoyed less demanding Community Service Obligations (CSOs) of 22 000 and 7 500 community service lines respectively, and fulfilled these three years before the 1999 deadline (Benjamin 2001: 98). As a result of this, the introduction in 2001 of the third mobile telecommunication operator, Cell C, did little to interfere with Vodacom and MTN's comparatively higher prices which they were able to maintain after their initial CSOs were fulfilled.

Beyond legislation, South Africa has failed to formulate a formal and all-encompassing information society policy (van Audenhove 2003: 2; Esselaar et al: 2006: 13). This has allowed for various departments to manifest their own implementation strategies and develop what seem to be 'independent' bureaucratic arrangements for ICT management and intended public roll-out. Consequently, there is an incredible complexity in the content of ICT-related discussions, statements and documents. Partially in response to these complexities and their uncoordinated effects on implementation, the Department of Communication began a new strategy in 2001 to re-legitimate itself as director of ICT initiatives and co-ordinator of ICT policy. This commenced with the awarding of Under-Serviced Area Licences. The main aim of this, based on the American National Telecommunications Cooperative Association (NTCA), was to allow small and locally-owned companies the opportunity to provide universal ICT access to 'under-serviced areas'. In the first round, seven licenses were issued to new small-scale operators.[52] However, this was done formally only in October *2004* while Gazette 22959 of December *2001* had originally published information regarding applicants' submissions. As a result of this three year delay, the many more potential licensees who had applied "could not sustain themselves during the lengthy process" (Cohen 2001; Smit 2004: 19).

Due to the pressure which the DoC was under in terms of urgently addressing Black Economic Empowerment (BEE), it sped the process by granting licences to those BEE companies which could introduce their own physical infrastructure. Although attaching regulatory standards to this in the form of the 2001 Telecommunications Amendment Act, costs in rural areas were relatively high and were mostly passed on to the consumer (van Leijden and Monasso 2006: 26). As van Leijden and Monasso (2006: 26) conclude, "the regulations were not based on an analysis of

[52] This was formalised in the 2001 Telecommunications Amendment Act. The seven named operators were: Ilizwe Telecommunications, Amatole Telecommunications Services, Bokone Telecoms, Kingdom Communications, Thinta Thinta Telecoms, Karabo Telecoms and Bokamoso Consortium.

cost structures, but on the mere determination of an operator as a USAL". Furthermore, the insistence on the provision of particular technologies in specific under-serviced areas limited the ability of the new licensees to compete with established operators and choose the technologies most suited to them.

The aim of the licenses was to empower local, previously disadvantaged businesspeople, and in turn, achieve two objectives: the stimulation of black-run business in the formal sector of the economy and the creation of universal telecommunication access in marginalised communities (ICT Charter Steering Committee 2005: 5). Despite the logic of the argument, there was, and continues to be, a concern. The encouragement of Small, Medium and Micro Enterprises (SMMEs) in South Africa is based on the possession, by definition, of skills and capital upon entering any competitive market. To the contrary, South Africa's skewed history of resource distribution has ensured that high skills and access to capital are, as acknowledged by government, limited in possession of those targeted entrepreneurs (Government Gazette 16995). As a result, the stimulation of economic competition at the point of entry to any sector is mostly counter-intuitive to redressing the imbalance of resources in South Africa.

With this shortcoming partially recognised by government, the second round of licences began in 2005 and was led by the combined broadcasting and telecommunications regulator, the Independent Communications Authority of South Africa (ICASA) (Government Gazette 27166). This regulator received its authority in the ICASA Act (2000) which was most recently amended in 2006. The clearest difference to the first reform round was greater state involvement, which was formalised both in South Africa's Telecommunications Amendment Act (2001) and the new economic strategy of Accelerated and Shared Growth Initiative for South Africa (ASGISA) in 2005. The structural changes to the adopted "managed liberalisation" have meant the slowing down of the entire universal service provision. Had these changes been done initially, the roll-out would arguably have been further along its process by this stage. With hindsight aside, the reality of this time lag renders any further analysis of the operational effects of the second round of licenses premature at the time of publication.

4.3.2 Rhetoric and policy

In the face of implemental shortcomings juxtaposed against the progressive ICT legislation they are intended to represent, the role of political rhetoric must not be overlooked. It would appear that, in a South African context where debate over ICTs is often very fragmented, rhetoric is the origin of legislation and the promoter of policy once that legislation is in place. In the case of South

Africa, this has already been shown with the praise granted to the information society by Mandela and Mbeki one year *before* the formalisation of the 1996 Telecommunications Act. One could even argue that their speeches played key roles in catalysing the 1995 Green paper which led to this Act.

With apartheid-created inequalities fuelling most of the impetus awarded to universal service and universal access (terms which were used synonymously in the 1996 Telecommunications Act and which are still not clearly separated in definition), the digital divide[53] is a useful starting point to understanding the role of political rhetoric in ICT policy (Republic of South Africa 1996). While a generic definition of the digital divide may be somewhat self-explanatory, a critical policy-deciding element to that definition differs between countries. This largely revolves around socio-centricity and techno-centricity as the key focus areas of policy.[54] The former emphasises the use of technology for the improvement of lives and the latter emphasises the increase in technological possession, largely, for reducing comparative statistical imbalances. Although these can be complimentary they can also be counter-productive if promoted uninformed of each other.

Along this line of thought, perhaps the term digital divide is more qualitatively than quantitatively useful and encouraging to the creation, promotion and mobilisation of efforts in the interest of 'curing' the problem of this divide (if it is a problem to begin with). In other words, does the digital divide focus attention on statistically increasing the availability of technologies to those people who do not already have such access or on using ICTs to bring about socio-economic betterment? Although obviously linked, the difference in specific and direct attention to quantitative and qualitative factors has the potential to, it is argued, dramatically influence on-the-ground effects of ICT policy implementation. Consider the four definitions of the digital divide in Table 4.1:

[53] In its simplified form, the 'digital divide' refers to distinctions between countries based on them being technologically 'rich' and technologically 'poor'. Although not always the case, this generally follows the well-known classifications of countries in the global 'north' and the global 'south'. The term is also expanded to refer to those differences between regions, cities and suburbs.

[54] This difference in perspectives is reminiscent of a social inclusion framework which "redirects the focus from providing *access to technology* to the effective integration of ICT into communities and institutions for *social development*" (Warschauer cited in Mutula 2005: 124; emphasis added).

Table 4.1 Table showing interpretations of the digital divide by members of South Africa's Cabinet (2001/2002)

Interpretations of the digital divide	***GOAL***	***TOOL***
"Our first task is to close the digital gap that already exists between the developed world and ourselves. As we carry out this task, we cannot seek to tie our country to outdated technology as this would guarantee that we further widen this digital gap" (Mbeki 2001)	Bridge the digital divide	Continuously embrace new ICTs
"We must bridge the gap between urban and rural communities, between blacks and whites and the digital literacy gap...efforts to bridge the divide [are] primarily about *people* and not primarily *technology*" (Matsepe-Casaburri 2001; emphasis added)	Bridge historico-geographic and digital literacy divides	Social development
"As government, while committing ourselves to an information revolution in our country, we are fully aware that bridging the digital divide is *not* the cure-all for social ills that afflict society, especially given our unique history in this country" (Zuma 2001; emphasis added).	Embracing the 'information revolution' as part of a larger social transformation	Bridge the digital divide, amongst other 'tools'
"Another challenge identified is the bridging of the digital divide between Africa and the developed world through developing infrastructure and ensuring the transfer of technology." (Mbeki 2002)	Bridge the digital divide between the global 'north' and the global 'south'	Infrastructure development, technology transfer

On one level, these views may appear to be complimentary and implicit of the prescriptions for synchronised foundations to ICT policy. However, when considered in terms of 'goals' and 'tools', it is very clear that these are not always consistent and therefore have the potential to be counter-productive to each other. There does appear to be an element of consistency in Mbeki's interpretations: in both his excerpts, he identifies a techno-centric strategy in achieving the 'goal' of bridging the digital divide. The second quote is clearly socio-centric. The 'goal' is to bridge geographic and digital literacy divides and the 'tool' for achieving this is social development. In the third quote, Zuma implies that the 'goal' is embracing the information revolution, within a holistic context, and that bridging the digital divide is one facet to realise this.

While there is some similarity in certain cases, the 'goals' and 'tools' are mostly inconsistent. The criticism will undoubtedly be levelled against this that the above quotes are taken out of context. Even so, they are excerpts from the *same* government administration, at a time when *all* were members of Cabinet (and therefore, seemingly in close contact), *between* national elections and from the *same* policy period of 2001/2002. As such, they should be reflective of consistency,

be written in an informed manner and, indeed, subject to such interrogation. While 'goals' and 'tools' will always overlap in vertical linkages (such as Cabinet to Department to agencies to implementers), the appearance of 'bridge the digital divide' in Table 4.1 should not, at the very least, appear as both 'goal' and 'tool' at the *same* political level of Cabinet.[55] The argument even, that perhaps the above 'goals' and 'tools' are holistically assumed in all the respective cases by all the speakers, does not stand. If the assumptions are as simple as the members of Cabinet may think, then there is actually no obstacle to conceptualising them in such speeches.

Furthermore, this inconsistency of views towards the digital divide emphasises an important concern. The lack of common identification of what exactly this term refers to impacts on a problematic culmination in implemental policies. In the view of van Audenhove (2003: 3), "[b]y trying to construct a vision on the basis of fragmented political discourse and political statements, one risks creating a vision that is more comprehensive than the underlying reality". Similarly, the above inconsistencies possibly account for the claim by Esselaar et al. (2006: 13) that "[t]he mechanism to achieve the objectives of the Department [of Communication] is not clear".

This suggestion of the DoC taking a lead is evident in its very own self-labelling. It has identified itself as being at "the forefront of Government initiatives to bridge the digital divide and provid[e] universal access to Information and Communications Technologies (ICTs) for all South Africans" Department of Communication's (2007). Despite this claim, between 1995 and 2008, *eight* government departments or institutions were involved, whether independently of each other or otherwise, in ICT-related policy initiatives (van Audenhove 2003: 10).

But such a problem is not easily remedied simply by restricting which Departments ultimately decide on ICT policy. This is because it has its own internal concerns, some of which have already been revealed. Further, the Department of Posts, Broadcasting and Telecommunications (which was dissolved into the present Department of Communication in 1996) outlined an important position towards the information society. Then-Minister, Jay Naidoo (1998, emphasis added) stated that,

> [i]n the Global Information Society, there is a direct positive correlation between *access* to telecommunications and socioeconomic development. We realise that telecommunications is no longer the *consequence* of development; rather it is a necessary *precondition*.

[55] Interestingly, before the end of 1996, the Task Group on Government Communications which Mbeki had commissioned in his capacity as Deputy-President to examine the role, benefit and management of e-government and e-governance in South Africa, produced its report. Of its 83 recommendations, one of the most interesting was the proposal that ICT-related policies should be conceived, managed and co-ordinated by a Cabinet Committee led by the Presidency (Communications 2000: 1996).

In this quote, Naidoo displays an understanding of the idea that telecommunications, as a concept, is only the initial stage of broader developmental potential. On a deeper level, he identifies access to telecommunications as a precondition for development. There is, of course, nothing empirically wrong with such a statement because with telecommunications being viewed as a precondition in such a context, access to telecommunications, implicitly, *facilitates* development and is not a *product* of development. The issue which *is* of concern is that such statements contribute to a problematic imbalance between, on the one hand, attention to the possibilities which can be derived from access to telecommunications, and on the other hand, attention to the precondition for that access to telecommunications. It is the latter which is glanced over, whether intentionally or not. Surely the ultimate precondition for development would be the infrastructure for the 'tools' which can then be used to bring about that development?

Of course, one may argue that the above quote is, like those in Table 4.1, isolated and out of context. Even so, it does not account for the paralleled contradictions and shortcomings within the DoC regarding its emotional determinism and devolutionary controversies which have already been shown. In this instance, the idea that the importance of physical infrastructure is sometimes overlooked in political speeches does appear to have associations with 'trickle-down' effects to departmental agencies, policymakers and the public. It is arguably the effect of ignoring infrastructural necessities which has alarming consequences on the ground and can lead to the lack of sustainability of government-led ICT projects. In other words, the resources required for telecentres, for example, require electricity, cellphones require signal towers from which the topography of the land does not interfere with signals etc. The problem, however, is that policymakers in South Africa seem, too often, to begin the process at the point of access and not the precondition for that access.[56] One could very well argue that the various infrastructure which this points to is so obvious that its expectation is assumed. Paralleled to the argument above regarding Table 4.1, is that if the infrastructure is so obvious a conception why then are they not mentioned as often as they could or should be? The overlooking of this obviousness arguably accounts for the determinism which is the reality of many government-initiated ICT policies and programmes.

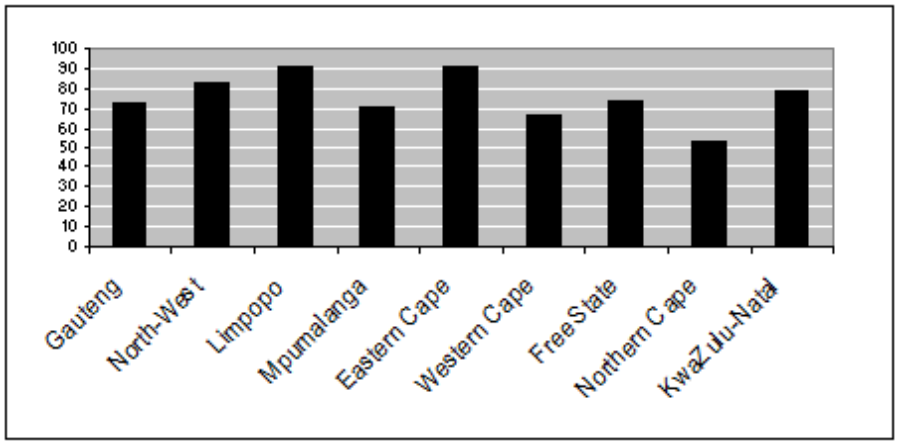
The repercussions of interpreting the digital divide in this way and overlooking the importance of physical infrastructure (both of which have been described) have the potential to breed complexities in the ICT policy debate. The failure of government to ensure the consistency of

[56] In support of such a claim, David Quail, spokesman on education for South Africa's opposition Democratic Alliance Party said, "We're not opposed to the concept of giving people computer skills. That's great, we need to do that. The problem is the pragmatics of the situation....A lot of schools don't have sufficient classrooms. There are not sufficiently trained teachers. Until those concerns are addressed, I don't think you should try to give all schools computers" (Itano: 2001).

policy and implementation in the specific targeted localities it identifies as technologically 'poor' points to two factors (Gazette 1995; Mbeki 2001). One, the national ambiguity of policy and, two, the lack of co-ordination between policymakers and the implementers of those policies.

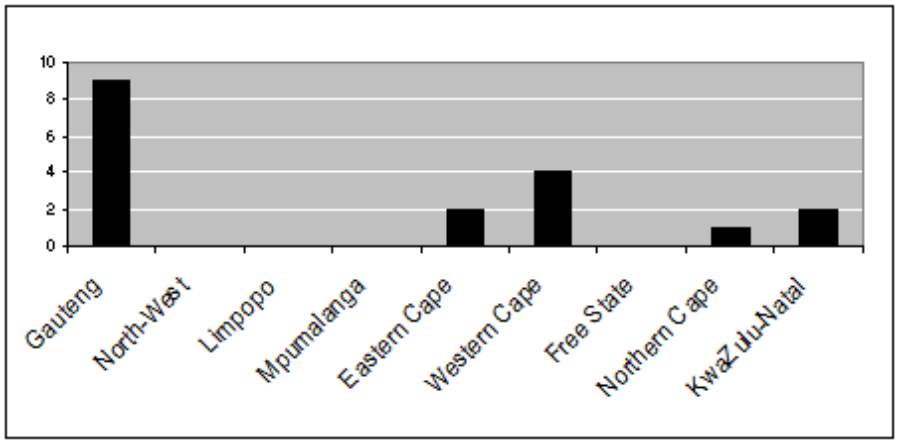
These are clearly illustrated with the juxtaposition of Figures 4.1 and 4.2 below. Although the former may suggest that efforts are being invested in reducing the digital divide, the latter shows that this is not the case. In other words, although the implementation of public Internet access points is seemingly responsive to government calls to reduce the digital divide throughout South Africa's nine provinces, the reality is that these Internet terminals are predominantly grouped in 'digital villages' which are mostly in major towns and cities (Maphatane 2006: 3). When viewed from this perspective, the great inequality of Internet distribution is startlingly obvious with emphasis predominantly on Gauteng, South Africa's financial heartland (Figure 4.2).

Figure 4.1 Numbers of public (community) Internet terminals in South Africa (as at December 2006)



Source: Adapted from Maphatane (2006: 3)

Figure 4.2 Roll-out of digital villages (as at December 2006)



Source: Adapted from Maphatane (2006: 3)

It seems likely that the aim to implement an 'infrastructural revolution' in rural areas –

South Africa's "domestic Third World" – is based on an assumption (Mbeki 2001); because this infrastructural revolution has occurred in some urban areas and is still occurring in other urban areas – South Africa's "first world" – the same level of 'development' will occur with the same level of 'ease' and certainty in rural areas (Mbeki 2001). The assumption of the willingness to accept these technologies in rural areas is based on the expectation of ICTs, such as cellphones, being endlessly advertised through the medium of other ICTs such as radio and television. Despite the reliance on this advertising, it largely overlooks the harsh reality of the different stages at which 'urban' and 'rural' operate with regard to ICTs. For example, while cities such as Durban, Cape Town and Johannesburg popularly use ICTs as 'tools' of development for city governance, many rural areas – largely through the second round of USALs – are still attempting to achieve the 'goal' of basic infrastructural construction necessary for a similar kind of development.

4.4 Implementation – subjects of development or members of material consumerism?

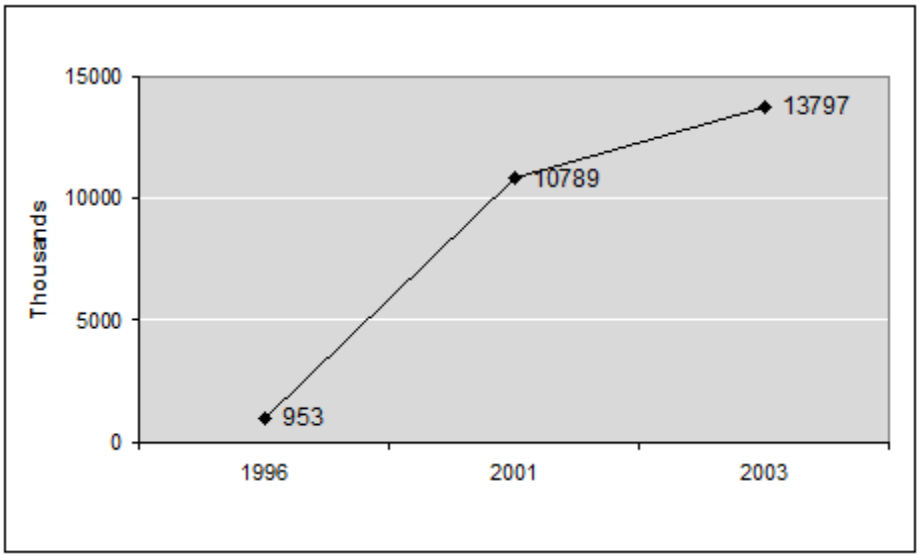
The awarding of licences by the National Party in 1993 to Vodacom and MTN without consulting the ANC alliance sparked controversy outside of minority leadership. If the then-ruling party's attempts to privatise Telkom were anything to go by, the introduction of the mobile telecommunication companies at a critical time in South Africa's history is intriguing. This is argued by Battersby (1990: 3) to be an attempted shift of capital to white businessmen before the political transition to black majority rule (Battersby 1990: 3). However, given the more threatening possibility of this with the already existing fixed-line operator, Mandela and de Klerk reached an agreement in September 1993. This was that in exchange for the National Party *not* privatising Telkom immediately through an amendment Bill, the ANC alliance would not oppose the mobile telecommunication licences any longer (Business Day cited in Benjamin 2001: 90).

Fifteen years later, the South African economic arrangement which has allowed Vodacom and MTN (and Cell C to a lesser degree) to be 'price makers' is one in which they are largely influential. This is clear in Figure 3.1 above which shows the extent of this influence on a continental level. This plays a role in undermining much success of smaller license-holders in under-serviced regions which are forced to be 'price takers'.[57] By the end of March 2004, these three operators "had a total of 18.3 million subscribers representing a penetration level of more than 40 percent" (see Figure 4.3) (Maphatane 2006: 11). The overlap of the Mandela and Mbeki governments brought with it a growth in the mobile telecommunications consumer market by 1347.7 percent (Figure 4.3). This provided the market creation of Vodacom, MTN and Cell C

[57] In economic theory, a market dominated by a duopoly or oligopoly most often has the characteristic of such participants being able to set prices above market efficient levels. While smaller participants can change their levels of production, they have little influence on market prices.

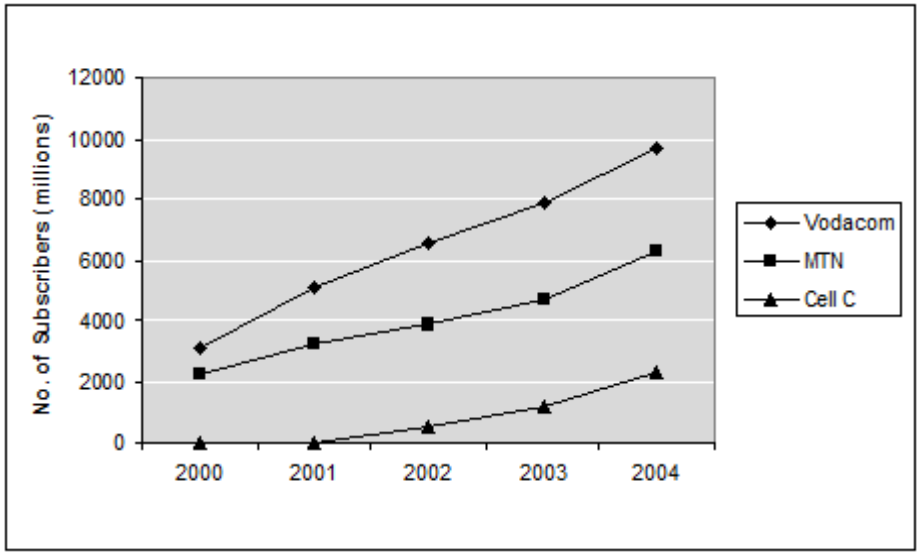
subscription bases, with Vodacom claiming the largest increase (Figure 4.4).[58] The Economist (2007: 38) estimates that over the 2000-2005 period, South Africa's cellphone subscribers had increased by 297.8 percent to a level of 71.6 subscribers per 100 inhabitants.

Figure 4.3 Numbers of Vodacom, MTN and Cell C subscribers (2000-2003)



Source: Adapted from Maphatane (2006: 10)

Figure 4.4 Cellphone subscribers in South Africa (1996-2004)



Source: Adapted from Maphatane (2006: 11)

Providing affordable ICT access to the South African public is seen by the Department of

[58] Data for the years after those contained in Figures 4.3 and 4.4 are not available from government. According to the Department of Communication, this is because "[m]easuring ICT's as a driver and enabler of socio-economic development is a challenge. In the first instance, generic data on ICT's is not kept. Instead service providers are collecting the data, and this makes the validity and reliability of such data questionable" (Maphatane 2006: 28). If anything, this response further adds to the lack of control and involvement of government in socio-economic development.

Communication as the "cornerstone" of its ICT policies (Maphatane 2006: 13). The investment in this direction is targeted at equating access to ICTs as fundamentally equivalent to basic healthcare and education on the level of basic human rights and as an "inherent attribute of citizenship" (Maphatane 2006: 13). However, with the phenomenal progression towards a technologically consumerist society, the Department of Communication, by its own admission, acknowledges the problems associated with this: due to the "recent proliferation of new technologies as a result of advances and the evolutionary nature of ICTs", the composition of basic needs and "'bare' essential service[s]" suffer from a lack of consensus (Maphatane 2006: 13). This then raises the possibility that ICTs are not necessarily consumed for the developmental purposes suggested by government. Instead, the possibilities of consumerism in a material culture seem more likely. This questions the ability of government ICT policy, with its contradictions and inconsistencies, to ensure the use of technologies, such as cellphones, for its intended purposes. As a result, while this need not affect policy decisions in the associations of ICTs to human and social development, it has a direct impact on both the roll-out of ICTs by the private sector and the nature of acceptance of these technologies by the public.

One needn't look beyond South Africa's Electronic Telecommunications Act (2002) which provides mobile network operators with the luxury, in terms of their consumer markets, that "[t]here aren't any no-go areas" (Knott-Craig 2007: 6). Similarly, there appears to be no incentive to question the possibilities of the technological devices which provide us with this information. Browsing through any cellphone magazine or brochure, one is bound to find pages advertising different ring tones, cellphone desktop images, downloadable jokes and many others. Because such advertising is within the confines of legality, can it be suggested that their promotion, by implication, is inclusive of government policy (albeit fragmented) to promote the existence of private network operators in South Africa? Does the possession of a cellphone from which such downloads are possible help create the status necessary to live the lives people have reason to value (Sen 1992: 293; 1999a: 241)? In promoting the ability for "living a *better*...life", what is the qualification for the level of betterment? (Vodaworld 2007a: 13, emphasis added). Following the lead from government, the Chief Executive Officer of the Vodacom Group notes,

> The world is full of mountains of information that grow bigger every moment. Services that help our customers to dig into the mountain of information and sculpture the content to their specific needs will add an important new dimension to our business…[w]hatever it is, Vodacom wants to provide what consumers want…nothing is impossible. (Knott-Craig 2007: 6)

Along this line of thought, Vodacom, and its competitors are largely praised by government for the cellphone technologies and other services which they offer as 'tools' in the development of

peoples' individual 'needs' (whatever these may be) (Goodenow 1996: 199). Given that the political leaders of this country associate these 'needs' with ICTs, 'trust' is evidently given to these companies to create the 'goals' of livelihoods which people want to live. This is despite the failure to, at a policy level, explicitly trace the association between ICTs and 'essential services' in terms of horizontal and vertical linkages. This 'trust' is seen to be linked to the "valuable contribution" of the mobile telecommunications operators and its associated technological producers to provide the 'tools' for the identification of these 'goals' (Maphatane 2006: 22).

To illustrate one of the ways in which the commitment provided by government to the private sector has manifested, consider the Nokia E90 Communicator. This is one of South Africa's newest and most recently introduced communicative devices ('new' when this chapter was written, but probably outdated by the time the thesis is concluded). The old English proverb 'knowledge is power' refers primarily to the world being the oyster of the person with knowledge. It is advertised in this case with the same English proverb except that knowledge is used in reference to *technological* empowerment and not social or intellectual empowerment (Nokia 2007: 5). Although still a 'tool' regardless of how it is packaged or marketed, emphasis seems to shift from any stated 'goals' of the DoC towards fashion trends. With this in mind, the flexibility of 'living the life which one has reason to value' is clearly subjected to the times and environments in which people live. This is largely irrespective of whether or not those times or environment is conducive to healthy living or indeed, to the satisfaction of 'essential services'.

4.5 Conclusion

This chapter has explored the emergence and interpretation of ICTs at the level of government in the 'new' South Africa. Based on this, it has invested its attention, with the use of a simple framework of 'goals' and 'tools', in exposing the shortcomings and contradictions in government legislation and rhetoric targeted at the implementation of policy. This has been extended to the role of mobile telecommunication operators and their inconsistency with government legislation and policy.

The conclusion of this analysis points squarely to the failure of the South African government to effectively act on its initial 'goals' for embracing the information society in its aim to address the inequalities it inherited from apartheid. It had conceptualised a role for these technologies in the early 1990s, but, because of inconsistent and counter-intuitive 'tools' which have been employed, has largely failed in this regard. Evidence in support of this lies in the politics of disagreement originating in an unclear Telecommunications Act (1996). This mostly relates to the

USAASA and SATRA over control of the USF and universal roll-out. The 'goals' and 'tools' framework shows that the vision of ICT policy was based so strongly on dealing with apartheid that decisions made in all sectors of the economy tried to accomplish and redress more than was possible and more than these sectors were individually capable of.

This is evident in three key forms: firstly, the roll-out target of the DoC and the USAASA was unrealistic from the outset. Therefore, the self-anticipated shortcomings could not culminate in anything more than implemental failure; secondly, competing actions, decisions and projects by various government departments exposed the uncoordinated 'tools' in striving for what was seemingly the same 'goal'; thirdly, USALs were introduced by trying to deal simultaneously with BEE and universal access – however, the simultaneous intentions were contradicted by the chosen economic arrangement of market liberalism. Such logic, when conceptualised in conjunction with counter-productive political rhetoric, shows that the issues raised in this research have not merely been about harmless semantics. Rather, the research has exposed the relationship between contradictions and fragmentations of political rhetoric and the inconsistencies in legislation and policy formulations.

What this reveals is that such contradictions and fragmentations of political rhetoric, within the context of the globalising market arrangement, are implicitly continued at an implemental level. When asking the question, 'does this interfere with the bureaucratic management of the South African state and its policy objectives?', the answer is an unmistakable 'yes'. This is because the contradictions they breed promote deterministic perspectives towards a slogan: *'possess ICT and lives will improve'*. This seems to be done with little due attention to the importance of infrastructure necessary to support ICT possession.

There is no indication from the involvement of national departments or from any government speeches or documents that the uncoordinated views which have been discussed will change in the political scene of South African politics in the near future. If anything, these views appear to be playing a role in fuelling the interests of corporate marketing in the mobile telecommunication sector. As a result, one cannot help but be driven towards the idea that while the Department of Communication has identified a specific role as leader in the use of ICTs for development there is clearly a 'missing link'. This has been identified as the lack of clarity in legislation, inadequate co-ordination of policy prescriptions, questionable devolutions of power in government, the failure by political players to all understand the complexities of ICT discourses, and of course, the questionable effects of implementation. This is largely because the lack of

common ground at government level of what the digital divide is or of how to address apartheid-created inequalities, impact on confusion in identifying the 'goals' which need to be achieved and the corresponding 'tools' which should be employed to meet those 'goals'.

Chapter 5: Case Study: Experiences with Cellphones and the Internet in Ndumu and Sicabazini

5.1 Introduction

This chapter examines the effects of ICT policy implementation at grassroots level in rural KwaZulu-Natal. As shown in the previous chapter, the ICT policy attempts by the South African government, the Department of Communication (DoC) and the Universal Services and Access Agency of South Africa (USAASA) have largely failed. This is mostly because these attempts have led to marginal and sometimes counter-productive 'development' *before* policy is even implemented. This seems to have created an unregulated window for organisations and the corporate private sector to intervene in 'development'. Regarding such players, this chapter focuses on the failure of the USAASA in the rural villages of Ndumu and Sicabazini in rural northern KwaZulu-Natal and traces the ways in which the Agency has interacted with the P.E.A.C.E. Foundation and Vuvuzela Communications. The lack of co-operation between these players has contributed to local perceptions which are reflective of the 'globalising of the local' and the 'localising of the global'. It is argued that such perceptions contribute to the existing 'development' dilemma of poverty.

The chapter comprises five main sections: the first three (Sections 5.1, 5.2 and 5.3) are purely narrative and the remaining two (Sections 5.4 and 5.5) are critically engaging. This structure allows for the stories of the USAASA telecentre initiatives, the Ndumu telecentre and the Sicabazini Computer Centre to be told and to, qualitatively, establish the periods of analysis. With this background, the roles of the abovementioned players can be closely scrutinised in their involvement in these rural communities.

5.2 USAASA 'telecentres'

The Universal Service Agency was established in May 1997, in terms of Section 58 of the 1996 Telecommunications Act (Republic of South Africa 1996). The Universal Service Fund (USF), which was created at the same time, could be used for two purposes. One was to subsidise marginalised communities with ICT-driven projects. Another was to subsidise telecommunications companies in their roll-out of infrastructure to meet their Community Service Obligations. A major problem experienced by the USAASA, in the view of Mandla Sithole, was identifying communities in such a way which would not open up the Fund to abuse. With political pressure for 'delivery'

mounting, the idea of establishing 'telecentres' was quickly conceptualised. Because of the pressure under which this conceptualisation took place, attention was primarily invested in creating generic templates for telecentre creation and Fund usage. This was at the expense of paying specific attention to how best to use the Fund in different local communities. It seems that this contributed to the initial top-down process of implementation representative of the ICT policies efforts which were described in the previous chapter.

Commenting on the ways in which to 'protect' the Fund from abuse, KwaZulu-Natal's USAASA representative, Mandla Sithole (2008), commented:

> we ran into problems...we did not know how to come up with that answer, and then we said 'if that is the case, there is no way we could touch the Fund'. We sat down and said, 'that means we should not work, we should lose our jobs!' Then we came up with a *clever* way of coming up with the telecentre concept...And then we went to the Minister Jay Naidoo and he bought into our idea...that's why we set up the telecentres. In setting up the telecentres we became excited… However, that created problems for us because people were judging us about the functionality of the telecentres...if the telecentres had problems, then people would say we've misused the funds.

Despite Naidoo agreeing to the telecentre concept, the accountability of the USAASA in proceeding with its roll-out was minimal: because of its initial financial problems dating back to 1998, the Department of Communication, very quickly, began to associate itself less with the Agency (see Chapter 4) and increasingly overlooked its activities and importance. Because the telecentre concept was created after the finalisation of the Telecommunications Act (1996), this aspect of the USAASA's activities not only reflected poor strategic management and planning but implied that it was not accountable to legislation.

Supposedly aware of this, Minister Naidoo allowed the USAASA to proceed with its activities. The USAASA did this almost immediately by advertising in the local media. This was directed at community organisations and asked them to apply for fully-funded telecentres to be established in their localities. With the provision of subsidies from the USF, the USAASA concentrated on providing access to telecommunications primarily in marginalised areas of South Africa which had been most badly affected by apartheid (Republic of South Africa 1996: 10). By the end of 1997, 30 sites for telecentres were selected. The required application forms requested information dealing with the reasons for wanting a telecentre, how it would be managed and how it would be sustained. Even though no financial burden would be incurred by the local people in the

construction of the telecentres, there was an underlying implication that the very sustainability of the telecentres was reliant on local financial resources. This was because after a two year period of USAASA ownership and maintenance of the telecentres and their equipment they were to be handed over to the respective communities. This, it was hoped, would foster local 'development' through the use of telecentres by providing local people with skills and offering them access to global possibilities.

By 2001, the USAASA had established a total of 65 telecentres in rural South Africa (Schofield and Sithole 2006: 27), which were spread throughout the country as shown in Table 5.1.

Table 5.1 Total number of USAASA-established telecentres in rural South Africa (2001)

Northern Province	13	Eastern Cape	10
KwaZulu-Natal	10	Free State	6
Western Cape	6	Gauteng	5
Mpumalanga	5	North-West	5
Northern Cape	5		

Source: Benjamin (2001: 125)

This comprised 54 'full' telecentres and 11 'mini' telecentres. The main difference between these telecentres related to cost, size and hardware. The 'mini' telecentres cost approximately R15 000 and the 'full' telecentres ranged in price between R150 000 to R200 000. Despite the possibility of the different kinds of centres which had different functionalities,[59] the hardware provided was not always sensitive to the needs of respective communities. This was mostly because, to cut costs, it was purchased by the Agency in bulk. As Benjamin (2001: 136) observes, "[o]verall, there was little variation in the equipment provided. In particular, there was little or no effort to match the equipment provided with the specific needs of the local area, and the local telecentre managers or owners had no say in the equipment they received". This was increasingly the case as telecentres created after the initial 30 were provided with *refurbished* hardware despite the initial promise to the contrary. It seems that neither the Agency nor the applicants took into account the sustainable supply and affordability of this equipment. This means that when consumers needed to replace consumables, such as ink cartridges, this took a very long time to do, if done at all. The nearest supply stores, especially in relation to deep rural telecentres, were

[59] The 'mini' was provided with one cabinet for a Pentium computer and a 3-in-1 printer, photocopier and scanner. Telephone functionality was also provided with two Vodacom 'Sigi' phones. The 'full' telecentre was provided with three to five Telkom or Vodacom Sigi telephone lines and management software to track costs of calls, between two and four new computers, a printer, photocopier and facsimile machine. It has been reported that, on occasions, one scanner, television and video recorder were also provided.

sometimes hundreds of kilometres away. If computers needed to be repaired, firstly locating, and secondly, convincing technicians to travel to the region, was a major challenge.

Having to constantly travel to repair equipment, the USAASA simply continued providing whatever it could. This often implied continuing to provide hardware which was not tailor-made for the interests of the intended communities. Further, the USAASA had no obligation to repair the hardware it provided after the initial two year period of ownership and maintenance. This helped to reduce the Agency's growing costs but, at the same time, led to the stagnation of many telecentres when hardware became inoperable. Despite crediting itself with having installed 65 telecentres, there were simple, yet integral shortcomings with USAASA's of this. This related mostly to the increasing problems associated with Internet connectivity and broken computers. As a result, there was a stage at which, despite the classification as a 'telecentre', 92 percent of these did not have Internet connectivity, 51 percent did not have working telephones, and 25 percent did not have computers. In 16 telecentres, electricity was a major problem with frequent blackouts (Benjamin 2001: 129).

On one level, one cannot deny the benefits which these telecentres brought to, mostly, impoverished areas. This ranged from SMME empowerment and gender-sensitive job creation to increases in access to information for people who had never before been exposed to such information. Despite this, by the end of 2001, it was clear that such benefits were short-lived in 21 of these telecentres. This was because they were shut down for reasons including corruption, burglaries, technical faults and managerial weaknesses (Schofield and Sithole 2006: 27; Benjamin 2001: 129).

These problems, shortcomings and failures provided incentives for non-governmental organisations and the private corporate sector to intervene in ICT-related 'development'. While some chose to partner with the USAASA in the fulfilment of its mandated responsibilities, others opted to intervene independently in local communities. The remainder of this chapter examines two of those communities in rural KwaZulu-Natal: Ndumu and Sicabazini.

5.3 Experiences with cellphones and the Internet in Ndumu and Sicabazini

5.3.1 The story of the Ndumu P.E.A.C.E. Telecentre[60]

Against the backdrop of poor telecommunication infrastructure in Ndumu, the P.E.A.C.E. Foundation, in the late 1990s, approached Vodacom for cellphone signals to be provided "to make life easier for local people" (Dorothy 2008a). Despite Community Service Obligations (see Chapter 4), this region remained with no mobile connections from either Vodacom or MTN. Furthermore, when approached by Dorothy, Vodacom did not look optimistically at the proposition of providing coverage to the region. It justified this to her with the view that the spread of the local population was not consistent with the company's target market, and as a result, that it was not economically viable to provide coverage. However, the persistence of the P.E.A.C.E. Foundation eventually paid off:

> ...initially, Vodacom were reluctant to provide a network for that region as they felt that there would not be an adequate market to justify doing that. On visiting the area, however, they agreed to assist with this and the result has been that many people in the area now have cellphones and since the landline service is very erratic, this has assisted them a great deal. (Dorothy 2008c, original emphasis)

By way of cellphone coverage increasing in rural northern KwaZulu-Natal, and with MTN also providing connectivity more recently, the effects of poor landline connectivity have been less noticeable. In other words, in 2001, the ward which includes Ndumu, had a total of 967 public telephones but nobody had private access to fixed line telephony. Furthermore, 296 households had absolutely no access to such telecommunications (National Census 2001). In contrast, the availability of cellphone coverage not only diminished the impact on locals of Telkom's obligatory shortcomings by actually acting as substitutes.

In 1998, when demand for cellphones and interest in other new information and communication technologies (NICTs) was slowly increasing, the P.E.A.C.E. Foundation established a P.E.A.C.E. Multi-Purpose Community Centre. This comprised a community hall, crèche, spaza shop, bakery, catering facility, an educational resource centre, permaculture gardens and a waste management facility, accommodation and a library. The aim was for this Centre to be a rendezvous of access to important information and resources for the residents of Ndumu. To this end, offices were created for the tribal authority, municipal councillor, and Home Affairs representatives. It was also hoped that this strategic positioning would improve public access to local leaders and provide

[60] The first telecentre in KwaZulu-Natal was established on 29 April 1998. This was in Bamshela, For more, see Schreiner (1999).

local people, in theory, with greater influence in the decisions which affect them most (such as social service delivery). Also included in the building of the Multi-Purpose Community Centre was a telecentre which sparked much interest from the community. It is this aspect of the Centre which is now dealt with.

The USAASA proceeded in 1999 with Ndumu as one of its projects. The telecentre's funding was received from the government of the Netherlands. Its establishment benefited from the assistance of KPN International Consultancy. According to Mandla Sithole (2008a), the P.E.A.C.E. Community Centre was originally provided with five computers, one photocopier, one scanner, one telephone, and assistance to introduce Internet connectivity. He reports that all the hardware was new on delivery. Although identified by him as "successful" in this regard, the P.E.A.C.E. Foundation has its reservations (Sithole 2008). While grateful for the attention which the USAASA gave to Ndumu, "they fell far short of expectations. Some of the five computers that they installed were never connected properly, and, therefore, weren't operational and...the Internet was never connected" (Dorothy 2008c). As a result, the P.E.A.C.E. Foundation had to find independent service providers, at its own cost, to rectify these problems.

When questioning Sithole (2008) about this – specifically with respect to the P.E.A.C.E. Foundation's claim of no Internet connectivity and that some of the hardware provided by the USAASA had exposed wiring without any plugs – he expressed, with shock, that "this is news to me". Similarly, the Community Centre's first Manager who was appointed in April 2001, has no recollection of ever witnessing, or being told of, such failures. He responded positively when asked if computers were in working order when delivered by the USAASA. Despite this, it is intriguing that there are many reports of unusable hardware – on delivery by the USAASA – in telecentres throughout South Africa (Benjamin 2001: 151).

The three women placed in charge of Ndumu's telecentre by the USAASA were expected to run it. However, there seems to have been definite confusion between the Agency and those employed in the telecentre. On the one hand, the Agency maintains that the locals "...were to be responsible for the day to day running of the telecentre from the beginning...we didn't go up to the extent of assisting them with providing wages for the people who are involved in it" (Sithole 2008). On the other hand, at no stage did the actions of the three women in the telecentre reflect that they were attempting to *earn* their money. It was their understanding that they would be paid their salaries simply by maintaining a presence. This further stagnated the very operation of the

telecentre which, as it was, had hardware which was allegedly not immediately ready for use. During this time, the telecentre remained under the control of the USAASA. As per general practice in South Africa, this control continued for two years, in partnership with Telkom. Some time after the USAASA's installation of equipment, Telkom provided Internet connectivity. This connectivity was possible through a satellite dish provided by the P.E.A.C.E. Foundation but sponsored monthly by the Agency. According to Dorothy (2008c), "[o]ne of the boxes for the IT [the server box] had never been unlocked and they didn't even have a key…we had to smash it to get in…". To the contrary, Sithole (2008) maintains that this was not the doing of USAASA. His argument is that it was the local telecentre staff that lost the key and this was only brought to the attention of the Agency when Telkom needed this key to provide an Internet connection.

During the days when the telecentre was being connected, Sithole was very vocal with promises. These included its operation as a useful facility for locals as well as the improvement of computer literacy amongst community members. However, neither of these promises was fulfilled. This is due largely to the fact that after computers were initially provided, USAASA did not visit the Ndumu telecentre again. When asked about what improvements the Agency has brought to the Ndumu telecentre since that time, Dorothy (2008d) replied that their involvement will always be an important concept, but has been limited:

> We have had ongoing disappointments from government – even at local Municipal levels where, at a site like Ndumu we have had no follow through...in providing the support for the Centre Manager, nor in the utilization of the Centre for purposes of providing the community with better access to government services, and this is disappointing. (Dorothy 2008c)

She went on to say that:

> The services that USAASA has provided in terms of the telecentre concept and also the training programmes that they provide are appreciated and are very important. It is regrettable, however, that their service provision often falls short of what is expected for a telecentre to be a sustainable business. (Dorothy 2008c)

Against the backdrop of stagnant functionings under the authority of three managers and the false promises of Mandla Sithole, Jabu was nominated to take over the management of the telecentre in April 2001. He was a local entrepreneur elected through a local *imbizo* (gathering/forum), and he assumed the position of manager soon thereafter. His dedication to his job was not questionable. When, in the event that computers required repairs, he packed them in his Fiat Uno and travel to Empangeni to get them attended to. His entrepreneurial talent and sincere

dedication to providing the community with a functioning telecentre became apparent very quickly. This continues to earn praise from Dorothy (2008d) and Sithole (2008).

At one stage, Jabu was able to get all five computers to operate. This allowed him to conduct computer literacy training on all these machines. He did this with an accredited computer literacy course from the University of Liverpool, which he researched online on his own initiative. These courses were targeted at school-going youth and adults who had completed secondary school not too long before. They were facilitated by Jabu himself and instructors from nearby towns. Gradually, an increasing number of graduates paved the way for more tutors. Other locals who became tutors had travelled to Durban to be trained.

The cost of the courses, which stood at R1 500 for the three-month duration, attracted many local people. As shown in Annexure 1, only one of the Ndumu participants earns an income in excess of the required R500 a month for the course. Despite this, Jabu (2008a) describes its cost as "reasonable to accommodate our rural people". With limited employment available, many people saw the course as a direct avenue to job opportunities. Because of this, one can argue that they were willing to redistribute the spending of income on other 'poverty alleviating' resources. In fact, at one stage, the demand was so high for Jabu's courses that the ratio of people to computers was estimated at 20:1 (Thabo 2008a). Importantly, the international course which Jabu had found was not one directly targeted at economically marginalised people, which was clearly reflected in its costs, in real terms, even before converting from Pounds to Rands. On this point, Sithole (2008) expressed great disappointment because the telecentre was actually charging poverty-stricken people international rates for computer literacy courses. Ironically, the USAASA offered no remedy, despite this criticism. The only training it provided was basic business training intended for those involved in the administration of its nation-wide telecentres.

After the initial period of the USAASA-sponsored Internet connectivity, Jabu was responsible for settling the telephone account (which reflected both fixed-line and Internet usage). This was with funds generated through the operations of the telecentre. He paid this account at the local post office or in Empangeni when he used to drive there. After a few months, Telkom changed its billing system by creating a single government code for all the USAASA's telecentres. This reflected the telecentres' accounts in sum. Based on this, a partially subsidised account was sent to the telecentres. However, when many managers throughout the country went to pay the accounts, they were told that the accounts had already been settled by the USAASA. This created

confusion. The managers, including Jabu, were told by the USAASA, from the outset that, "this is your responsibility...we go as far as providing connectivity and then from there you [the managers] take over and run it" (Sithole 2008). Because of the accumulating unpaid accounts, Sithole (2008) estimates the debt of the Ndumu telecentre alone to have been approximately R180 000.

It was only many months later, after talking to a few telecentre managers in KwaZulu-Natal, that Sithole (2008) became aware of what he describes as "havoc". This was because these managers expressed, with confusion, "we've been to the Post Office to pay, but Telkom doesn't want to take our money" (Sithole 2008). The reason for this was that both Telkom and telecentre managers were under the impression that the USAASA was, and would continue, paying these accounts. Telkom, understandably, held this view because the USAASA was the original applicant and had signed a contract with them. To complicate matters, the USAASA had a verbal agreement with telecentre managers. This agreement explained that although the Agency used its name in the application to Telkom, the managers were actually responsible for payment.

In Dorothy's (2008c) view:

> USAASA are mandated to provide connectivity to rural communities, but our experience has been, at Ndumu, that after supporting the connectivity for some time, it was, without warning, withdrawn, apparently due to some arrangement between Telkom and USAASA which had broken down.

The cross-agreements were very unclear. While the USAASA maintains that it would never have signed such an agreement with Telkom, telecentre administrators remained confused, but satisfied, nonetheless, that they were not paying. Sithole (2008) clarifies the problem:

> ...we went to Telkom – they said because you guys are the applicant we thought we should bill you. We said, 'no, but you didn't make any arrangement with us, how can you do that?' Then they produced a document where one of our staff members had signed – she was a junior person in the organisation. When we asked her, she said 'Telkom said I must sign it'. With that, we said we were not going to apply for other telecentres.

It has been reported by Dorothy (2008c) that without informing her of this, Jabu continued as manager of the telecentre (and the Community Centre as a whole) even though Internet connectivity had been removed. This was unexpectedly brought to her attention some months after it first happened. She discovered, to her amazement, that Jabu had not been paying the Centre's telephone account. According to Dorothy (2008c), neither Sithole nor Jabu informed her of the problems and confusion regarding account balances and payments.

At the same time, the Community Centre experienced financial problems. These were mainly due to the fact that the electricity usage in its bakery, to meet growing local demand, raised costs beyond any anticipated or budgeted expenditure. As a result, initial start-up equipment could not be paid for in full. With Jabu's (2008a) estimation of the associated equipment debt for the bakery to have stood at R24 000, it is likely that total debt for the entire Community Centre greatly exceeded this figure. With the Community Centre's inability to meet the required electricity payments, Eskom, eliminated power supply to the Centre.

For the telecentre, the problems associated with Telkom and Eskom exposed the vulnerability in the Centre's management. Customers were also unable to browse the Internet for information or to access e-mail and locals could no longer be taught computer literacy. As a result of these contributory factors, Jabu is reported to have had, in September 2005, a fall-out with the community. In his defence, it seems that local perceptions were largely unaware of the internal politics between telecentre managers, the USAASA and Telkom. At the same time, however, reports of Jabu "earning lots of money through the telecentre" have emerged. These claims could be in reference to that money which he had originally set aside for telephone account payments (Thabo 2008b). This link is most likely the justification for members of the community pointing to Jabu's expansive improvements to his house and his purchasing of a new car. On the other hand, Jabu (2008) has indirectly distanced himself from such suggestions by saying that, "I left the centre because I got the job at Ithala Bank as a bank manager...that was the only reason".

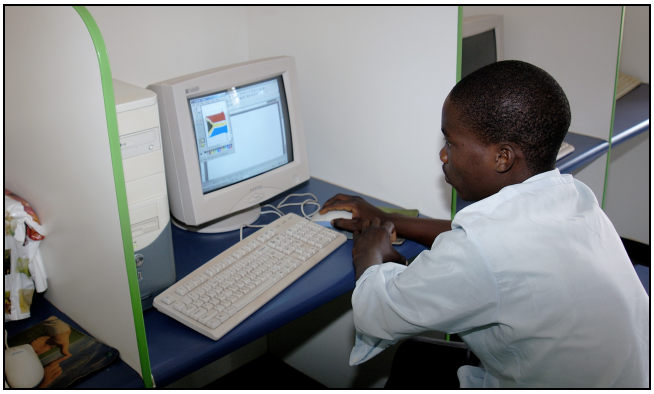
Contrary to much of the above, Jabu (2008) has provided a different account of events. Firstly, he has argued that he was not Manager, or in any associated position, when Eskom cut electricity to the bakery. Secondly, he maintains that Telkom cut connectivity to the Community Centre only after he resigned. In fact, when asked about this, he stated that "during my time [as Manager] everything was in order, this happened after me" (Jabu 2008).

Sipho was Jabu's successor. He became manager through the same process of election. Because he was originally his predecessor's assistant, he had knowledge of the success which could be garnered from this telecentre. However, by the time he took over in the last quarter of 2005, the computers which originally worked no longer did so and the Internet was still not reconnected.[61]

[61] Dorothy (2008b) has commented that since the initial concerns she had with Jabu and the USAASA, she attempted to find a service provider who could provide, over and above the connectivity, a software system specific to the needs of rural communities. In search for such providers, she encountered various disappointing experiences which proved

For the duration of his employment in this position, a few computers lay stacked on the floor, in potentially further damaging direct sunlight, with no way to repair them. The others on the tabletops were connected but were temperamental in their irregular functionings. If they were indeed brand new, as the USAASA claims they were when provided in 1999, it is neither clear why Jabu had to travel to Empangeni so often to repair them, nor why none were in working order when Sipho took over as manager.

Figure 5.1 Before: Ndumu telecentre in operation
(exact date unknown; estimated to be between January 2002 and December 2004)



Source: P.E.A.C.E. Foundation (2006: 33)

Figure 5.2 After: Ndumu telecentre with inoperable hardware, 2 July 2008

Source: Own images

Sipho is reported to have lacked the entrepreneurial personality of his predecessor. He had no vehicle in which to transport broken computers for repair and his managerial skills proved inadequate for the functioning of the Community Centre. Further, Dorothy (2008c) reports, that "he

financially costly .

never complied with our reporting systems on the Centre management side". Perhaps it is this which gives reason to the belief of many members of the community that he too was responsible for the abuse of Community Centre funds. In fact, even Dorothy (2008c) is aware of the view – albeit unproven – which points to "dishonest dealings" which took place. Sithole (2008) expressed similar disappointment in Sipho: "You can set up a communications centre, but you need someone who can run it...if the administration is not done properly, it is bound to collapse...he tried to swim but he didn't prevail". Under Sipho's leadership, it became clear, as it was under Jabu...that there was a general dissatisfaction with the management of the Community Centre's finances. Thabo (2008b) said that "choosing Sipho after Jabu – that was the biggest mistake". Thabo estimates that Sipho was responsible for the Community Centre losing R60 000-R70 000. Thabo (2008b) went on to say, "[i]f Sipho was responsible for this much money, you can only imagine how much more Jabu cost the community".

By the end of 2007, Sipho resigned. Even though the P.E.A.C.E. Foundation handed over the Multi-Purpose Community Centre to the community in 2004, it maintained a role in its management. Possibly because of the problems which the Multi-Purpose Community Centre had experienced with its previous two managers, and in contradiction to its model, Thabo was *not* elected by the Management Board and community (P.E.A.C.E. Foundation 2007a: 4). In Thabo's (2008b) own words, "I was hand-picked by [Dorothy]. She has known me since my school days and she is aware of all the things I have done. We have had too many problems here so I think she wanted somebody she knows".

Like it was under the management of Sipho, the computers in the telecentre were still not repaired. On the author's last visit to the Community Centre in July 2008, they had deteriorated further to the extent that "we are lucky if one even switches on" (Thabo 2008b). With Vuvuzela Communications, a private company based in Durban, the P.E.A.C.E. Foundation hopes to revive the functions which the telecentre once performed. It seems likely that the IT-based company will reinstall an Internet connection and repair the broken computers before the end of 2008.[62]

5.3.2 The story of the Sicabazini Computer Centre

The Community Centre in Sicabazini was built in 2001. This was done by the Department of Social Development even though it was constructed off the plans originally developed by the

[62] In private conversation with the author, it was noted that a trip was planned by this company to install five workable computers in this telecentre during the week 20-24 October 2008.

P.E.A.C.E. Foundation. The fact that the P.E.A.C.E. Foundation was excluded from any involvement in what was intended by the provincial department to be a skills development centre for local weavers and carvers from the Umkhanyakude community. It was only after stagnant 'development' and usage, that the P.E.A.C.E. Foundation was approached by the Department in early 2007. It was hoped that the P.E.A.C.E. Foundation would transform the Centre into a productive information and community-driven resource hub. Efforts in this regard commenced with funding from Toyota Tsusho Africa. When the Sicabazini Community Centre was finally launched on 26 November 2007, it housed a large community hall, pre-school, bakery, craft centre, computer centre and accommodation for 40 people.

Although comparable, on some level, in potential and promise, to the Ndumu Multi-Purpose Community Centre at its respective infant stage in 1999, the Sicabazini Community Centre differs most strikingly in managerial and bureaucratic design. It has a central manager and individual entrepreneurs, or 'operators', who each run and profit independently from the other services which the Centre offers. Mpho is the central manager of the entire Sicabazini Community Centre. If the operators decide that they want to improve an aspect of their businesses, which will require financing, Mpho decides if this is financially possible and within the budget of the entire Centre. Despite this centralised reliance, all the operators have their own budgets and earn their own salaries from the earnings of their respective individual businesses.

The computer centre in the Sicabazini Community Centre was networked by Vuvuzela Communications. The intention of this company, in line with the motives of the P.E.A.C.E. Foundation, is to promote local entrepreneurship. The intention is that this will be sustainable and will meet the needs of the local economy (Jerry and Slevin 2007: 6). Musa and Winnie are the franchisees of the computer centre. According to the marketing director of Vuvuzela Communications, Jerry (2008a) "...they get all the profits. If they can't pay their expenses, it is their call. If it goes well, they do well". At the same time, however, one must not forget that that is the intention of the model. At the moment, Musa (2008b: 2) complains that, "we suppose to be at the office daily but now it get hard cause we do not receive the salaries may be some things have do about this issues cause it difficult to work fulltime without payment." The reason that profit is not yet forthcoming is that, up to July 2008 when fieldwork was concluded, the P.E.A.C.E. model had not been fully implemented. Also, operator training had not been completed.

The computer centre has 10 computers, all of which were donated by the USAASA and

were connected by Vuvuzela Communications on 13 February 2008. The Internet connection was set up with an antenna on the roof of the Centre. This connects to the Vodacom tower, situated approximately five kilometres away. Because cellphone coverage rarely reaches Sicabazini, it was necessary to use an antenna shared through a wireless router with a data card. Once the Internet installation was completed, training was conducted on 14 February 2008 for the six operators. These comprised three from Makhanes School, three from Sicabazini, and one Project Manager (who is also the present manager of the Ndumu telecentre). The training covered basic differences and meanings of 'hardware' and 'software' and the use of various training applications. During this workshop consumer prices were discussed. It was agreed by the operators to base prices on market forces of demand and supply. This was because they emphasised that such a mechanism reflected that the services would be affordable for the surrounding community (Jerry 2008d). When operations commenced in the computer centre on 12 February, prices began at:

Table 5.2 Market-based prices of resources and facilities in the Sicabazini Computer Centre

Office Applications	50c per min
Printing	R1 per page
Copying	R1 per page
Faxing	R4 per page (dialling code specific)
Internet	50c per minute.
Training	R20 per course

Source: Dorothy (2008b)

Figure 5.3 Sicabazini Computer Centre, 1 July 2008

Source: Own Image

All 10 computers are currently loaded with a Microsoft self-learn programme, Microsoft Office and other training software. Vuvuzela Communications also designed a software package, called MyVuvuzela which provides users with a user-friendly public interface. 'Loyalty members' are provided with an e-mail address, a usable facsimile number, electronic storage space, free Vuvuzela Computer Time (V-time) to the value of R5 (which is based on the method of pre-paid cellphone airtime) and the use of a wizard tool to generate a curriculum vitae. The computer centre also has a photocopier, printer, and a Vuvuzela tubing kiosk (Figure 5.4) which allows users to browse the Internet, use a webcam, do online banking and also make use of other more detailed applications. All the services offered by the computer centre are based on pre-billing with the purchasing of 'V-time'. The way the management of the computer centre has been designed ensures self-accountability by the users for every action they perform in the computer centre. This is dictated by the amount of money they choose to spend.

Figure 5.4 Vuvuzela Kiosk in the Sicabazini Computer Centre, 1 July 2008

Source: Own Image

At this time, commenting in further detail on the computer centre in the Sicabazini Community Centre is not possible due simply to the fact that it is still in its infant stage. The tentative forecast by Vuvuzela Communications is that "the computer centre will be sustainable because people are willing to pay...instead of driving down to the nearest facility they can do it here" (Jerry 2008a). Also, a financial injection, from UNISA, into the computer centre seems likely. This is because given its many students in the vicinity, the University has expressed interest in paying up to R1800 per month to facilitate the use of the computer centre by its students.

5.4 An assessment of the implementation of the Internet and cellphones in Ndumu and Sicabazini

The roles of USAASA, the P.E.A.C.E. Foundation and Vuvuzela Communications needs to be critically analysed. This is because of their commitment – albeit in differing levels – to providing ICTs to poverty-stricken communities. Although their primary focus lies with computers and the Internet, cellphones also comprise the broader category of NICTs and have an associated impact, it is argued, on local people. Questionnaires were compiled as a basis for an analysis of both past and present 'developmental' actions of these players. This was also done to understand their effects on local communities in Ndumu and Sicabazini. From the initial sample of 20 from each of these locations, those in possession of cellphones were asked to, voluntarily, complete a questionnaire (Annexure 2). 17 participants (13 males and 4 females) in Ndumu owned cellphones, but 2 females chose not to participate in this questionnaire. In Sicabazini, 15 participants (14 male and 1 female) owned cellphones and all agreed to participate in this questionnaire.

The results are shown in Table 5.3 below. In both locations it was predominantly males who were found to be in possession of cellphones. Interestingly, both females from Ndumu answered consistently for six of the nine statements. Responses to Statements 1 and 2 show the impact of poor cellphone coverage in Sicabazini compared to Ndumu. Despite poor connectivity in Sicabazini, the balance of responses to Statement 3 shows that one of the greatest benefits of cellphones is that they drastically reduce the distances which people have to travel to communicate. This reduces time and money spent on travel, which are very often spent in search of work (Statements 4 and 5).

Most interesting, when considered collectively, are the responses to Statements 6, 7, 8, and 9. There is agreement in the responses to Statement 6 between those interviewed both in Ndumu and Sicabazini. This reflects that, in real terms cellphone rates are more expensive than Telkom rates. Despite this, responses to statements 8 and 9 show that insufficient income is generated to support the upkeep of a cellphone. Compared to Sicabazini, the Ndumu participants earn comparatively less, yet match the number of cellphone subscribers from Sicabazini. In Ndumu, income is not consistent for 60 percent of participants as responses to Statement 9 show. At the same time, 87 percent (Annexure 2) owned more than one cellphone largely for status (Statement 7).

Sipho was presented with these results, and it was highlighted that 9 males own more than 1

cellphone, while females chose the 'never' option to Statement 7 and own only one cellphone each. He responded, "...if a man has 2 cellphones, then all the girls will like him!" (Sipho 2007). The complexities of the superior 'man' and diminutive 'girl' aside, this is possibly grounds for another study into the social constructions and gender dynamics of technological status. Unfortunately, from the perspective of the present thesis, that would consume an entirely new study.

Table 5.3 Responses of the survey (Annexure 2) regarding the perceptions towards cellphones in Ndumu and Sicabazini

	NDUMU				SICABAZINI		
Having a cellphone is beneficial to me because...							
	ALWAYS	SOMETIMES	NEVER		ALWAYS	SOMETIMES	NEVER
1. It improves communication with my family and friends.	7	4	4 (2)		0	15 (1)	0
2. It helps me in emergencies.	4 (2)	5	6		0	1	14 (1)
3. I don't need to walk to a Telkom callbox.	12 (1)	3 (1)	0		13 (1)	2	0
4. It helps me find work.	0	12 (1)	3 (1)		2 (1)	13	0
5. It saves me money because I don't have to travel as much.	6	8 (2)	1		0	13 (1)	2
6. It saves me money because it is cheaper than using a fixed line.	3 (1)	2 (1)	10		1	0	14 (1)
7. It improves my life because it is a status symbol.	13	0	2 (2)		4	5	6 (1)
8. I allow family and friends to make calls and I charge them for it.	5	2	8 (2)		5	4 (1)	6
9. I am able to constantly afford its expenses with a constant form of income.	3	3 (2)	9		2	2	11 (1)

*Figures in brackets denote the contribution of female responses to the stipulated totals.

The same 20 participants agreed to participate in the study shown in Annexure 3. The interviewees were asked to identify the cellphone which '*can realistically help you most to improve and sustain your living standards and quality of life from what they currently are, and reduce poverty if you are affected by it*'. They were then asked to provide a substantiation for that response. In Ndumu, 55 percent (11 participants) chose cellphone 1, while 65 percent (13 participants) chose cellphone 2 in Sicabazini. These responses are shown below in Table 5.4.

Table 5.4 Responses to Data Survey on Cellphones

Ndumu responses to D900		***Sicabazini responses to Ericsson GSM628***
1. It is nice! It can play music and take photos, which I like. Now I won't need to buy a radio or a camera!		1. I cannot afford Cellphone 1. All I need is a phone which can make and receive calls.
2. Maybe it will have better capabilities to help me find a job.		2. As long as it works, I am happy.
3. It is more durable, so my husband and I can share it.		3. This phone is very simple, but at the moment I have nothing, so it will help me. Cellphone 1 must be for rich people!
4. Employers will know I am 'the man' if I have this phone and they will employ me!		4. It is not the extra features of the phone that matter...as long as it works.
5. It will last longer than the other phone.		5. If my family and friends can contact me, it will save me taxi money or having to walk to a call box.
6. My boss will think I am worth more than what I am.		6. Sending messages and receiving calls is all that is important. These other fancy phones are just for the creators to make money.
7. With this phone, I will have the girls waiting for me!		7. It is not the features which matter, but if the phone works.
8. It is a more recent model, so I can sell it for more.		8. This cellphone works, right? What is the problem?!
9. I think I will find a job.		9. I already have 3 different covers which I can change for this phone! I can have a different colour everyday!
10. I like John Cena and I want his song for my ringtone!		10. I want this phone to get started, but eventually, I want cellphone 2.
11. I will feel good with this phone in my pocket!		11. I know that if I am connected, I can get employment.
		12. If I buy cellphone 1, I can communicate with everybody.
		13. This is what I can afford.

The evidence shows the value which is attached to different cellphones in different contexts. These results do seem to put forth an implication regarding perceptions. One could argue that ICTs in Ndumu are more 'developmental' to fashionable images and assumptions of automatic associations between 'technological literacy' or 'technological possession', and 'employment'. On the contrary, the level of technological provision, educational assistance and technical support in Sicabazini are potential (yet tentative because the Sicabazini Computer Centre it is relatively new). explanations for the different results.

Looking more broadly at these two villages, it is also possible to argue that that the differing levels of technological perceptions, desires for possession and availability of functioning ICTs are linked, on some level, to two contributory factors. The first is the extent of government policy implementation. The second is the design of the P.E.A.C.E. Development Centre (PDC). On the former, the shortcomings of the USAASA in Ndumu have already been explored. These shortcomings range from lack of government representative presence in the Ndumu telecentre to the provision of inoperable equipment.

To the contrary, the Department of Social Development has played (after its stagnant role from 2001-2007), a comparatively more active role in local 'development'. It would seem that this government involvement has had a contributory influential impact on perceptions of local 'development' in Sicabazini. Simultaneously, the regulatory framework of the Ndumu Multi-Purpose Community Centre differed considerably to that of Sicabazini. By her own admission, Dorothy (2008d) reflects that in Ndumu "there were no appropriate contracts and regulations in place" for the managers (particularly the first). Beginning operations this way made it very difficult to "provide him with the guidance and legislation and support that was required". It is clear that this has been taken into account in the Sicabazini Centre where the rules and regulations of the Management Board are adhered to, as a matter of insistence. Such a framework has certainly played a role in the development of perceptions towards NICTs. The next task is to identify the promoters of the different perceptions.

5.5 Shaping perceptions towards the Internet and cellphones

In the context of Ndumu, what role does the P.E.A.C.E. Foundation play in promoting the perceptions towards technology which were gathered for this thesis? Because of the marginalisation of this community, identifying possible promoters of these perceptions is arguably less complicated than it would be in a different context.

The P.E.A.C.E. Foundation has provided a portal to information for local residents. The potential of this must be recognised. In fact, the organisation has stated the importance of ICTs to paving a path to globalisation and reducing poverty (P.E.A.C.E. Foundation 2006: 6, 11; Dorothy 2000: 13). Despite this, evidence seems to be limited on the P.E.A.C.E. Foundation's efforts to convince locals of *how* and *why* ICTs are associated with poverty alleviation and the benefits of globalisation. For example, concepts such as 'putting the world within reach',[63] suggested by an advertising board outside the telecentre, seemingly have little effect when the realistic benefits of that 'global interaction' for alleviating poverty is not directly focussed on. It is argued that any failure to transfer this conception to local people potentially inflates existing, and other, pre-conceptions in the community of what technology can provide.

To illustrate this, consider the following response from a graduate of the computer literacy course. At the time of communication, this individual worked as a parcel packer in a supermarket in Empangeni. He commented:

> The course was interesting, but I never got a job like how they promised. I sacrificed everything to attend...family, money...but I cannot go back there [to Ndumu]...after I graduated I took my certificate to employers in Empangeni to give me a job. They said 'good – you have a certificate, but to get a job with technology, this is useless...you need to go to learn computers in the university'. How am I supposed to do that?...[In the Ndumu telecentre] I gave them my money, they gave me a certificate, I have no job like how they said I would get...The P.E.A.C.E. Foundation is good for the children, but I tell you, they didn't do for me like how they said they would. (Anonymous 2007)

Sipho (2007) interprets the cost of the Ndumu computer courses described by this individual as "highly expensive". Despite this, he deems it necessary because, "when they [students] learn how to use the computers and the Internet, it is easier to get a job". While reasonably true in a generic sense, the association between ICTs and employment seems to be a popular one. This is also reflected in the responses which were generated in the data surveys.

Dorothy (2008a) revealed the P.E.A.C.E. Foundation's vehement support for ICT-led 'development' by saying that, "[t]he people urgently need improved access to water, improved roads, and more schools, but providing these was never within the budget or the mandate of the

[63] This board shows that the Embassy of the Netherlands and KPN International Consultancy sponsored the establishment of the telecentre.

P.E.A.C.E. Foundation, so it is not that these needs were dropped in order to supply ICT. Elsewhere, she commented that, "First when I went in there [to Ndumu], I thought, 'no, I can't bring computers in here because these people haven't got water', but then I said, 'even if I don't bring in computers they still will never have water'" (Dorothy 2008c). While acknowledging the importance of other needs, the support for ICTs is clearly dominant in the P.E.A.C.E. Foundation's 'development' policies. Despite this emphasis, the organisation has no social impact assessment of its ICT-related 'development' in the Ndumu Community Centre. It also does not have a preliminary one for the relatively more recent Sicabazini Community Centre. As a result, it would not be inaccurate to question the P.E.A.C.E. Foundation's awareness of the social dynamics which have been revealed in the data for this study. Indeed, if the local views towards technology (of high levels of fashion and status consciousness) had been researched by this organisation, its commitment to poverty alleviation would presumably have shown sensitivity to this.

The apparent failure to do this, or indeed, to conceptualise the role of ICTs more holistically, is captured in contrasting responses towards the priority of ICTs for 'development'. Sipho (2007, emphasis added) argues, "yes, the computers are not primarily essential to us, and yes, the courses are expensive. But at the end of the day, *what can we do? We have nothing here*". Furthermore, Ndumu's ward councillor (2007, emphasis added) has commented, "...while we recognise the importance of the telecentre, it is *not at the top of our agenda*. It is a long way down, but it is still there". The chairperson of the Ndumu Community Centre (2007), echoed similar sentiments in saying that "they [graduates] go to find work in the nearby towns and cities…Empangeni and other places…Durban too…from the perspective of Ndumu and those who they leave behind, it is a *tragedy*, but for the individuals, we cannot stop them from trying to improve their lives".

These views, with particular emphasis on desperation, lack of necessity and tragedy respectively, are clearly in contrast to those of the P.E.A.C.E. Foundation in its efforts towards ICT implementation. With this in mind, the attention granted to motivating its own perceived importance of the association between ICTs and poverty alleviation is found wanting. Crucially, it seems that this motivation has not been provided to key local figures. In light of this, one can argue that priority – as a point of entry – is given to ICT implementation by the P.E.A.C.E. Foundation at the expense of greater focus on educating locals as to why that priority is necessary.

5.5.1 The P.E.A.C.E. Foundation and Ndumu telecentre managers

Dorothy (2000: 13) supports managerial skill-based training which is provided to the micro-entrepreneurs who manage P.E.A.C.E. Community Centres. While necessary, this must not detract attention from the reported inability of Sipho to perform any meaningful managerial role in the telecentre (see section 5.3.1 above). Furthermore, attention should also not be detracted from the fact that managerial training is different to the kind of awareness which is argued here as necessary. Ironically, the P.E.A.C.E. Foundation recognises that "[l]imited information" is a problem of poverty (P.E.A.C.E Foundation 2006: 8). However, it does not seem to provide training to telecentre managers in response to this. This failure is reflected in the entrepreneurial actions of Jabu. As manager, he performed his *own* research into the computer courses offered by the University of Liverpool, with little reported evidence of P.E.A.C.E. Foundation guidance. This was presumably because Jabu's research into the course was seen by the Foundation as evidence of the learned managerial skills it had passed on to him. There does appear to be an absence of an interventionist role to explain the intended model of use to managers and other locals. This failure arguably allows for the popularity of those perceptions towards ICTs which have been shown.

While preliminary evidence has shown that responses in Sicabazini to the data surveys vary with respect to, and sometimes contradict, those in Ndumu, it would be premature to offer substantial reasons for this. This is mostly because ICT implementation in this community is relatively recent. Therefore, one cannot dismiss the view that responses similar to those of Ndumu participants will be evident in Sicabazini if the same study is to be repeated at a later stage.

Nonetheless, the concerns raised above with respect to the P.E.A.C.E. Foundation's role in the Ndumu telecentre are not entirely absent in Sicabazini. Vuvuzela Communications is critical, perhaps as much as the P.E.A.C.E. Foundation, to promoting the idea to the local community of the ways in which ICTs can be functional and useful to local 'development'. Commenting on Ndumu and Sicabazini, Vuvuzela Communications' marketing manager commented that,

> [i]n Africa, everything is donor driven and it creates a culture that has their hand out wanting to receive something...we need to change that mindset. They need to come to the P.E.A.C.E. Foundation, hungry, having completed a business plan, bought a car...at least they've risked something, they've got self-actualisation and self-worth that they've achieved it themselves. When things stop working, they will then fight harder for it. (Jerry 2008b)

Although understandable in principle, this shows little sensitivity to local socio-economic conditions and the extent of poverty in the region. It possibly points to the need for better and

holistic understandings of local conditions, as suggest above. Most clearly is the predominant financial inability of those people who ICT-led 'development' is targeted at in Sicabazini to perform the prerequisite tasks described in this comment.

5.6 Conclusion

This chapter has explored the roles of the USAASA, the P.E.A.C.E. Foundation, Vuvuzela Communications and local people in ICT-related 'development' initiatives. With the approach of cellphone and Internet analyses, the chapter has paid very close attention to the ways in which these players are largely unaware of local ICT perceptions, and the implications of that reality. This has been shown in comparison of Ndumu and Sicabazini. This comparison revealed the influence of NICTs in the decisions which affect the lives of local people.

The P.E.A.C.E. Foundation places unequivocal trust in the premise that paving a way to globalisation, by way of computers and the Internet, leads to the 'development' of local rural people. The synonymous association in the minds of local participants in the data surveys that 'e-literacy' equals 'employment' is of potential concern. This is partially because, in general absence of government commitment, ICTs are promoted with little emphasis on how and why they are useful. These definitions seem to be left to local people to conceptualise for themselves. This is against the backdrop of a seemingly inadequate provision of education to detail the realistic poverty-alleviating and job-creating potential of ICTs. Perhaps it is the state which needs to play a greater role in addressing such 'macro' concerns and simultaneously create an enabling environment for organisations such as the P.E.A.C.E. Foundation to foster local rural development. The failure to do this, particularly in Ndumu, has arguably contributed to the emergence of a culture-ideology of consumerism. Of course, evidence of such trends is apparent in any city around the world. This must not, however, deviate attention from the fact that if the 'globalising of the local' is not seriously addressed, then it is likely that this trend will be followed in Sicabazini, where NICT introduction is still in its infant stages.

National government, USAASA, the P.E.A.C.E. Foundation, and Vuvuzela Communications, seem to have contributed, at various stages, to the adoption of an understanding of 'local empowerment' through local *discretion* as opposed to local *support*. This has most clearly been shown in two forms. Firstly, in USAASA's absence of involvement in Ndumu since providing inoperable hardware, local people were largely left to their own devices with little assistance from this Agency. Secondly, is the failure by the P.E.A.C.E. Foundation and the Ndumu Community

Centre's Management Board to implement rules and regulations by which its managers would operate. This granted unprecedented control to local managers to act as entrepreneurs for personal gain despite the P.E.A.C.E. Foundation's stated 'development' objectives. Although the idea of promoting local empowerment and incentives is an important one, this should not detract attention from the extent to which it may contribute to the worsening of local socio-economic conditions. The ways in which this has been jeopardised by the P.E.A.C.E. Foundation and Vuvuzela Communications have been closely analysed. In short, it points to an inadequacy in a well-rounded understanding of ICTs as a *social* tool (as opposed to a *technological* tool) and the application of that tool to specific contexts.

Although the central aim of this chapter, within the broader context of the thesis, is to draw attention to problems with government policy, it has also focussed on other players involved in Ndumu and Sicabazini. This approach has been adopted to reveal the shortcomings of the P.E.A.C.E. Foundation and Vuvuzela Communications. The dominant failure is that of not educating people of the realistic potential of ICTs, particularly the new ICTs of the Internet and cellphones, *before* introducing them in the communties of Ndumu and Sicabazini. It is sometimes this problem which leads to pre-conceived and misconstrued local perceptions to dominate.

It has been argued that these shortcomings are linked, on some level, to the failure of government policy and implementation. As a result, perhaps it is addressing the lack of leadership at this national level which will contribute to greater understandings and less deterministic points of view amongst all concerned 'developmental' implementers.

Chapter 6: Conclusion

6.1 Review of Study

This thesis examined the role of ICT policy in the global information economy. It did this through the lense of political economy, or what has been suggested to be, more aptly, 'digital' political economy. The core of the argument was that the appropriation of ICT policy in Africa has not informed or certain of realistic intended benefits. It has also not been conceptualised holistically with attention to the processes involved in creating societies which can benefit from ICTs. This discourse was localised by directly concerning itself with the politics of the South African information society. This revealed a host of internal contradictions and inconsistencies in the politics of ICT-related policy formulation. It was shown that ineffective policy implementation is a direct result of the absence of clearer and more insightful policy conceptualisation.

The framework employed to prove this was an analysis of 'goals' and 'tools' of 'development'. This was done by operating on two central plateaus: horizontal and vertical. The first was a 'horizontal' analysis of international 'digital' political economy. It paid attention to a range of social, political and economic processes which have formed relationships with, and have given birth to new features of, the information economy and capitalist development. These saw notable shifts from the emergence of the information networks of the late 1960s to the current promotion of ICTs as 'tools' for the 'developing' world. It has been argued, however, that the associated interests of such a promotion by those who promote it, fulfil the vested interests of cultural and ideological incentives more so than they do the supposed intentions. This has been shown with comparisons between the appropriation of ICT-related rhetoric in African politics and the effects of the culture-ideology of consumerism at the individual level. It is their relationship which ironically contributes to the polarisation of the 'digital divide' despite the appropriation of ICTs as a solution to this concern.

With an exploration of the complexities of this geopolitical plateau, the second feature of this thesis has been a 'vertical' analysis of internal politics. From a methodological point of view, the vertical analysis has offered justification to the broader analyses of global relations and western culturalisations which fall under the horizontal form. The internal politics of the vertical plateau has mostly been shown in the form of a detailed account of the South African information society. With the case studies of Ndumu and Sicabazini, this thesis has shed light on the politics of policy formulation and implementation as well as revealed the details of internal inadequacies at these

levels. Altogether, this has shown the lack of relation between policy intentions and local implementation and adoption.

6.2 Final conclusion

At the outset, the postulation of this thesis was that 'the digital economy is a complex one requiring greater understanding by ICT policymakers and implementers. It would seem that lack of clarity between ICTs as goals of development and ICTs as tools of development is the source of much failure of the 'development' potential of policy implementation'. The complexity of the digital economy cannot be denied. That it requires improved understanding is obvious. Exposing this has been the basis of the adopted 'goals' and 'tools' methodology. Further, this has even revealed the failures of policy implementation, mostly on the basis of them being riddled with problems in their conceptualisation. As a result of these inadequacies, the private sector, particularly shown in COMESA states and in South Africa, has had little difficulty in establishing and proceeding to achieve its own objectives. Very often, these objectives are in contrast to the original intentions – however problematic – of government policy.

The postulation then offered two reasons for the complexities of the digital economy. The first asked, 'is the confusion between goals and tools due to technological determinism on the part of politicians whether this be in the arena of national, regional or continental socio-economic legislation, policy and rhetoric?' This has been answered with an unmistakeable 'yes'. This is due to the formulation of templates of 'development' at national, regional and continental levels. These templates stand in juxtaposition to idealistic promises from politicians and other ICT policymakers in addressing local concerns. In Africa, NEPAD's assessment of 'e-readiness' is based on the existing levels of ICT 'development' on the continent. The assumption of creating a platform from which to assist African countries without actually providing them with strategies to attain 'e-readiness' bears connotations of technological determinism. In South Africa, the promotion of the USAASA's (later known as USAASA) telecentre concept, without even mention in the 1996 Telecommunications Act, or in the 2001 Amendment to this Act, serves as a further illustration of determinism. This is because the establishment of telecentres encountered a host of political and logistical problems, mostly because it lacked any guiding legislation. At the same time, the widening set of rights granted to South Africa's mobile telecommunication companies in terms of full market penetration, continues to be legally endorsed by the Electronic Telecommunications Act (2002). Therein is an implicit technological determinism of the state. This is because in the face of attempts to shape policy, it has assumed that successful implementation will occur with a decreasing

self-interest in implementation.

The second reason for consideration was, 'is the confusion between goals and tools due, simultaneously, to the unbridled impact of modernisation at grassroots level – even in the most rural settings – which instils a 'commodity fetishism' in the end-user?' Against the backdrop of weak and questionable policy formulation, the private sector has contributed to growing commodity fetishisms in consumer markets. In different parts of Africa, even in the poorest regions, this is sometimes credited, by local people, with more priority than their interest in alleviating personal poverty. One reason for this result is the way in which governments allow ICTs to be marketed, by the private sector, as symbols of fashion and status.

6.3 The future direction of the 'information superhighway'?

The future of the information society in the 'developing' world is one which must be approached with greater caution. While the topography of ICT policy with greater coherence and holistic formulation is possible, being able to reverse the existing effects is more questionable, and in fact, less certain. With this in mind, the key policy prescription of this thesis is that because the digital economy is one which is more complex than originally anticipated by African, and specifically South African, leaders, it requires greater understanding by ICT policymakers and implementers. While ground can be made in improving consistency in policy formulations on the basis of 'goals' and 'tools', little can be done to reverse the influence of the private sector and the global trends of commodity fetishisms in even the most remote African setting.

The use of cellphones and the internet for reasons beyond those which some would suggest to be 'developmental' is widespread. Because of this global trend, the symbol of the cellphone, for example, as an accessory to a personal image should possibly not be challenged. Perhaps it should rather be embraced in the more holistic and the clearer intentions of ICT policymakers which have been prescribed above.

To do so, however, without being informed about what ICTs *are* (as discussed in the introduction) could lead to a host of concerns beyond those which have been raised in this thesis. Only after attention has been granted to ICTs in this way should policies address what ICTs *can do*. The latter ranges from education to social networking to the restructuring of real and virtual spaces. A failure to understand these linked, yet individually separate channels of thought, has arguably contributed to a key shortcoming in many ICT prescriptions. Perhaps it is the ease with which ICTs

are appropriated that overlooks the point that the “good change” which they can bring are, in actual fact, not directly associated simply with their adoption. It must not be forgotten that ICTs are simply technologies. They are “no more than catalysts that facilitate these changes” (Thioune 2003).

African Economic Communities have expressed great interest in using ICTs to reduce poverty. Optimism on the ‘information superhighway’ in the ‘developing’ world can only be found if they improve commitment in this regard. Instead of allowing for the breeding of misconceptions of the immediate potential of ICT literacy (such as the guarantee of employment with a computer literacy certificate) a different route must be taken. Substantial effort must be invested – with a reduced dominance of commercial interests – in guiding the awareness of how information generated through ICTs can best be used. This commitment must stretch beyond prescriptions in political rhetoric and have greater direct bearing on policy implementation.

Academic scholarship also has a role in this. At the moment, the contribution of research to the political economy of cyberspace is minimal. Indeed, for this discipline to develop a comprehensive understanding of the 21st Century, more effort must be invested in this regard. Given the integration of various sources into this thesis from within 'traditional' political economy, it is perhaps such academics who are best equipped to take on the discourses of 'digital' political economy.

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Annexure 1

Data Survey in Ndumu

Age group categories	Age frequency per age group	Age frequency by gender	
		M	F
16-29	9	8	1
30-39	3	2	1
40-49	6	3	3
50-59	1	1	0
60-above	1	0	1

Education groups	Education level frequency	Education level frequency by gender	
		M	F
None	7	5	2
Grades 1-3	3	1	2
Grades 4-7	4	3	1
Grades 8-10	2	2	0
Grades 11-12	4	3	1

Income groups (per month)	Income by frequency	Income frequency by gender	
		M	F
< R100	9	4	5
0-R199	8	7	1
R200-R499	0	0	0
R500-R999	0	0	0
R1000-above	1	1	0

*2 participants chose not to provide income-related information.

Data Survey in Sicabazini

Age group categories	Age frequency per age group	Age frequency by gender	
		M	F
16-29	8	3	5
30-39	7	5	2
40-49	1	0	1

Education groups	Education level frequency	Education level frequency by gender	
		M	F
None	8	4	4
Grades 1-3	5	3	2
Grades 4-7	0	0	0

Income (per month)	Income by frequency	Income frequency by gender	
		M	F
< R100	7	3	4
0-R199	6	3	3
R200-R499	6	4	2
R500-R999	0	0	0
R1000-above	0	0	0

*1 participant chose not to provide income-related information.

Annexure 2

Questions on Perceptions Towards Cellphones in Ndumu and Sicabazini

Before answering the following questions, participants were asked to state how many cellphones they own.

1. It improves communication with my family and friends.
2. It helps me in emergencies.
3. I don't need to walk to a Telkom callbox.
4. It helps me find work.
5. It saves me money because I don't have to travel as much.
6. It saves me money because it is cheaper than using a fixed line.
7. It improves my life because it is a status symbol.
8. I allow family and friends to make calls and I charge them for it.
9. I am able to constantly afford its expenses with a constant form of income.

Annexure 3

Data Survey on Cellphones

"Which cellphone *can realistically help you most to improve and sustain your living standards and quality of life from what they currently are, and reduce poverty if you are affected by it*"

Cellphone 1

Model Type	Samsung D900
Model Year	2006
Dimensions	103.5 x 51 x 12.9 mm
Weight	85g
Vibration	Yes
Ringtones	Polyphonic, MP3
Phonebook	1000 entries and photo call
GPRS	Yes, Class 10 (32-48 kbps)
3G	No
WLAN	No
Bluetooth	Yes
Infrared Port	No
Messaging	SMS, EMS, MMS, Email
Camera	Yes (3.15 mega pixels, autofocus, video, flash
FM Radio	Yes
Price	R1 889

Cellphone 2

Model Type	Ericsson GSM628
Model Year	1996
Dimensions	130 x 49 x 28 mm
Weight	160g
Vibration	No
Ringtones	Monophonic
Phonebook	No
GPRS	No
3G	No
WLAN	No
Bluetooth	No
Infrared Port	No
Messaging	SMS
Camera	No
FM Radio	No
Price	R99