A Habermasian-based Critical Discourse Analysis of the ICT Strategies of the Centre for e-Innovation, Provincial Government of the Western Cape

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By

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Abstract

There is much political discourse concerning the role of information and communication technologies (ICTs) in supporting the achievement of development goals. Given the increasing prevalence and importance of ICTs in society, the Centre for e-Innovation (CeI), Provincial Government of the Western Cape, South Africa, has prepared five strategic documents outlining how to utilise ICTs for development and create an information society in the province. Amidst the discourse about ICT for development there is, however, a recurrent theme of technological determinism, which is shown to be a cause of the high failure rate of ICT for development projects. Based on the approach of Cukier, Middleton & Bauer (2003) and Cukier, Bauer and Middleton (2004) to operationalising Habermas' validity claims to assess communicative rationality, I conducted a critical discourse analysis (CDA) of the five CeI strategic documents to determine whether or not these are distorted, e.g. through claims of technological determinism. The study found a large number of distortions in the discourse. Suggestions are provided for how to create less distorted strategies, which more closely resemble Habermas' ideal speech situation.

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List of common acronyms

AsgiSA	Accelerated and Shared Growth Initiative for South Africa
CDA	Critical discourse analysis
CeI	Centre for e-Innovation
CST	Critical social theory
ICT	Information and communication technology
OECD	Organisation for Economic Cooperation and Development
PGWC	Provincial Government of the Western Cape
PNC	Presidential National Commission
SA	South Africa
TCA	Theory of Communicative Action
UN	United Nations
WSIS	World Summit on the Information Society
WSSD	World Summit on Sustainable Development

1 Introduction

The concept of "development" has been on the international agenda for at least the last sixty years, with many changing views and ideologies as to how to achieve socio-economic prosperity in all countries (Davis & Trebilcock, 1999). In the last two decades, information and communication technologies (ICTs) have become an important aspect of the modern era. "ICTs are revolutionising the way in which societies interact, conduct their businesses, compete in the international market, and set their national economic and human development agendas" and they "present – at least theoretically – a promising potential to lead developing countries into the 'highways' of development" (Morales-Gómez & Melesse, 1998). There is much political and practical discourse around the role and usage of ICTs in support of achieving development goals. The pinnacle of this emergent field, known as ICT for development, was the United Nations-convened (UN) World Summit on the Information Society (WSIS): its resultant declarations and plans make causal connections between ICTs and development.

Since 1996, South African president, Thabo Mbeki, has vocalised his belief in the importance of ICTs in helping South Africa (SA) meet its development challenges. At his behest the Department of Communications drafted the country's first national *Information Society and Development Plan and Implementation Strategy* (hereafter referred to as the "e-strategy"), which was approved by Cabinet in 2007, to create a clear vision for the building of an ICT-enabled information society in SA. This was a positive step because "without the development of informed, integrated and appropriate national policies, the role that ICT can play in development [in Africa] will be limited" (Gillwald, 2003). Provincial government bodies, such as the Centre for e-Innovation (CeI) in the Western Cape (Department of the Premier, Provincial Government of the Western Cape), have also prepared ICT-related strategic documents. During the period under analysis (June 2004 to January 2006), five documents came out of the CeI that constituted the background, framework, strategy and planning associated with developing an information society in the province.

Amidst the discourse about ICT for development there is, however, a recurrent theme of technological determinism, which posits that the most effective way to harness the developmental potential of ICTs is simply through providing access to them. Further, "governmental, political and technological attempts that focus almost exclusively on providing access to digital communication technologies... expect 'development' naturally

to flow from that" (Roode, Speight, Pollock, & Webber, 2004). A limited body of empirical and qualitative research has exposed as false the technologically deterministic assumption that access to ICT will "leapfrog" traditional development problems (Tipson & Frittelli, 2003). This technocentric approach is shown to be a cause of the high failure rate of ICT for development projects.

While technology is an increasingly important and pervasive tool for socio-economic development, the causal relationship between ICTs and development needs to be empirically researched in much greater detail. The existing research shows that the success of ICT adoption is influenced by a host of issues such as social factors, capacity, culture and availability of local content. Ulrich and Chacko (2005) believe, therefore, that "unlike the previous industrial revolution, the knowledge revolution encompasses all aspects of society, so e-strategies must go beyond technical goals in addressing the challenge of universal access to, and use of, ICTs."

One way of doing this is to expose the ICT for development strategies to critical discourse analysis (CDA), which often reveals the discourse as being based upon theories of modernisation and industrialisation, and a reason for the high number of ICT project failures. The critical social theorist, Jürgen Habermas, proposed the Theory of Communicative Action (TCA) as a basis from which to conduct CDA and reveal underlying assumptions and ideologies in texts, e.g., technological determinism. Cukier, Bauer and Middleton (2004) propose that "Habermasian communicative rationality is a useful standard for the analysis of discourse because it enables us to apply normative standards to expose the distortions in discursive practices and so improve practice. Habermas provides a way of understanding the effects of the discourses in which we participate."

In this study I conduct a CDA of the five CeI strategic documents to determine whether or not these are distorted, e.g. through technological determinism. The implications of distortion include a limited chance of successful implementation of the proposed ICT initiatives. This study recognises the importance of discourses in organisational decision-making and operational contexts and aims, by critically analysing these, to improve the chance of ICT for development successes in the Western Cape.

1.1 The need for more research

The literature survey will explore theories of development, development programmes and broader ICT for development, to reveal the following: i) gaining true developmental

benefits from ICTs is a complex and challenging process, which, if approached inappropriately, can actually do harm; ii) there is a dearth of quality research that critically evaluates ICT for development initiatives; (iii) this is particularly true for developing countries; and iv) CDA of policies is useful for understanding underlying ideologies and exposing distortions in communication.

Despite the many promises, speeches, reports and initiatives around the potential of ICTs to further development, there is a strong need for more research in this area. "Most of the understanding of the information age comes from the theory and experiences gained in the developed world. Africa produces little in the way of independent, primary research feeding into the ICT policy and regulatory processes" (Gillwald, 2003). These "research gaps leave African governments in a weak position in their efforts to develop policy comprehensively and to implement plans effectively" (Gillwald & Abrahams, 2004).

As part of the broader research effort to understand the reasons for so many ICT failures, CDA is instrumental in highlighting the underlying assumptions of the ICT for development discourse. Knowing these base assumptions and ideologies will help us to understand the complex web of factors that determine ICT initiative success or failure. The current set of quantitative measures, based on positivist research, are not uncovering all of the factors that enable the achievement of development goals through ICTs.

1.2 Relevance of the research

The purpose of the research is to take a critical perspective on governmental ICT-related strategies in order to gain an informed understanding of the real potential of ICT for development. The CeI's strategic documents are exposed to a CDA as a way of contributing to the overall research purpose. Because the CDA aims to test claims for validity, reveal underlying assumptions and seek new insights with regards to ICT for development, it is exploratory in nature. The research is important because the documents under analysis provide an information society vision for the Western Cape and will ultimately impact on its citizens. Other provinces in SA have expressed an interest in adopting the ICT strategies of the CeI. Further, local government municipalities will align their ICT strategies and programmes with those of the CeI. The research thus has far-reaching implications. To my knowledge, no CDA has been conducted on ICT policies in SA. In fact, the only one conducted on the continent has

been by Stahl, McBride and Elbeltagi (2005) who examined the ICT policies of the Egyptian government.

It is believed that this research has an important and practical contribution to make to its primary audience: provincial government stakeholders who develop ICT policies, strategies and plans in the Western Cape. The secondary audience is made up of the same stakeholders in other provinces, as well as researchers and practitioners in ICT for development in SA and similar developing countries.

The developmental approach adopted by provincial governments, e.g., sustainable development or shared growth, is usually governed by or aligned with national government policies. This top-own influence makes for commonalities across provinces: they all have to make ICTs support the development agenda of the day. Therefore while the detailed results of this research are not generalisable to other provinces, the overall findings should be relevant.

1.3 Research questions

The vision of an information society in the Western Cape, as perceived by the CeI, is presented in its various background and framework documents, policies and strategies.

This research analyses five CeI documents using Habermas' TCA in order to answer the **primary question**: are there communication distortions, or invalid claims, in the ICT-related documents under analysis? The **secondary question** builds on the first and asks: if communication distortions are evident in the documents, what are they?

1.4 Roadmap of the dissertation

After important terms are defined, the literature survey (Chapter 2) is presented in two main parts. The first part explores theories of development and actual development programmes, while the second part discusses the uncritical discourses surrounding ICT for development. CDA is introduced as a way to effectively expose assumptions and ideologies in texts. Chapter 3 situates the CeI and its related discourse within the South African and Western Cape context by describing the relevant demographics and information society strategies. The research methodology and strategy are described in Chapter 4, including the data and sampling plan, coding, method of data analysis, expected results, limitations of the research, and issues of access and ethics. The findings of the CDA – presented according to the four Habermasian validity claims – are found in Chapter 5 and discussed in Chapter 6. The personal reflection on the research process (Chapter 7) and the conclusion (Chapter 8) close the dissertation.

1.5 Definitions

Important terms used throughout the dissertation are defined below.

Information and communication technology (ICT)

ICT is an umbrella term that includes computer hardware and software; digital broadcast and telecommunications technologies as well as electronic information repositories such as the World Wide Web or those found on CD-ROMs (Selwyn, 2002). It is a broad and continually evolving range of elements that also includes television (TV), radio and mobile phones. ICTs have spawned many related industries – e.g., manufacturing and services – and also resulted in policies and laws that govern the media and devices.

Information society

ICTs are the tools that underpin the emerging "information society". While no universally accepted definition for information society exists, it can be described as a society in which "the creation, distribution, and manipulation of information has become the most significant economic and cultural activity. An information society may be contrasted with societies in which the economic underpinning is primarily Industrial or Agrarian" (TechTarget, 1999). Information exchange between people and through networks of people has always taken place. But the ICT-enablement of information exchange has radically changed the magnitude of this exchange, and thus factors such as timeliness of information and information dissemination patterns have become more important and empowering than ever.

E-strategy

Wild (2003) defines an e-strategy as being "intended to exploit information and communication technologies to promote national development." Using the metaphor of a journey, Ulrich and Chacko (2005) consider e-strategies as a "road map guiding countries to becoming information societies and knowledge economies."

Digital divide

The digital divide is commonly understood as the division between the technology "haves" and the "have nots". Bridges.org (2002) explains that it is not simply about having the technology, but also about what can be done with it; the haves are those who can access and use ICT to gain the associated benefits, and the have nots are those who do not have access to technology or cannot use it for one reason or another.

2 Literature Survey

The literature survey has two distinct parts: the first considers a number of theories of development, and describes specific global and South African development programmes. The second part discusses ICT for development, presenting first the uncritical view thereof – common to political discourse such as the WSIS texts and e-strategies. It then considers a critical, research-based view of ICT for development, highlighting examples where political and practical discourses have been exposed to CDA to reveal assumptions of technological determinism. CDA is introduced as a way to expose underlying assumptions and ideologies in the texts. The literature survey draws to a close by highlighting the need for more rigorous research of ICT as a catalyst for development.

2.1 Part I: Development theories and programmes

The relatively emergent field of ICT for development – discussed later in the dissertation – requires, by definition, an understanding of "development". Trusler (2004) says that without this, "it is impossible to properly understand the role that ICTs can fulfil in this field." A clear understanding is also necessary because, as Roode et al. (2004) point out, the concept of "development" is not commonly understood. As a foundation to the rest of the dissertation, this chapter begins with a brief introduction to the field of development and some of its theories and actual development programmes.

2.1.1 Changing ideologies of development

International development has seen many theories and movements in the last sixty years. These include "modernisation theory; dependency theory; economic growth theories; welfarist theories of development; feminist theories of development; sustainable development" (Davis & Trebilcock, 1999) and human-centred development. A commonality amongst all of these is the "ideal of improvement" (Rhodes, 2004), or the improvement of the *status quo* (Trusler, 2004).

Below is a selection of definitions of development to further introduce the topic:

- Jayaweera (1991, as cited in Trusler, 2004) defines development as "an inclusive process involving qualitative and structural change, resulting in the improvement of the quality of life of the community as a whole."

- Himmelstrand (1994) talks about [African] development as being concerned with "the over-all question of how to improve the capabilities of contemporary African societies to solve the problems of mass survival, indigenous entrepreneurship, international trade, and democratic self-rule."

- Max-Neef et al. (1989) propose a Human Scale Development approach, which can be summarised as follows: "[D]evelopment is focused and based on the satisfaction of fundamental human needs, on the generation of growing levels of self-reliance, and on the construction of organic articulations of people with nature and technology, of global processes with local activity, of the personal with the social, of planning with autonomy and of civil society with the state." (Here articulation refers to the construction of coherent and consistent relations of balanced interdependence among given elements.)

It should be noted that each of the many definitions of development – especially academic definitions – has deep ideological connotations. For example, Trusler (2004) contends that the definition of Max-Neef et al. (1989) "is built on the fact that fundamental human needs are at the centre of development, while Himmelstrand's definition is more concerned with highlighting the state's role in solving societal problems."

For many years, economics played a dominant role in development thinking. The success of the 1947 Marshall Plan and Keynesian economics in the rebuilding of Europe after World War II resulted in "economists playing a leading role in the elaboration of development theory during this period" (Brohman, 1996, as cited in Trusler, 2004). Rhodes (2004) contends that ever since then "it seems that development and economic development have been taken to be almost synonymous", assuming a top-down American- and European-influenced approach.

The economic boom of the 1960s and 1970s, where development was measured with economic indicators such as growth in Gross National Product (GNP), affirmed the modernisation views of that time, which collectively held that the single path to progress was through industrialisation. It was believed that in order to develop, countries needed to liberalise their markets and democratise their politics (Davis & Trebilcock, 1999). This economic development polarised the world into the "developed" and the "underdeveloped". However, economic growth and modernisation in many countries was being accompanied by blatant social deprivation such as poverty and unemployment (Rhodes, 2004). Max-Neef et al. (1989) note that economic drives did

not alleviate poverty because "poor people were more often than not excluded from any beneficial effects arising from liberalised markets."

In response to the failure of economic and modernisation development theories an "alternative" trend in development theory began, one based more on people's needs and the inclusion of a wider set of influences such as sociology, anthropology and geography. This broader "integrated" approach formed the beginnings of a shift towards people-centred development where the state also moved from a centralised model to one where control was manifested with decentralised local governments. This "small is beautiful" (Hyden, 1994) phase "stressed the importance of the informal sector" and saw "many individuals and groups starting their own successful ventures without governmental authority" (Neefjes, 2000, as cited in Trusler, 2004).

A major limitation of poverty eradication through economic development was that measurement was based on quantitative indicators only, which "ignored the reality of the existence of multiple poverties, e.g., subsistence, protection, participation, identity, educational, associative, environmental" (Rhodes, 2004). The alternative approach to development, which added a social dimension to "basic needs", is encapsulated in the theories of Todaro (1989) and Max-Neef et al. (1989). Todaro (1989) posited three core values of development: life sustenance (the ability to provide basic needs), self-esteem (to be a person) and freedom from servitude (to be able to choose). Max-Neef et al. (1989) expanded on this people-centred approach with their Human Scale Development approach, which has three pillars: human needs, self-reliance and articulations.

It was in the 1980s that development was first widely recognised as multidimensional, incorporating social, economic, cultural and environmental aspects. The foundation of sustainable development was based on this multifaceted view. Out of the 1960s and 1970s, which saw only a few developing countries showing increased growth rates while the majority continued to be bedevilled by poverty, social inequality and growing debt, the 1980s saw acknowledgement of the fact that developing countries had their own trajectories, which differed from the Western industrialised ones (Rhodes, 2004). It must be noted that while sustainable development was extolled by the United Nations-convened *World Commission on Environment and Development Report* (or the *Brundtland Report*) (1987) as the "great alternative to the then current impasse" (Rhodes, 2004), it has not been a magic bullet for development. Rhodes points out that at that time it was erroneously envisioned that "'sustainable development would make possible the eradication of poverty and the protection of the

environment in one single feat of western rationality" (Escobar, 1995, as cited in Rhodes, 2004).

In the 1990s, concepts within development studies moved towards a human-oriented approach that extended the idea of development beyond economic growth, sustainable development or even the basic needs concepts. Amidst this change, economist Amartya Sen (1999) proposed a new, critically-acclaimed theory of development – Capabilities Theory. At its core, this theory asserts that "development has to be more concerned with enhancing the lives we lead and the freedoms we enjoy"; it shifts the focus of development away from commodities to what people can do with those commodities.

It must also be noted that thus far the discussion has only included academic development viewpoints. Hyden (1994) maintains that there are two groups of people in development: the architects, usually people of power and tied to a given ideology who try to shape the development of a society (e.g., politicians, governments, international aid agencies or multilateral donors), and the auditors, usually academics who assess, within a given theoretical perspective, the success of the architects in shaping the process of societal change according to their own models. There is an inherent tension between these two groups as they have different agendas and influences when considering development. The political development approach, as driven by the architects, can be much broader, simpler and more inclusive than the academic view, and is typically applied at a large scale, such as at country or provincial level. For example, the Brundtland Report (1997) offers the 'standard' definition of sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

The preceding views have shown some of the theories and approaches to development, such as the general shift from an economic to people-centred development approach. This lays a good foundation for a discussion of the Millennium Declaration and other development programs that come more from the stable of architects than auditors.

2.1.2 A global development programme

Despite that "there has never been consensus or unanimity about the definition and conceptualisation of development, let alone the means to achieve or promote it" (Simon, 1999, as cited in Rhodes, 2004), the world today has a global developmental

framework called the Millennium Declaration[1] (which has influenced development efforts in many countries, including SA) and, more recently, the WSIS.

Using the turn of the millennium to reflect upon the increasing levels of extreme poverty and environmental degradation in the world, the Millennium Declaration was adopted by all UN member states (189 countries, including SA) in September 2000. It follows a sustainable development approach to eradicate extreme poverty, promote human dignity and achieve peace, democracy and environmental sustainability. It is based on the core values of freedom, equality, solidarity, tolerance, respect for nature and shared responsibility. One year after the declaration was signed, the *Millennium Development Goals* (MDGs) were adopted. This is a framework of eight goals, 18 targets and 48 indicators to measure progress towards meeting its targets by 2015 (see Appendix A for the complete set of measures). The eight goals are as follows:

- Goal 1: eradicate extreme poverty and hunger;
- Goal 2: achieve universal primary education;
- Goal 3: promote gender equality and empower women;
- Goal 4: reduce child mortality;
- Goal 5: improve maternal health;
- Goal 6: combat HIV/AIDS, malaria and other diseases;
- Goal 7: ensure environmental sustainability;
- Goal 8: develop a Global Partnership for Development.

The MDGs have not escaped criticism; it is claimed that they espouse a centralised, top-down management approach and use shallow, quantitative indicators for measurement (Sweetman, 2005; Women's Environment & Development Organisation, 2003). However, they are impressive in that this is the "first time in the history of the UN that the global community has agreed and pro-actively rallied around a common framework" (Cooper, 2005).

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[1]See http://www.un.org/millennium/declaration/ares552e.pdf

The first major UN event after the signing of the Millennium Declaration was the World Summit on Sustainable Development (WSSD), hosted by SA in 2002. This summit turned the Millennium Declaration into a concrete set of programmes; its implementation plan includes, among other things, programmes to sustainably deliver water, energy, healthcare, agricultural development, a better environment for the world's poor and targets for the reduction of poverty and protection of the environment. Naturally SA is a signatory to the summit documents, the *Johannesburg Declaration on Sustainable Development* and *Plan of Implementation*.

The framework represented in the Millennium Declaration is not necessarily the best way to achieve global development, but is impossible to discount. While it requires and fosters global solidarity, the "primary responsibility for translating the sustainable development agenda into action lies at the national and local levels" (United Nations Development Programme, 2003). Each country has formulated its own programmes to meet the MDGs and implement the WSSD plans.

2.1.3 South African development programmes

The discussion now turns to SA, where the concept of development underpins many laws, policies and government initiatives. What is its view of development? While there is currently no single, formal development approach in SA, in the first half of the nineties the concept of sustainable development was "widely accepted in planning and development arenas" (O'Riordan, Preston-Whyte, Hamann, & Manqele, 2000, Sowman, 2002, Scott, Oelofse, & Weaver, 2001, as cited in Department of Environmental Affairs and Tourism, 2002). A good example of this is the definition given for development in the *Local Government Municipal Systems Act* (No. 32 of 2000):

> 'Development' means sustainable development and includes integrated social, economic, environmental, spatial, infrastructural, institutional, organisational and human resources upliftment of a community aimed at –
> (a) improving the quality of life of its members with specific reference to the poor and other disadvantaged sections of the community; and
> (b) ensuring that development serves present and future generations.

Sustainable development is widely prevalent in governmental laws, policies and programmes in SA, at a national, provincial and local level. It is characterised by an integrated and holistic approach to development.

While sustainable development goals have been on the developmental agenda for some years, since 1994, the year of SA's first democratic elections, various government policies to grow the national economy while redressing the inequalities created by Apartheid have also been pursued. The first of these was the Reconstruction and Development Programme (RDP), which was broadly based on the belief that redistribution (of assets and capital) would lead to economic growth. In 1996, the RDP was replaced by the programme of Growth, Employment and Redistribution (GEAR), based on the trickle-down theory that economic growth would naturally lead to redistribution.

In the decade before 1994, economic growth in SA averaged 1% per year. Since then the economy has shown steady growth, reaching about 5% in 2005 (Government Communication and Information System, 2007). However, the rise in economic growth has primarily benefited the formal, or first, economy, that operates on an established infrastructure and economic base comprised of skilled workers and registered businesses. The informal, or second, economy is characterised by unskilled workers and loose, unregistered business structures, e.g., shebeens, taxi operations and stokvels. Stokvels are informal savings associations in which members contribute regularly and receive payouts in rotation (Encarta, n.d.). The majority of unemployed people in SA operate in the second economy.

In 2004, the South African government was mandated to halve poverty and unemployment by 2014. To achieve these goals, the economy will have to grow at a more accelerated rate and result in the creation of more jobs. Premised on the same redistribution-through-growth approach of GEAR, the Accelerated and Shared Growth Initiative for South Africa (AsgiSA) was launched in 2005 as part of the National 2014 Vision. It aims to share the benefits of economic growth and development across the first and second economies through, amongst other things, skills development, SMME development and specific sector development. Presenting South Africa as a 'developmental state', then deputy president, Phumzile Mlambo-Ngcuka (2006), announced:

> We believe that we have built the basis for a national effort to achieve faster and shared economic growth. With this programme we can achieve our social objectives and we can more than meet the Millennium Development Goals. Our second decade of freedom will be the decade in which we radically reduce inequality and virtually eliminate poverty.

The main criticisms of AsgisSA have been that it is a neo-liberal development programme that does not do enough to share development benefits with those in the second economy – this view comes mostly from trade unions (Bell, 2006) – and a questioning of how the "sizeable increase in public investment" anticipated by AsgiSA will be financed (Frankel, Smit, & Sturzenegger, 2006).

2.2 Part II: ICT for development: Uncritical views and limited critical research

The focus now moves to the role of ICTs in meeting developmental goals. The political view is generally uncritical, making a connection between the two that is based more on naïve optimism than factual information (Roode et al., 2004). While there are critiques of the general discourse, as pointed out below, these are scarce and limited in impact.

Since at least the 1980s, ICTs have been identified as tools and catalysts in achieving development goals. Notions of the power of ICTs in this regard range from believing that they are a panacea for development to more cautious calls for ICTs to be positioned within broader socio-economic contexts, as discussed in the next chapter. The following quote illustrates the former belief:

> This new technology greatly facilitates the acquisition and absorption of knowledge, offering developing countries unprecedented opportunities to enhance educational systems, improve policy formation and execution, and widen the range of opportunities for business and the poor. (World Bank, 1998)

Many international and national bodies have been created to provide strategic guidance on how best to harness ICTs for social and economic development, for example, the UN ICT Task Force, and in South Africa the Presidential International Advisory Council (PIAC) on Information Society and Development, which advises the president.

The single largest event dedicated to ICT for development has been the WSIS.

The UN General Assembly convened the first phase of the WSIS in Geneva in 2003, where all UN member states signed a *Plan of Action* and *Declaration of Principles*, thereby committing to "build a people-centred, inclusive and development-oriented Information Society, where everyone can create, access, utilise and share information and knowledge" (International Telecommunication Union, 2003a). WSIS puts forward the challenge "to harness the potential of ICT to promote the development goals of the

Millennium Declaration" because "distribution of the benefits of ICT-driven growth contributes to poverty eradication and sustainable development" (International Telecommunication Union, 2003a).

As with the MDGs, the Plan of Action sets specific targets to be reached by 2015. Based on internationally agreed development goals, including those in the Millennium Declaration, which are premised on international cooperation, indicative targets may serve as global references for improving connectivity and access in the use of ICTs in promoting the objectives of the Plan of Action, to be achieved by 2015. The targets (International Telecommunication Union, 2003b), listed below, may be taken into account in the establishment of the national targets, considering the different national circumstances:

- To connect villages with ICTs and establish community access points;
- To connect universities, colleges, secondary schools and primary schools with ICTs;
- To connect scientific and research centres with ICTs;
- To connect public libraries, cultural centres, museums, post offices and archives with ICTs;
- To connect health centres and hospitals with ICTs;
- to connect all local and central government departments and establish websites and email addresses;
- To adapt all primary and secondary school curricula to meet the challenges of the Information Society, taking into account national circumstances;
- To ensure that all of the world's population have access to television and radio services;
- To encourage the development of content and to put in place technical conditions in order to facilitate the presence and use of all world languages on the Internet;
- To ensure that more than half the world's inhabitants have access to ICTs within their reach.

Eight out of the ten targets require connectivity to ICTs, whether to villages, schools, scientific centres, libraries, health centres, government departments or access to television and radio services. Further, "everyone should have the necessary skills to benefit fully from the Information Society. Therefore capacity building and ICT literacy are essential" (International Telecommunication Union, 2003b). A central aspect to meeting the targets is that governments should develop e-strategies and public/private partnerships to extend access to ICTs. Governments also need to "create a trustworthy, transparent and non-discriminatory legal, regulatory and policy environment" in order "to maximise the social, economic and environmental benefits of the Information Society" (International Telecommunication Union, 2003b).

WSIS ostensibly takes a holistic view of the complex of interconnected factors that underlie an information society, although in terms of targets it is primarily concerned with access to ICTs.

2.2.1 National e-strategies

While international organisations like the International Telecommunications Union (ITU) and the United Nations Development Programme (UNDP) have been helping countries to develop e-strategies for some years, it was at WSIS 2003 that "e-strategies were placed on the world's agenda and validated as important policy instruments for ICT, development and the Millennium Development Goals" (Currie, 2004). For both developed and developing countries, e-strategies are "an evolving process rather than a fixed output that is defined once and for all" (United Nations Development Programme, 2005) and are necessary because a passive policy stance is not enough to realise the developmental potential of ICTs (International Labour Organisation, 2001, United Nations Development Programme, 2001, as cited in Hanna, 2003; United Nations Development Programme, 2005).

In addition to SA, a number of sub-Saharan African countries have e-strategies in place, e.g., Ghana, Rwanda, Tanzania, Uganda and Mozambique.

2.2.2 Sustainable development and ICTs in SA

"There is evidence in Africa of a growing interest in effective policy design to harness the potential of ICT to accelerate broad-based growth and sustainable development, and to reduce poverty" (Gillwald & Abrahams, 2004). In SA the relationship between ICTs and sustainable development has been widely acknowledged (Department of Science

and Technology, 2003; Government of the Republic of South Africa, 2002b; Government of the Republic of South Africa & European Commission, 2002).

A number of common themes are found in the convergence of the many sustainable development-related publications in SA and those related to ICTs and the information society. These are generally echoed in the area of convergence in the WSSD and WSIS principles and plans. The common themes are: raising awareness about sustainable development; information availability and thus transparency; public participation in governance; empowerment of citizens, especially women; fostering of cultural diversity; and building capacity. These themes underpin the common goals of poverty alleviation, primary education for all, improved healthcare, etc. Despite the commonalities, Willard and Halder (2003) found that in general information society and sustainable development policies make only cursory references to each other, and do not seriously attempt to explore how ICTs can support sustainable development.

More recently, as is seen in the CeI documents under analysis, the role of ICTs in bringing about accelerated and shared growth is being documented. AsgiSA is a major influence on this line of thinking as it links ICTs with the first and second economies.

So far we have explored the concept of development and ICT, which has been shown as an important tool for achieving development, e.g., in the Millennium Declaration and WSIS texts. However, in the descriptions given, not much attention has been paid to how or why ICTs are essential to development. Generally the *potential* of ICT for developmental purposes is described as opposed to the *actual* outcomes of ICT successes and failures and the underlying reasons for either (Curtain, 2004; Heeks, 2002a; Keniston, 2002; United Nations Development Programme Evaluation Office, 2001). The literature has revealed a common characteristic when considering ICTs in the context of development: uncriticality. References to ICT for development in SA's political and practical discourse (as cited above) are equally uncritical. This would not necessarily be a problem were it not for one fundamental reality: a high percentage of ICT for development projects fail (Heeks, 2005). ICT implementation actually carries some real risks such as uncontrolled costs, increasing technological dependency, and the threat of exclusion (Wade, 2002). ICTs can exacerbate inequalities within and across countries (Basu, 2004; Wade, 2002).

The World Summit on the Information Society Civil Society Plenary (2003) affirmed the last three risks when it described how initiatives that disseminate information must make use of "appropriate and plural modes of access, avoiding the risk of high

dependency on digital technology alone". Thus a website about agricultural practices is of no use to farmers who don't have access to the internet; in fact, it excludes them and creates a power imbalance between them and other farmers who can access the content and apply the new, more productive practices. The implication of a policy based on uncritical worldviews, one that "oversimplifies and generalises a complex issue and phenomenon" (Pyati, 2005) such as ICT for development, is that the risks associated with ICT implementation can be realised.

In summary, there is an apparent contradiction between the plethora of high-level political and practical discourse presenting ICT as a "magical force that will erase centuries of discrimination and inequality" (Kvasny & Truex, 2001) and the reality of implementation failures. In fact "most attempts at bridging the [digital] divide have indeed contributed to the widening instead of the closing of the divide" (Roode et al., 2004).

2.2.3 Rigorous research of ICT for development

A number of reasons are offered for the contradiction between what is said about ICTs and what they genuinely deliver. These include that donors are increasingly keen to justify huge ICT expenditures and thus only present ICTs in a positive light (Heeks, 2002a), or that so far many ICT projects have really been "technology transfers", where success or failure has been judged on deployment rather than on impact on development (United Nations Development Programme Evaluation Office, 2001). Another reason is the sheer dearth of quality, rigorous and, where applicable, scientific research in the field of ICT for development. The Director of the Massachusetts Institute of Technology (MIT) in India, Ken Keniston (2002), observes that the hope that ICT can be used to solve the as-yet-unsolved problems of development in India "are built almost entirely on an empirical vacuum" because, ultimately, "we know almost nothing about the factors that make for effectiveness or ineffectiveness of grass roots ICT projects in developing nations." In order to make sense of the bulk of uncritical ICT for development discourse, especially political rhetoric, it is necessary to define what *is* being said.

The groundswell of this discourse that promotes ICT as a developmental panacea tends to put the focus on ICT while not much attention is paid to development. Wade (2002) presents a good summary of this groupthink, which believes that:

- The digital divide is the major source of inequality in the world economy today.

- It can be bridged by supplying more ICT to developing countries.

- ICT is an inherently enabling metatechnology that can bypass or leapfrog institutional and infrastructural obstacles.

- ICT investment is exempt from normal cost-benefit comparisons between alternative kinds of ICT and non-ICT investments — because it reflects a "new paradigm" of thinking and because "it is not a matter of either/or."

- Evidence of high failure rates in ICT projects only shows the need for more training, the lifting of cultural constraints, or the strengthening of political will, and does not call ICT investment into question.

Heeks (2002b) corroborates the list above when he proposes that "an enduring theme... has been the overemphasis on the technology itself, to the exclusion of other parameters." ICTs are predominantly couched within a technocentric approach – where the primary focus is on providing access to digital communication technologies (Roode et al., 2004; Shields & Servaes, 1989, as cited in Morales-Gómez & Melesse, 1998) – and the development view offered is one of modernisation. For example, in the MDGs, ICTs are specifically mentioned in Target 18 (under Goal 8), which says: "In cooperation with the private sector, make available the benefits of new technologies, especially information and communications." The two associated indicators – numbers 47 and 48 in Appendix A – are concerned with the number of telephone lines, cellular subscribers, personal computers and internet users per 100 population.

The criticism that high-level indicators cover up underlying complexities and present only half a picture (Sweetman 2005; Women's Environment & Development Organisation, 2003) is confirmed here by the following example: the increase in recent years in fixed and cellular lines per 100 people in South Africa is good in MDG terms, but this surface, quantitative statistic hides the underlying problems of a restrictive telecommunications policy and extremely high cost of calls (Bridges.org, 2005). Furthermore, it hides the issue of sustained use: Telkom cuts off almost as many users as it connects.

Thus the MDGs "reflect a growing demand of elected officials for outcome-led intervention... [T]his target-oriented approach prioritises output rather than the quality or the quantity of inputs, resulting in glossing over the long-term underlying systemic causes of social problems in favour of short-term gains" (De Paladella Salord, 2005). In

other words, meeting targets draws attention away from understanding causation or the real issues that need to be addressed. If the focus is only on ICT then no contribution is made to understanding the role of ICT for development. On the WSIS targets, Currie (2004) acknowledges that "connecting ICTs to villages, health clinics, schools and libraries can appear to be a simple and purely technical question but on closer analysis ICT access is primarily a social question – a socio-technical interface between human beings and technology." Roode et al. (2004) question the validity of the concept of the digital divide and propose that other divides, such as social or economic divides, underpin the reason why some people are more ICT-enabled than others.

2.2.4 Critical discourse analysis

One method of critique of ICT for development policies is discourse analysis. Discourse refers to spoken or written words that convey meaning in the "exchange of ideas" (Stahl, 2004).

> "Discourses are used in everyday contexts for building power and knowledge, for regulation and normalisation, for the development of new knowledge and power relations, and for hegemony (excess influence or authority of one nation over another)." (McGregor, 2003)

Discursive-based analysis appeared on the research agenda in the late 1970s as part of a philosophical discussion on the constructive role of language in social reality (Gill, 1996, Fairclough, 1995, Potter & Wetherell, 1987, Sinclair & Coulthard, 1975, Titscher, Meyer, Wodak, & Vetter, 2000, Van Dijk, 1985, as cited in Bondarouk & Huub, 2004).

There are a number of discourse analysis techniques, drawing on various philosophies and approaches such as sociolinguistics and social theory. Of the various types of text analysis, CDA is "the uncovering of implicit ideology in texts. It exposes underlying ideological bias and therefore, the exercise of power in texts" (Widdowson, 2000, as cited in Roode et al., 2004). Given the power of the written and spoken word, "CDA is necessary for describing, interpreting, analysing, and critiquing social life reflected in text" (Luke, 1997, as cited in McGregor, 2003).

CDA of political speeches and policies is a legitimate way to explore the assumptions that underlie the political and practical discourse on ICT for development. A number of researchers have employed this technique to show how technocentric ICT for development discourse can leave unquestioned the social, political and cultural issues that influence both development and the adoption of technology, which precipitates failure in ICT for development efforts (Heeks, 2005; Kvasny & Truex, 2001, Roode et

al., 2004; Thompson, 2005; Wilson, 2002). CDA is the research approach used in this study, as described in greater detail below.

2.2.5 Technological determinism

Theories of the interplay between technology and society generally fall into two genres: technological determinism and social constructivism. Summarised very briefly, "technological determinism upholds that technology itself has the power to affect and induce (societal) change", while on the other hand, social constructivists "emphasise the 'social shaping' of technology" (Christiansen, 2001). Social constructivism proposes that society – a particular culture and people – exerts an influence on technology development and ultimately determines its course. The truth – that "technology is both socially constructed and society shaping" – lies between these two ends of the spectrum.

One view of technological determinism "maintains that materials and physical laws are such that technology is determined to develop in a particular way or pattern", which implies "diminished human choice and responsibility in controlling technology" (Pannabecker, 1991). This line of thinking, in which technology is portrayed as something inevitable and to which resistance is futile, is often taken by private sector stakeholders who stand to profit from supplying the new technology and in doing so gain access to new markets (Kvasny & Truex, 2001). In development terms, technological determinism follows on from modernisation theory and industrialisation.

Assumptions of technological determinism often permeate the discourse of politicians and inform the work of ICT policy-makers, for example, within the European Union, Organisation for Economic Cooperation and Development (OECD) (Iversen, Ørstavik & Smith, 1998) and China (Hughes, 2002). Roode et al. (2004) conducted a CDA of three speeches made by two South African ministers and found an underlying belief that "the development problems of Africa can be solved by the availability of and access to ICT. These convictions are legitimised by the speakers through force of persuasion, and not on the basis of factual information." This again highlights the need for rigorous, critical research in this space. Interestingly, one of the speeches analysed was given by Dr Ngubane (2002), the then Minister of Arts, Culture Science and Technology, at a conference workshop on "Bridging the Divide" in Copenhagen. On the surface he describes how research, technology and innovation are indispensable and fundamental engines of sustainable development and, indeed, Africa's hope for development; but

CDA reveals how he "avoids analysis of [the] reasons behind [the] developing world situation, by focussing on Europe's relative prosperity" (Roode et al., 2004).

Kvasny and Truex's (2001) text analysis of the speeches of various senior United States (US) government officials reveals a belief that the provision of technology is a key factor in alleviating poverty. By analysing a speech by the previous World Bank president, Thompson (2005) shows the donor organisation to hold similar beliefs as the US officials. Further, he found instances of technological optimism (what I refer to as techno-optimism in this study), which is the "unproblematic linking of ICT to opportunity".

Wilson's (2002) critical analysis of the text found on the websites of a number of key development and donor agencies, including the ITU, UNESCO, USAID, the World Bank and One World, found that assumptions of technological determinism underlie the ICT and development discourses of these too. This assumption "allows the complex political factors influencing poverty and inequality at local, national and international levels to be hidden, or at least go largely unquestioned".

"If the problem of the 'digital divide' is defined as a problem of technology or infrastructure scarcity in the developing countries, it is all too easy to slip into the erroneous assumption that simply introducing these technologies – without addressing other major elements of the development equation – will produce development consequences" (Tipson & Frittelli, 2003). Roode et al. (2004) point out that "development efforts and projects aimed at 'bridging the digital divide' through technocentric approaches" will inevitably continue to fail.

A classic example of access-focussed ICT initiatives that have promised much and rarely delivered is telecentres. Telecentres go by a number of different names and models of operation, but are essentially centres that provide local communities with shared access to ICTs. The Universal Service and Access Agency of South Africa (USAASA) is responsible for ensuring universal access to all telecommunications services for disadvantaged communities. Out of 65 USAASA telecentres established between 1996 and 2000, only 47% were still operating with phones and computers in 2001 (Benjamin, 2001). "Its programme is committed to providing sustainable telecentres and socio-economic information services... but is unclear on how ICTs in disadvantaged areas could be used for development purposes, and has not moved beyond the rhetoric of universal access to ICTs" (Roode et al., 2004). The partial or complete failure of the

others was attributed to issues such as theft, technical problems, managerial weakness, financial problems, community conflict, fire and repossession.

For almost every potential benefit ascribed to ICTs, the opposite could also be true. For example, ICTs can help to redress the inequalities between men and women in a village where a telecentre offers an opportunity for the women to learn new skills. However, if the men of the village do not let their wives or daughters access the telecentre for fear of them becoming more educated than themselves, then the telecentre only serves to further entrench existing problems. Thus ICTs can actually entrench existing "offline" inequalities (Castells, 1999).

Currie (2004) points out that a dominant feature of most national e-strategies is to also "over-emphasise the technical deployment of ICT infrastructure over the social dynamics of development, ICT policy issues and human capacity". He calls for a "new framework for e-strategies that addresses ICT, human rights and development holistically."

Given the narrow view of technology implementation, lack of quality research in the ICT for development space and a high expectation of ICTs created by politicians, it is not surprising that so many projects fail.

2.3 Summary

The literature has explored the changing ideologies and theories of development since the 1940s. A practical implementation of a global development programme is the Millennium Declaration, which drew heavily on the theory of sustainable development. In SA, sustainable development is shown to have been common in government development strategies. More recently, AsgiSA is a programme to bolster economic development in SA in a way that results in shared growth for all citizens.

By describing how ICTs have been hailed as a way to leapfrog traditional developmental challenges, the literature reveals that it is easy to become naïvely optimistic about the potential of ICTs. "There is a legitimate worry that ICT may be promoted as a development fad, not dissimilar to earlier ones, disregarding the risks" (Hanna, 2003). WSIS and the call for national e-strategies promote the core role that ICTs have to play in development, but there is still a dearth of rigorous research that illustrates the causal connection between ICTs and development. Many ICT for development projects focus on addressing technology deficits, which can "drive unfortunate policy priorities – such as

wiring schools that cannot use them, building databases that do not affect decisions, or creating expensive government Web portals that citizens ignore" (Tipson & Frittelli, 2003).

While "if ICT is to be involved in the developmental process, then access to ICT is certainly necessary", an appreciation of the "delicate and complex interplay of many more factors than merely the access to ICT in creating a developmental process" is crucial (Roode et al., 2004). Technological determinism is common in e-strategies and ICT for development discourse, and is usually linked to the failure of ICT projects. One way to uncover ideologies and technological determinism is to conduct critical analyses of the relevant discourse.

3 The context of the CeI discourse

Thus far the dissertation has covered all of the key topics related to this field of research. To contextually situate the study, our attention is now turned to SA, examining first the national and Western Cape demographics, then ICT penetration and policies, and culminating with a brief overview of the CeI, the e-government body in the PGWC.

3.1 National demographics

SA exists in both the developing and developed worlds. It is at once the strongest economy in Africa, and also home to dire poverty and high levels of unemployment. The Apartheid years created a highly unequal society, both politically and materially, cast along the fault line of race.

Since 1994, the State has "set out to dismantle Apartheid social relations and create a democratic society based on equity, non-racialism and non-sexism" (Government Communication and Information System, 2005). The government, made up of national, provincial and local spheres, has made major progress, but enormous developmental challenges have also kept many South Africans in dire circumstances.

The 2001 census (Stats SA, 2003) revealed the following: a population of 44 million; 53% of whom were under the age of 25; 33% aged 20 and older with no schooling or only primary school education; and 30% unemployed. One in every seven households did not have access to a toilet facility. While, overall, 30% of households had no electricity, those which did were largely in urban areas (80% of households). Only 52% of rural households had electricity. The urban/rural divide presented itself in a number of other demographic indicators (GCIS, 2005). Between the nine provinces in the country, there were major demographic differences, e.g. in Limpopo, a rural province, 60% of households were using wood as the main source of energy for cooking. In the Western Cape the equivalent figure was 3%.

While there was an average of only 1% per-capita growth since 1994 – "a mediocre performance" (Government Communication and Information System, 2005) – by 2004 SA had achieved its best level of macro-economic stability in 40 years. Inflation fell from over 15% in the early 1990s to 4% in 2004. Unfortunately, a stable economy has not led to an adequate and much-needed increase in jobs. Since 1995, the number of jobs

has grown by 20%, but the economically active population has grown by double that figure (Government Communication and Information System, 2005).

Despite the impressive achievements of the democratically-elected government, the *South Africa Human Development Report 2003* (United Nations Development Programme, 2003) revealed that just under half of the population (49%) lived below the official South African poverty line (R354.00/month). Chronic income and wealth inequality exists, which continue to exhibit strong racial and spatial biases.

3.2 Demographics of the Western Cape

Based on the 2001 census (Stats SA, 2003), the Western Cape had a population of 4.52 million people, and was ranked the second richest province after Gauteng, based on total current income and also per capita income. Table 3.1 provides a demographic comparison of SA's provinces in 2001. The Western Cape had a high percentage of people with higher education qualifications and, despite only accounting for 10.1% of the total population, contributed 14.2% to the country's GDP, after Gauteng and Kwazulu-Natal.

Province	***Population*** *(as % of total country population)*	***Higher education*** *(as % of province's population)*	***Unemployment*** *(as % of province's population)*	***GDP*** *(as % total country GDP)*
Eastern Cape	14.3	6.3	24.6	8.2
Free State	6.0	6.3	25.5	5.4
Gauteng	19.7	12.6	25.8	33.8
KwaZulu-Natal	21.1	6.9	21.6	16.4
Limpopo	11.8	6.8	21.6	6.4
Mpumalanga	7.0	5.9	23.0	6.8
North West	8.1	6.1	19.7	6.5
Northern Cape	1.9	5.9	24.8	2.3
Western Cape	**10.1**	**11.2**	**17.1**	**14.2**
	100.0			100.0

Table 3.1: Demographics of South Africa's provinces (Stats SA, 2003)

Despite the fact that the province has the lowest unemployment rate in the country – 17.1% of the working population is unemployed (Stats SA, 2003) – severe inequality in the distribution of income exists between different population groups, with unskilled migrants and agricultural farm workers representing some of the most economically disadvantaged people.

3.3 The information society in SA

The South Africa government has recognised the strategic importance of ICT and the ICT sector in "enhancing the country's competitiveness and meeting development challenges" (Cape IT Initiative, 2003). When surveying SA's demographic landscape the many developmental challenges are obvious, especially in terms of building an information society. Still, President Mbeki, referring specifically to ICTs has said that we must "ensure that as many of our people as possible master modern technologies and

integrate them in their social activities, including education, delivery of services and economic activity" (Government of the Republic of South Africa, 2002b). Further, he has highlighted the policy responsibility of Government to ensure that the information society "supports and enhances the objectives of development, empowerment, economic development and preserves the constitutional values on which the whole national edifice is built" (Mbeki, 1996). Bodies such as the Presidential National Commission (PNC) and PIAC on Information Society and Development play a role in effectively undertaking this responsibility. We begin to build our understanding of the information society in SA by looking at ICT penetration levels across the country.

Despite the telecommunications policy constraints that exist, for a developing country SA is generally well placed in global e-readiness indexes. For example, the World Economic Forum's *Global Information Technology Report* ranked SA 34th out of 104 countries in terms of e-readiness (Dutta, Lanvin & Paua, 2005). South Africa is often compared to India and Brazil, which ranked 39th and 46th respectively.

In 2001, while some urban centres had strong computer-based ICT capabilities, national ICT adoption was best contextualised by the fact that only 2% of Black African, Coloured, Asian or Indian households had a computer, as opposed to 46% of White-headed households (Stats SA, 2003). Much more prolific were radios, TVs and mobile phones: nearly three-quarters of households in the country had a radio and well over half had a television (in terms of other household appliances, just over half had a refrigerator). These figures concur with the results of the *South African 2004 e-Index Survey* (Gillwald et al., 2005), which segmented its sample into metropolitan areas, other urban areas and rural areas; as anticipated, ICT penetration was skewed towards urban areas (see Figure 3.1).

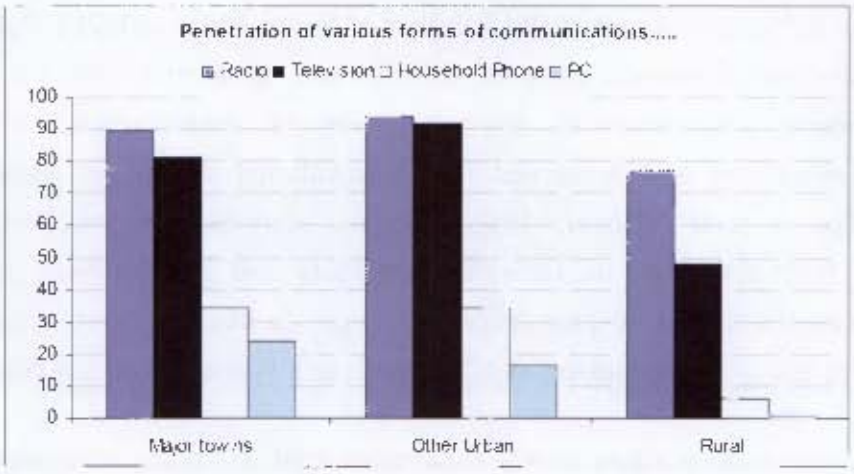

Figure 3.1: Penetration of various forms of communications in South Africa (Gillwald et al., 2005). Note: Household phone refers to private, non-mobile phones.

The boom of mobile telephony has been significant: in SA there are over 35.9 million mobile subscribers (The e-Business Handbook, 2006). In sharp contrast, only 3.5% of households have internet access and of that number 80% are in metropolitan areas, 20% in other urban areas and none in rural areas (Gillwald et al., 2005). This clearly shows the urban-rural divide in SA.

Perhaps the greatest constraint to increased communications penetration is cost. More than two-thirds (68%) of respondents earned less than R500.00 per month. The problem of these painfully low incomes is compounded by high telecommunications costs; out of a survey of 15 comparable countries, SA's local call rates (peak) were 199% more expensive than the average rate (South Africa Foundation, 2005, as cited in Gillwald et al., 2005).

Given the severe inequalities and financial and resource limitations for a large part of the population, shared internet access is the only viable option to go online for many people. In 2004 there were 981 public internet access points such as cybercafés, government Multi-Purpose Community Centres, post offices, digital villages and telecentres (Thomas, 2004, as cited in Gillwald et al., 2005). Other shared-access venues include schools and universities. In the Western Cape and Gauteng there are government-led initiatives to ICT-enable schools. As at January 2008, 813 schools in the Western Cape have had computer labs installed as a result of the Western Cape Education Department's Khanya project (http://www.khanya.co.za). Khanya aims to have every school in the province connected by 2012. The project promotes the use of ICTs to support curriculum delivery, ensuring that teachers are adequately trained to

Critical research draws on critical social theory (CST). "For critical social theorists, the responsibility of a researcher in a social situation does not end with the development of sound explanations and understandings of it, but must extend to a critique of unjust and inequitable conditions of the situation from which people require emancipation." CST research through a neo-humanist perspective therefore has, as its main goal, the "improvement of the human condition" (Boudreau, 1997).

While under the "critical" umbrella there are a variety of social theories and social thinkers, Information Systems research has largely been dominated by the Frankfurt School (Brooke, 2002b), and in particular the work of Jürgen Habermas (Doolin & Lowe, 2002; Howcroft & Trauth, 2004, p. 198), prompting Ngwenyama and Lee (1997) to posit that "his work has had a greater impact on the [information systems] discipline than any other CST school of thought."

However, some scholars have called for critical research in Information Systems to broaden its influences (Doolin & Lowe, 2002); for example, Brooke (2002a) has called for enrolling the works of other critical social theorists, such as Foucault. While Habermas is the representative of the newer Frankfurt School or Critical Theory, Foucault is probably the most widely used postmodern scholar in information systems research (Stahl, 2004; Stahl et al., 2005). Both Critical Theory and Postmodernism are central streams of theory in critical research.

Acknowledging the suggestion of Doolin and Lowe (2002), and Brooke (2002a), I considered the work of Foucault as a theoretical underpinning in my research. Stahl et al. (2005), who attempted to combine a Habermasian and Foucauldian approach to the study of information systems in the Middle East, provided valuable insights as to which approach would be best suited to my research. They describe how the main agreement between Habermas and Foucault is critical intention, "the fact that they do not believe social reality is justified per se but that it is open to critical investigation" and, further, "that reality is constituted and structured by language and that we therefore have to pay attention to discourses when we critically observe the world".

The key difference is as follows: Foucault explores the *conditions* of real discourses (as opposed to ideal ones) because for him it is impossible to divide the content of a discourse from its practice (Foucault, 1971, as cited in Stahl et al., 2005). He is interested in the (external) power issues that determine the outcome of discourses (Conway, 1999). On the other hand Habermas' central interest is the *content* of discourses and the question of their validity; he looks to discourse content to produce legitimacy (Stahl et al., 2005). Given that my research is a CDA of ICT texts within a

described context and concerned more with the validity of the discourse than the inherent surrounding power plays, the CST of Habermas is more applicable.

4.1.2 Theory of Communicative Action

This section introduces Habermas' TCA (1984, 1987). The anthropological basis of this theory is that humans are intrinsically social beings who require social interaction to survive and thrive (Stahl et al., 2005). Communication is aimed at facilitating this necessary cooperation. TCA describes four types of social actions or intentional behaviour in social settings: instrumental, strategic, communicative and discursive. While only the last two are relevant to this study, I will briefly describe the first two for the sake of completeness.

When employing instrumental action, a person "views her opponent as if he were a mere object or organizational resource (rather than another actor) and attempts to manipulate the opponent to act according to her wishes" (Ngwenyama & Lee, 1997). An example is a manager ordering a subordinate to do something. When an actor influences and transforms the behaviour of others so as to conform to his or her desires or goals, that person is taking strategic action. It often manifests itself through manipulative and exploitative behaviour.

In contrast, communicative action is when actors – writers or speakers – engage or inform each other about, for example, states of affairs, strategies or decisions taken. In CST, communication is not only about understanding what a writer or speaker is saying, but also the validity of their discourse (Ngwenyama & Lee, 1997). The basis for the validity claims, as described by Habermas, is as follows: all social actions assume a basic set of norms; these hold that writers or speakers are allowed to express themselves unhindered and must also honour the outcome of open rational argument with others. When enacted in this ideal environment, communicative action between actors seeks to achieve and maintain a mutual understanding and consensus. This hypothetical "ideal speech situation" is characterised by:

> a) [A]n open agenda and free access in which all claims and counter claims can be freely examined, b) no asymmetries of knowledge and power... c) a social atmosphere which encourages everyone to express their feelings, to question and examine those feelings. (Klein & Hirschheim, 1991)

Habermas (1979, 1984) provides four validity claims, to which the reader or listener is able to hold up any communicative action to test it for validity and rationality (a valid claim is a rational one). The claims are *truth* (an applicable question would be: Is the discourse true?), *clarity* (e.g., Is the discourse clear or does it use jargon that is not

understood?), *sincerity* (e.g., Is there a hidden agenda in the discourse?) and *legitimacy* (e.g., What is assumed in the discourse?). Communication in an ideal speech situation builds knowledge, comprehension, trust and consent. If any of the claims are not met, the communicative rationality has been violated. In such a case, when the ideal speech situation is not realised, communication distortion occurs, resulting in misrepresentation, confusion, false assurances and illegitimacy.

Habermas posits that if distorted communication is found, the reader (in the case of texts) should enter into a discourse with the author of the texts to debate the issues that fail the validity claims. Using Habermasian terms, the distortion inherent in the initial communicative action, i.e. the texts, leads to a discursive action, i.e. a discourse between the actors, with the goal of reaching consensus (or at least achieving agreement on a rectifying course of action) and redeeming validity claims. The discursive action, through which "the force of the best argument" (Habermas, 1979) has the right to change a given situation, offers emancipation from distortions.

> By providing an explicit and ethical standard for assessing the validity of communications, Habermas offers a strong and unique conceptual framework that can be applied not only to analyse the distortions in communications which reflect the dominant ideology and power structures but also to undistort communications, thereby improving practice. (Cukier et al., 2004)

Thus through the engagement of a social action that can ultimately result in emancipation, the research is well grounded in CST. A number of researchers within information systems have applied the Habermasian framework (Klein & Huynh, 2004). The areas of application of Habermas include discourses within managerial emails (Ngwenyama & Lee, 1997), e-democracy (Heng & de Moor, 2003), discourses related to e-learning in Canada (Cukier, Middleton & Bauer, 2003; Cukier et al., 2004), a rural e-health system (Byrne, 2003), a rural telecentre programme (Kanungo, 2004), Egyptian ICT policies (Stahl et al., 2005) and South African government speeches (Chigona, Mjali, & Denzl, 2007).

In summary, Habermas' validity claims have a strong theoretical foundation, provide a good conceptual tool for empirical research and are easily understood, making them accessible for researchers. Because most approaches to planning – including strategic and framework documents – are based on rationality (Cukier et al., 2004), the Habermasian notion of communicative rationality presented itself as a good fit for this study.

4.2 Research strategy: CDA

As discussed above, CDA was chosen as the research method for this study based on the literature and the research theory.

CDA is based on "assumptions of disharmony, conflict, and power differentials between populations and groups, and on the assumption that language use reflects, reproduces, and changes these social phenomena" (Frantz, 2003). It thus "becomes very helpful in connecting discourses of different actors to broader considerations of social context" (Pozzebon, 2004). Thompson (2005) proposes the following:

> [CDA is a] useful tool for [information systems] researchers; in particular, those wishing to understand the potent interaction of ICT with developmental and other discursive 'gazes' which look out upon contested organisational landscapes. Indeed, it is this very task – uncovering, problematising, and raising our consciousness about contestable assumptions which have, through sheer use, become woven into the fabric of discursive interaction - at which CDA arguably excels.

4.3 Operationalising Habermas' validity claims to assess communicative rationality

While Habermas' validity claims have received much attention in social science and information systems research, there has been limited reflection on how to actually conduct such research (Stahl et al., 2005). This challenge has been addressed by Cukier et al. (2003) and Cukier et al. (2004), who propose that "the Habermasian notion of the 'ideal speech act' can serve as a standard for assessing the rationality of discourse and that Habermas' validity claims can be operationalised to textual analysis [in a way] that is both rigorous and theoretically sound."

Their approach is as follows: a series of questions are used to discover truth, sincerity, clarity and legitimacy claims in the texts.

The identification of *truth* claims is guided by a search for objective facts, e.g., Are the issues and options clearly defined in the texts? What evidence has been provided to support these arguments? Has the relevant information been communicated without distortion or omission? Or are there ideological claims that are unexamined?

Coding for *sincerity* claims involves looking for rhetorical devices – metaphors, adjectives or connotative language use – which might promote or suppress understanding or create false assurances. This is a way of revealing subtle nuances,

which are not directly expressed in the text or not apparent on cursory reading of the text.

Assessing *clarity* involves looking for jargon, or confusing or incomprehensible language. If these obfuscations are not present, clarity is achieved.

Legitimacy is concerned with participation in the discourse. Coding for this asks questions such as the following: to whom was legitimacy accorded in the texts? Who was considered an expert and on what basis? What was assumed or implied in the discourse? How were decisions legitimised? After the initial coding for legitimacy, it is possible to identify the missing elements in the text. In other words, which groups and viewpoints are marginalised or excluded from the discourse?

Table 4.1 provides a summary of the validity claims and corresponding discourse dimensions.

Validity claim	***Result***	***Distortion***	***Speech dimensions***
The content of the presuppositions of what is said to be factual or true.	Truth	Misrepresentation	Argumentation and evidence
The speaker is honest (or sincere) in what she says.	Sincerity	False assurance	Metaphors and connotative words
What is said is linguistically intelligible and comprehensible.	Clarity	Confusion	Rhetoric and semantic rules
What the speaker says (and hence does) is right or appropriate in the light of existing norms or values.	Legitimacy	Illegitimacy	Use of experts

Table 4.1: Validity claims and speech dimensions (Cukier et al., 2004)

I based the guiding questions for validity claims on those developed by Cukier et al. (2003), Cukier et al. (2004) and Stahl et al. (2005). The questions, which I adapted slightly to be appropriate for the discourse under analysis, are listed in Appendix B.

4.4 Data and sampling plan

The CeI, through its strategies and projects, sets the direction of ICT enablement for all other departments within the PGWC. I thus set out to identify documentation by the CeI that constituted its ICT-related discourse.

During the sampling process I first searched the Cape Gateway website, the primary source of provincial government information for ICT-related documents of the CeI. Three relevant documents were found. The list of documents was shown to the then Chief Information Officer (CIO) of the CeI, who had co-authored two of the documents, to check that no applicable documents were missing from the list. The CIO pointed to two other documents that were not listed on the website, but were available to those working in the organisation. The documents were not of a confidential nature; they simply were not relevant to the public and thus not available on the portal.

It was through a merging of the IT and e-government units of the PGWC in April 2004 that that CeI was formed. My initial data collection period ended in January 2006. Thus during the time period under analysis – April 2004 to January 2006 – there were five documents of the CeI that constituted the background, framework, strategy and planning associated with developing an information society in the province and turning the CeI into a change agent for that process. These documents, which constituted the primary data source for analysis, are listed in Table 4.2 (and also in Appendix C with full reference details).

Document	*Summary*
[1] Technology, e-government and economic development: A background paper to inform the strategy of the Centre for e-Innovation (2004) (32 pages)	This background paper informs the strategy of the CeI by considering the role of ICT and its implication for government. It explores e-government, and suggests success factors and metrics to measure progress towards an information society.
[2] Ignition Strategy for the Centre for e-Innovation (2004) (16 pages)	The Ignition Strategy describes the CeI's reason for existence, its vision, mission and different units, its priorities and its action plan. It gives a high-level view of the role and structure of the CeI, in the context of the PGWC.
[3] Bridging the Gap: A framework for provincial governments to implement e-government and promote an information society (2005) (36 pages)	This framework guides provincial governments to plan and implement an e-government strategy. It describes how the provincial ICT department must follow an internally-facing ICT strategy, a service delivery strategy, and a developmentally-focused information society strategy.
[4] The critical role of ICTs in delivering shared growth: background document developed as a contribution to the Western Cape Provincial Government Shared Growth and Development Strategy (2006) (19 pages)	This document precedes [5] and provides background information to the role of ICTs (and therefore the role of the CeI) in supporting the Western Cape Provincial Government Shared Growth and Development Strategy.
[5] The critical role of ICTs in delivering shared growth: a contribution to the Western Cape Provincial Government Shared Growth and Development Strategy (2006) (11 pages)	This document supersedes [4] and feeds into the Western Cape Provincial Government Shared Growth and Development Strategy. The document describes how ICTs support the strategy.

Table 4.2: Documents analysed in the research (the discourse)

Excluding references and endnotes, 97 pages (out of a total of 114 pages) of text constituted the discourse to be analysed.

The literature on conducting CDA recommends that taking into account contextual information is extremely important for the quality and accuracy of the research findings (so that the texts under analysis are not misinterpreted) (Bondarouk & Huub, 2004; Frantz, 2003; Stahl et al., 2005). The research drew on two secondary data sources, listed in Appendix D. The first is a white paper titled Preparing the Western Cape for the Knowledge Economy of the 21st Century (2001), which sets out a vision and a ten-year strategic framework for ensuring that the Western Cape province is well-prepared for the "global knowledge economy of the 21st Century." The second is a speech from 2006 that describes the shared growth strategies of the Western Cape in the context of AsgiSA.

The following events, which I attended and presented at, provided further contextual input to the research:

- Community Informatics Research Network Conference in Cape Town (August 2005);
- The third WSIS Preparatory Committee Meeting (PrepCom-3) in Geneva (September 2005); and
- The second WSIS in Tunis (November 2005).

At each of these events e-strategies were widely discussed.

4.5 Coding

To test for the four validity claims, texts were coded using the guiding questions provided in Appendix B. I used up to three levels for the coding, because as in the study by Stahl et al. (2005), the coding process revealed that several individual claims appeared frequently and were worthy of their own sub-categories, e.g. truth (level one), benefit (level two), poverty alleviation (level three). Further, I found that I needed to make a second pass through the analyses to regroup or redefine some of the claims.

Breakdowns of the claims are tabulated throughout the Chapter 5 (Findings). As a coding aid, a Microsoft Access database adopted from Bernd Carsten Stahl, co-author of Stahl et al. (2005), and modified by Nico Denzl, co-author of Chigona et al. (2007), was used. The actual Access database, as well an exported HTML file containing all of the database findings are also supplied with the dissertation. Note that in the HTML file, the

integrate ICTs into their teaching. Some of the schools open their labs up to the wider community after hours.

In terms of ICT-focussed legislation that is relevant to this dissertation, the Electronic Communications and Transactions Act (Government of the Republic of South Africa, 2002a) recognises "the importance of the information economy for the economic and social prosperity of the Republic." It calls for universal access to "electronic communications and transactions" and legalises electronic transactions, amongst other things.

3.4 Information Society and Development Plan and Implementation Strategy

Broadly speaking, the work of the PNC is to create a framework for the building of an information society in SA. It consulted with key stakeholders to ensure that their sectoral interests were promoted in the information society strategy. Following the release of the e-strategy, there will be more prescriptive policies and sector-specific ICT strategies created by stakeholders within all three spheres of government. The mandate of the PNC is to inform, guide and align the work of these "line function" departments. For example, it collaborated with the Department of Education on its e-education strategy.

SA's national e-strategy thus aims to provide a clear information society vision to which all spheres of government should align their own ICT strategies and programmes. For example, local governments' ICT plans and projects should be in line with, or feed into, their IDP plans. The e-strategy was partly informed by the WSIS Plan of Action, and is underpinned by the National 2014 Vision. It aims to "integrate the economy for the benefit of all" (Grewan, 2007), clearly a shared growth sentiment.

The strategy focuses on five areas for ICT application: education, skills development and training; e-health; government service delivery; ICT and Small, Medium and Micro Enterprise (SMME) development; and local content development. These focus areas are based on ten cross-cutting pillars on which an inclusive information society can be built in SA. The pillars include: a supportive policy and regulatory environment, ICT infrastructure, universal access to ICTs, human resources development and ICT measurement mechanisms.

4 Research methodology

This chapter describes the theoretical framework of the research, covering critical research, Habermas' TCA and how this has been operationalised to assess communicative rationality. The data and sampling plan, coding and method of data analysis are presented, along with the expected results, limitations of the research and issues of access and ethics.

4.1 Theoretical framework

The three main research paradigms in the field of Information Systems are positivist, interpretivist and critical research (Howcroft & Trauth, 2004, p. 198; Orlikowski & Baroudi, 1991). Drawing on the work of Burrell and Morgan (1979), Hirschheim and Klein (1989) mapped these paradigms onto information systems development as follows: positivism maps to the functionalist paradigm, interpretivism to the social relativism paradigm and criticalism to the neo-humanist paradigm.

Positivism is an approach that "seeks to provide essentially rational explanations of social affairs" (Burrell & Morgan, 1979). It aims to be as objective as possible.

The interpretive paradigm is characterised by a need to understand the fundamental nature of the world at the level of subjective experience (Hirschheim & Klein, 1989), in other words, the point of reference needs to be from participating in the action, not from a point of outside observance as in positivist research. In information systems development terms, the paradigmatic shift in focus is from technical development to interpretation of social action (Howcroft & Trauth, 2004, p. 199).

4.1.1 Critical research

While the interpretive paradigm "seeks to clarify the meaning of social situations so they can be better understood" (Ngwenyama, 1991), the critical/neo-humanist paradigm questions and challenges the structures and actions in social situations. Critical research questions the *status quo* of a situation; it wants to know what is "wrong with the world rather than what is right" (Walsham, 2005, p. 112). This paradigm "seeks radical change, emancipation, and potentiality" by focusing "on all forms of barriers to emancipation – in particular, ideology (distorted communication), power, and psychological compulsions and social constraints – and seeks ways to overcome them" (Hirschheim & Klein, 1989).

TextID column corresponds to the texts as follows: 1 corresponds to [1], 2 corresponds to [2], 5 corresponds to [3], 6 corresponds to [4], and 7 corresponds to [5].

4.6 Method of data analysis

I initially decided to conduct the CDA based on an adaptation of Fairclough's procedures by Thompson (2005), as applied by Roode et al. (2004), Roode and Khakhar (2005) and Vosloo and Roode (2006). However, because Thompson's approach is suited to small amounts of text and applies critical research outside of Habermas' theories, the approach of Cukier et al. (2003) and Cukier et al. (2004) was followed. This methodology, which is particularly suited to large amounts of text and has also been successfully applied by Stahl et al. (2005) and Chigona et al. (2007), was used to explore the rationality of organisational discourse – within the CeI – on ICT for development.

"Critical research usually sees reality as socially constructed and research as part of this construction process" (Stahl et al., 2005). Important in the neo-humanist paradigm is the free admission by the researcher of his or her underlying assumptions (Boudreau, 1997), which influence his or her research. This admission of subjectivity lies in contrast to the claims to objectivity often made by positivist researchers.

My inherent assumptions were as follows: communication distortions did occur in the documents under analysis. The CeI's position required it to provide strategic ICT leadership; it was my personal belief that sometimes it was not afforded the time and resources to conduct adequate research to do this, nor did other government units co-operate in a supportive way during the research and strategising phase. The effect of external political pressures along with time and resource limitations could mean that strategies were developed too quickly and made to fit a given agenda. Before beginning the coding process, I acknowledged that my subjective assumptions would have an influence.

Because there is no such thing as a set of specific methods of conducting CST research, a pluralistic and multi-method approach is necessary (Boudreau, 1997). The methodology that was used allowed for qualitative and quantitative textual analysis techniques, which addressed this issue and mitigated somewhat against over-subjectivity.

Critical researchers need to take a reflective look at the methods they themselves use, thus demonstrating a high-level of reflexivity (Boudreau, 1997; Stahl et al., 2005). My own reflection is presented at the end of the dissertation in chapter 7.

4.7 Expected results

It was expected that holding up the primary source documents to Habermas' validity claims would reveal communication distortions. The findings would probably problematise the ICT for development discourse, confirming the need for more critical research to understand the relationship between ICTs and development. For example, many government policies in SA claim a correlation between ICTs and sustainable development, but this is unsubstantiated and based more on popular discourse than rigorous research (Vosloo, 2005).

It was also expected that in the documentation the benefits of ICTs would be seen to outweigh the costs, or risks, associated with ICTs.

4.8 Limitations of the research

It was acknowledged that the sample of primary data was not large, that the documents spanned a relatively short period within a particular context, and were influenced by existing policies and political activities. The worldview espoused in the documents did not necessarily represent all of the PGWC or those of the CeI.

From September 2003 to September 2007 I was a permanent employee of the CeI, and thus potentially prone to practitioner-researcher bias. Further, I may have subconsciously not wanted to be overly critical of the work of my superiors.

There are a few notable problems associated with using Habermas' theories, most related to the dichotomy of ideal and real discourses (Stahl et al., 2005). To some extent, the TCA "relies on a model of the individual as potentially autonomous and clear-headed" (Heng & de Moor, 2003), always behaving ethically, responsibly and rationally. This ideal scenario is only possible to a certain degree; in the real world individuals behave according to their own agendas or according to pressures upon them.

The realisation of discourses is also problematic in hierarchical organisations (e.g., government bodies), which, because they don't cater to Habermas' egalitarian assumptions, don't include all parties who have an interest in a particular discourse (Stahl, 2004).

As Thompson (2005) points out, CDA "inevitability involves subjective judgements on the part of the researcher" and as a result "there can be no 'definitive' analysis of a piece of discourse." I was aware of the challenge of consistently coding five texts, as well as the danger of over- or under-analysis.

Thompson (2005) suggests that one approach to mitigate against over-subjectivity is to present all of the source materials, as well as the identified distortions, to the reader. The researcher and reader are thus placed in the same position to interpret the texts, thus "actively supporting the development of independent judgements concerning the analysis." I followed this suggestion in presenting the source materials along with the dissertation.

4.9 Access and ethics

There were no apparent issues of ethics in the research. The primary documents were not of a sensitive nature, confidential or contentious. Three of the documents are publicly available on the Cape Gateway website, and the other two are available upon request from the CeI. No observation of personal or private activities was done. Ethics approval for conducting the research was received from the Ethics Committee of the University of Cape Town.

In light of the democratic, developmental and transparent values espoused by Government, it was hoped that all opinions expressed, even critical ones, would be welcomed as valuable and constructive input.

4.10 Summary

The research methodology was based on critical research, using Habermas' TCA as applied through CDA. Habermas' validity claims have been operationalised, by a number of researchers, to assess communicative rationality. I used this as my research approach to code and analyse the data. The following chapters describe the findings of the CDA and discuss these in a broader context of analysis.

5 Findings

This chapter presents the findings of the discourse analysis for each claim type according to Habermas' standards of validity, presented in aggregate form along with illustrative claims. The complete set of all of the identified claims are supplied with the dissertation.

Table 5.1 presents a breakdown of the claims identified in the discourse.

Claim	*Occurrences*	*Percentage (%)*
Truth	640	53
Sincerity	432	35
Clarity	20	1
Legitimacy	122	11
Total	**1214**	**100**

Table 5.1: Breakdown of all claims identified in the discourse

Each claim type is explored via a number of guiding questions, which are based on the work of Cukier et al. (2003), Cukier et al. (2004) and Stahl et al. (2005). All of the questions are found in Appendix B.

5.1 Truth claims: Argumentation and evidence

Overall, truth claims are concerned with argumentation and evidence in the discourse. In order to more thoroughly understand the truthfulness of the discourse, the following questions were asked:

- What is said about the technology?
- Are the issues and options clearly defined?
- What costs (financial and claimed negative effects) and benefits (claimed positive effects) have been identified and assessed?
- What evidence has been provided to support these arguments?
- Has the relevant information been communicated without distortion or omission?

- Are there underlying problems that are referred to – explicitly or implicitly – in the texts?
- Are there ideological claims which are unexamined?

Table 5.2 gives a summary of all of the truth claims identified in the texts, grouped according to the applicable questions.

Level 2 (Truth)	***No. of claims***
Description	250
Benefit	231
Disadvantage	3
Evidence	10
Distortion	29
Omission	13
Faulty analogy/logic/cause	5
Problem	84
Ideology	15
Total	**640**

Table 5.2: Summary of all truth claims

5.1.1 Description-based claims

I identified 250 descriptive claims in the texts that are either definitions, general descriptive statements or descriptions of the goals, programs and focus areas of the CeI. The high number of descriptive claims is to be expected in discourse that seeks to promote a major new drive within government. Examples of definitions include knowledge economy, information society, e-government, e-administration, e-agriculture and e-service. Definitions are usually short and to the point, e.g., e-service means "digitally enabling the delivery of services to the community so as to provide seamless

access to government" [3]. In [4], a stated goal of the CeI is "developing and acting on a program that promotes and nurtures the benefits of living in an information society."

5.1.2 Benefit-based claims

After descriptive claims, by far the next biggest category of claims concerns ICT-related benefits (231 claims identified) – the discussion of the many advantages of ICTs for society and government. Table 5.3 gives a summary of the claimed benefits.

Level 3 (Benefits)	***No. of claims***
Economic development	14
Economic growth (first/formal economy)	6
Grow a knowledge economy	8
Improve efficacy	9
Improve efficiency	31
Improve G2C/G2B/G2G communication	9
Improve government service delivery	36
Improve health care	3
Improve literacy/education	14
Increase productivity/save time	6
Other benefit*	68
Poverty alleviation	7
Shared economic growth (first and second economies)	4
Social development	16
Total	**231**

* Other benefits include: bridge the digital divide; creation of social capital; development; increase the growth and competitiveness of the regional ICT industry; improve NPO/civil society service delivery; transform internal and external relationships; optimise governance; minimise the duplication of effort; optimise constituency participation; provide a platform for new ways of doing business; enable the sharing of good ideas; improve internal administration; enable information and financial transactions; improve civic interaction; gather and disseminate global market intelligence; improve the transparency and approachability of government; cost and resource savings; sustain competitiveness of SMMEs; foster democracy; skilled-jobs creation; and improve gender equity.

Table 5.3: Summary of all benefit (truth) claims

Many of the associated benefits of ICTs claim to ultimately result in social and economic development, e.g.

> [T]he efficient and effective delivery of roads, houses, schools, water, sanitation, health care and other basic needs can be much improved in a connected and informed community. In turn, these basic building blocks together with the effective use of ICTs can greatly assist the further development of human capital, to create a virtuous cycle that ratchets up the pace of social and economic development. [3]

Further, the link between ICT and poverty alleviation is established in a number of places, e.g.:

> ICTs are thus not only a tool for extending economic opportunities, but also for reducing poverty by extending health services, expanding educational opportunities and generally improving the quality of life for the many disadvantaged people of the Western Cape. [5]

> [T]he use [of ICTs] by poor communities to bridge the digital divide and gain a foothold in the knowledge economy. [5]

ICT is seen not only as an enabler, but it also has a seemingly transformative effect on government: it improves service delivery effectiveness, improves efficiency and improves government to citizen (G2C), government to business (G2B) and government to government (G2G) communication. Sample representative quotes are as follows:

> e-Government is the continuous optimisation of government service delivery... through the optimal utilisation of appropriate Information and Communication Technologies (ICTs). [3]

> e-[G]overnment projects should seek to improve service delivery by improving the efficiency and productivity of government agencies. [1]

> e-Government can also impact human development by increasing access channels to government. It broadens opportunities for citizen participation, opening new channels of communication between constituents and their representatives and bringing marginal groups (i.e., women, physically challenged, rural people) into mainstream participatory channels. [1]

5.1.3 Disadvantage-based claims

Only three disadvantages associated with the use of ICTs were identified in the discourse, all highlighting the risk that ICTs can actually deepen existing divides.

> In doing so, government will also need to promote access to ICTs, so that everyone can benefit from the information society, and so that the digital divide is not exacerbated. [1]
>
> ICT deployment (or the lack of it) can end up reproducing and deepening existing inequalities in society. [4]

Clearly there is an imbalance between the three disadvantages of ICTs and the 231 benefits of ICTs.

5.1.4 Evidence-based claims

Despite the many claimed benefits of ICT, there is very little evidence provided to support these claims. Of the evidence that is provided, some is based on reports that are referenced in the footnotes of the texts, e.g. "The World Bank has confirmed the important part that ICTs play in the development of a competitive economy" [5], and some is simply referred to in a way that does not give the reader an opportunity to verify it, e.g. "The direct connection between the expansion of information communication technologies and growth and economic development is well established by policy makers, researchers, funding organisations and others worldwide" [5].

The disproportion between the benefits and evidence thereof means that the majority of the claimed benefits are simply asserted.

5.1.5 Distortion-based claims

In the Habermasian ideal speech act, communication must happen without distortion and omission. In the discourse under analysis, 27 instances of distortion were identified. For example, the CeI is mandated to "work with all other departments to... reduce costs so that more of the available resources directly benefit the poor" [5]. This statement gives a distorted view of the reality since more money in government budgets does not necessarily result in direct benefits for the poor; that depends on how the money is spent. Further examples of distortion are presented below.

In a digital world, "[t]hrough collaboration, more voluminous and accurate information is generated and accumulated, and distributed in a twinkling to an audience that understands exactly what was said" [1]. Because the nuances of face-to-face communication are not available in asynchronous digital communication, there is a higher chance of misunderstanding in the meaning of the content (not the actual presentation).

"What allows information to flow through the economy is the pervasiveness of ICT (telecommunications) networks, the availability of a computer and information literate workforce, and a supportive ICT industry" [5]. This claim does not recognise that information has flowed through the economy of the Western Cape for hundreds of years, without the use of ICTs.

"The world's largest encyclopaedia is on the Internet, and free for anyone with an Internet connection to use." [3]. But what about people who cannot afford an internet connection or who don't have a computer? For them Wikipedia is no more free than the Encyclopaedia Britannica, which they cannot afford to buy.

"[A]ccess to ICTs by government institutions and individuals helps to ensure that the benefits of economic growth are more equitably shared" [5]. The direct link between access to ICTs and overall economic growth is not evidenced anywhere in the text.

"[G]rowing a competitive ICT industry is vital to support the ICT needs of government and business. It also is an important employer and direct contributor to the economy" [4]. The discourse describes how the ICT industry only employs skilled people, meaning not people from the second economy. However, the section from which this quote comes begins with: "From a shared growth perspective, the following goals are most relevant." Thus it is easily misunderstood that the ICT industry is a direct contributor to the *whole* (first and second) economy by employing people; this is not true.

5.1.6 Undistorted claims

A number of "undistorted" claims were also identified, which offer a balanced approach to ICTs:

> A number of researchers have demonstrated that the application of ICTs is not sufficient to address problems of rural poverty without adherence to the principles of integrated rural development. Unless there is at least minimal investment in transport, education, health and social and cultural facilities, it is unlikely that investments in ICTs alone will enable rural areas to cross the threshold from decline to growth. [5]
>
> Government can help to form the [ICT] environment and nurture key initiatives, but cannot do everything itself. [3]

The usual pitfall of ICT-enablement discourse is to focus on access. Again, the texts provided a much more holistic view, e.g.:

> Access alone is insufficient. [4]

> Programs and projects need to simultaneously address the need for locally relevant content, skills and access. [1]
>
> ITC (sic) deployment is not an end in itself, but a critical contributor to success. [4]
>
> e-[G]overnment programs should be needs driven and customer centred, enabled by what technology can do. Technology is the tool, not the reason. [3]

While the discourse does gush about the potential of ICTs for poverty alleviation, it is also realistic about these expectations:

> But the structural challenges to overcoming the digital divide will remain almost overwhelming in some communities. Computer and information literacy first requires basic literacy, and an economic environment where using technology makes sense. People will always need housing and healthcare before computers – even if using computers could help get them. There is no 'chicken and egg' conundrum here. [4]

5.1.7 Omission-based claims

Thirteen cases of omissions have been identified in the discourse, mostly concerning a lack of ICT-related disadvantages or risks. An illustrative claim is as follows: "[A]ll government departments and agencies must give attention to ICTs is (sic) to ensure that their specific efforts are effective and that the benefits are equitably spread throughout society" [5]. The sentiment – echoed throughout the discourse – is a positive view of ICTs. Related disadvantages are mostly omitted.

"The expanding reach and capability of mobile technologies, including cell phones to deliver information and soon even television" [5]. While cellphone penetration is high in SA, the cost of making phone calls is prohibitive. The claim above does not consider costs associated with ICT use.

In [1], Wesso et al. (2004) describe the ability to create and distribute information in new ways and in new volumes – due to ICT – as a sign of progress. But, according to Sen (1999), information itself is not useful unless people have the power to act upon it, free of social, economic or other constraints. Thus while the ability to create and disseminate information has been improved in some ways, this does not necessarily lead to development outcomes.

In [5], Wesso et al. (2006b) describe technology as a "driver of globalisation": "information based activities are becoming distributed around the globe, to the benefit

of developing countries." This statement omits to acknowledge that globalisation is not widely regarded as beneficial for all developing countries.

"The widening acceptance of free and open source software (FOSS), which is reducing costs and opening up participation in the knowledge economy" [5]. While there are reduced costs associated with FOSS, there are also problems that negate its widening acceptance, such as lack of skills to support FOSS use, e.g., in schools. These problems are not mentioned in the text. Below is another example concerning FOSS where any mention of its disadvantages are omitted.

> The circumvention of the direct costs associated with use of licensed software has enormous implications for the developing world, both in terms of affordable access and the emergence of local software development industries. The rise of FOSS will also support the growing interoperability of systems. [4]

5.1.8 Claims to do with faulty logic

In the discourse, five claims that exhibited faulty logic, or faulty cause, were identified. Below are illustrative texts:

> The diffusion of ICTs is not just of relevance to the formal economy - though this alone is sufficient to argue that ICTs should be a critical aspect of any development strategy to ensure that the productive sector can create both jobs and the resources to fight poverty. [5]

This is faulty logic because the very reason for shared growth strategies is the realisation that the newly created jobs in the formal economy are not accessible to people working in the second economy. A further consideration is that the stakeholders in the formal economy that operate according to capitalist motives are primarily concerned with maximising profits and not necessarily generating resources to fight poverty.

> A focus on ICT development and deployment and there (sic) use to build a competitive knowledge economy and inclusive information society is thus a necessary building block and precursor to all other economic and developmental programs. [5]

The claim posits that economic and developmental programs (the latter cause) are dependent on a competitive knowledge economy and inclusive information society (the former cause). This assertion has not been substantiated anywhere in the texts. In order to not commit the fallacy of false cause (Michalos, 1986) it would be more

accurate to say that the first cause is a necessary "precursor to other economic and developmental programs."

5.1.9 Problem-based claims

The discourse covers a range of problems, or obstacles, associated with implementing ICTs in the Western Cape and its government. These problems, summarised according to sub-claims in Table 5.4, are distinct from ICT-related disadvantages.

Level 3 (Problems)	***No. of claims***
General problem	2
Access (to ICTs)	13
Affordability	3
Content	7
Digital divide	3
Environment	2
Insufficiency of ICTs alone	17
Other problem*	27
Skills	10
Total	**84**

* Other problems include: the need for a favourable regulatory telecommunications environment; recognition of the need for a holistic approach to ICT-enablement; and the insufficiency of government to single-handedly realise an information society.

Table 5.4: Summary of all problem (truth) claims

The most common sub-claim concerns the insufficiency of ICTs alone to realise the development goals of the PGWC. For example:

> ICTs are an important enabler of access to these services and social activities and play a vital role improving the efficiency of delivery, but they can never be a substitute. [4]

> Computers and the Internet are not a 'magic bullet' that cause economic development. [3]
>
> A focus on IT no longer gives an organisation (or society) a competitive edge. Investment in IT and the capacity to use it properly are simply basic requirments (sic) – not in themselves a source of competitive strength. [1]

The discourse also acknowledges the insufficiency of government to single-handedly realise an information society; other stakeholders are needed.

> The information society that the pervasive use of ICTs brings about, and the development of its economic counterpart, a competitive knowledge economy, cannot be legislated into being. It is rather the result of the actions of a wide range of economic and social actors, including government but also including businesses of all types, organisations such as schools and colleges, public entities, and individuals. [3]

Of course access to ICTs is a requirement to using them. The texts propose that the emergence of an information society depends on the fulfilment of certain "factor conditions", one of which is "broad and equitable access to the infrastructure (telecommunications networks) and tools (computer hardware and software)" [3] of ICTs. The CDA notes any requirement as a potential problem, in other words, no access equals no information society. Broad and equitable access is therefore a problem because it does not yet exist.

In the same way, another factor condition is a "significant and growing level of skills in the form of basic literacy, computer literacy, information literacy and business literacy" [3]. Without the necessary skills – that not everyone in the Western Cape has – the attendant benefits of ICTs will not be realised.

5.1.10Ideology-based claims

In the discourse fifteen ideological claims were identified, mostly related to the role of the State, e.g.:

> The vision of the [CeI] is for the Provincial Government of the Western Cape to become a leading e-government to better serve our people in the new, knowledge-based economy. [2]

ICT-enablement is presented as a way in which government can better serve the people.

> The attention that all government departments need to give to ICTs is to ensure that their specific efforts are effective and that the benefits are equitably spread throughout society to ensure a better life for all. [5]

Government should help to share benefits because sharing benefits is the right thing to do. Government is committed to creating a better life for all, through effective use of ICTs.

Both of these examples illustrate how claims to ideology are powerful ways to align a particular outcome – the ICT-enablement of the province – with a higher cause, a moral cause.

5.2 Sincerity: Metaphors and descriptors

Cukier et al. (2003) explain that "if communication is sincere, the speaker is honest (or sincere) in what he or she says" and that "sincerity claims are assessed by considering metaphors and connotative words in the discourse." Metaphors and connotative words can evoke positive and negative responses. For example, positive associations are *innovative, new, award-winning, wired, hi-tech, first, pioneering* and *exciting*, while a negative association is *expensive* or *insufficient*. Below are relevant questions – based on Cukier et al. (2003), Cukier et al. (2004) and Stahl et al. (2005) – that help to uncover the sincerity of the discourse:

- Are metaphors used, e.g., *ICT revolution*?
- Do metaphors and connotative words promote or suppress understanding?
- Do metaphors and connotative words create false assurances?

Metaphors and connotative descriptors are widely used throughout the discourse. Table 5.5 lists the common ones, some of which are presented as excerpts (to give context) below the table.

Metaphors and descriptors	***Count***
Revolution/revolutionary	7
Knowledge economy	78
Digital divide	18
Information society	108
Transformation	10
Information/computer literacy	27
(ICT as) Tool	31
Global	34
Connotative words*	118
Total	**431**

* Connotative words include: enabler, critical, seamless, participation and modern.

Table 5.5: Summary of sincerity claims in the form of common metaphors and descriptors used in the discourse

ICT is represented as a tool that has a revolutionary effect: "The staff of the Centre for e-Innovation must adopt the zeal of a revolutionary in finding new ways to [deploy ICT]," and, "[T]he ICT *revolution* [italics added] can provide powerful new tools both for addressing people's basic needs and for enriching the lives of poor people and communities in unprecedented ways" [1].

Furthermore:

> Since intuitively the increased deployment of information communication technologies leads to greater digital opportunities, then ICT can be framed and applied as a tool in reducing poverty, extending health services, expanding educational opportunities and generally improving the quality of life for the many disadvantaged people of the Western Cape. [4]

Such is the power of these tools, that applying them correctly will put the CeI in a "position to take the required leadership role in the transformation of the Provincial Government." [2] Most of the connotative words are positive, e.g., ICT is an *enabler*

(used 28 times) that has a transformative effect. ICT is described as playing a *critical* role 42 times. It also makes possible *seamless* access to government (mentioned five times).

The act of *participation* is described 34 times in the discourse: participation by citizens, businesses, civic organisations and government departments in public life, in political decisions, in the knowledge economy and information society. Through ICTs, citizen and organisations are empowered to participate, an act that is at the heart of a vibrant democracy. The opposite of participation is exclusion: "No community should be left behind as this will preclude them from participating in the modern economy" [4]. *Modern* is described nine times in the discourse.

ICT is portrayed as something that must be embraced. An article included in [1] describes how "[a]n apparent reluctance to embrace new technologies must not be allowed to hinder the creation of jobs and wealth for the people of South Africa." ICTs are new and revolutionary, to be embraced by those brave enough to face and accept the future. "A view that overlooks this critical, dynamic role of social capital formation substantially underestimates the broad economic development benefits of ICT" [4]. By implication, anyone who doesn't "get it" is blind to the obvious benefits associated with ICT.

Lastly, while only mentioned twice, *globalisation* is relevant, especially in the context of the 34 references to *global*. The texts describe globalisation as an inevitable yet ultimately beneficial trend, presenting it as a compelling reason for ICT-adoption:

> Still other trends may be more problematic – the Western Cape cannot isolate itself from the forces of globalisation and has no choice but to harness them and benefit from them as best possible. [4]
>
> Technology as a driver of globalisation – information based activities are becoming distributed around the globe, to the benefit of developing countries. [5]

Many of the metaphors used invoke powerful associations regardless of their appropriateness or accuracy.

5.3 Clarity

Clarity refers to the ability of the reader or listener to understand and comprehend what is being communicated. It can be undermined if any of the questions below are answered in the affirmative:

- Is there use of jargon?
- Are there terms that are not explained?
- Is there evidence of obfuscation?

Table 5.6 gives a summary of the clarity claims in the discourse.

Level 1	***Level 2***	***Level 3***	***No. of claims***	***Total***
Clarity	Irrelevant information	"Consultant speak"	1	
Clarity	Irrelevant information	Not relevant to SA	10	**11**
Clarity	Jargon		8	**8**
Clarity	Unexplained term		1	**1**
Total				**20**

Table 5.6: Summary of clarity claims used in the discourse

Clarity is also compromised when irrelevant information is presented. The bulk of these cases involve information that is not relevant to South Africa because it refers to the developed world or developing countries with entirely different ICT infrastructure to South Africa, e.g., "In Korea more hours are spent playing locally developed, on-line multi-player games than watching TV" [4]. The texts below further illustrate the point:

> In developed economies such as the USA, more that 60% of all workers are knowledge workers. [3]
>
> Where it has been studied (mainly in the developed world), productivity gains are characterised by ICT intensive growth. [5]
>
> The OECD has also found a positive relationship between the diffusion and take-up of ICTs and economic growth. [5]

According to Cukier et al. (2003), "there is no doubt that clarity is one of the more difficult standards to apply." A word is that is jargon to one person can be understandable and appropriate for another. Since the texts under analysis were of a strategic nature and generally not very technical, jargon represented anything that was uncommon to the discourse of most senior managers, e.g., "A useful model of these issues is the 'digital flywheel'" [1].

According to Michalos (1986) the fallacy of jargon occurs when a claim is made through technical or uncommon terms that make it seem more important or valuable than what it is, e.g., "The Centre for e-Innovation has the *digital ecosystem* [italics added] of the entire Province as its concern" [1].

Lastly, clarity can be compromised when certain terms are described but no explanation is given for why they are useful or important, e.g., "All digital data can be routed in a unified manner using packet based switching and Internet protocol" [1]. Why is this very technical information provided? It is incongruous with the tone of a high-level and non-technical document.

5.4 Legitimacy: How is it achieved? In whose interests?

Cukier et al. (2003) explain that legitimacy claims are "assessed by considering the inclusivity of the discourse, and by assessing the extent to which the discourse relies upon experts and sources." Specific questions that help to understand to the legitimacy of the discourse include:

- Who is speaking, who is silent, what are their interests?
- What is privileged? What is not said about the technology?
- What is assumed or implied?
- How are the decisions legitimised?
- What is missing or suppressed in the discourse?
- What are the stakes and interests involved or excluded?
- Who is cited, who is not? What are the interests of these stakeholders?

Table 5.7 gives a summary of the legitimacy claims in the discourse.

Level 1	*Level 2*	*Level 3*	*No. of claims*	*Total*
Legitimacy	Assumption	(General)	3	
		ICTs have inherent value	1	
		Technological determinism	30	
		Techno-optimism	20	**54**
Legitimacy	Legitimation	Government developmental strategies	11	
		Other means of legitimation*	24	
		Other PGWC documents	18	**53**
Legitimacy	Non-speaker		8	**8**
Legitimacy	Speaker		7	**7**
Total				**122**

* Other means of legitimation include: best-practices, trends, expert opinion and globalisation.

Table 5.7: Summary of legitimacy claims used in the discourse

The discourse contains a significant number of claims based on assumption, for example, the aim of [5] is to "urge government to encourage ICT diffusion in government, business, education, health, civil society and communities at large." This claim implies that broad ICT diffusion, amongst a variety of stakeholders, is desirable. The assumption is that ICT has inherent value and benefit.

The majority of the assumptions within the discourse are related to technological determinism and techno-optimism. Quotes to illustrate technological determinism are presented below.

> Since ICT use results in improved access to information, then increased deployment leads to greater social and economic opportunities. This happens through improved ICT diffusion in the formal economy, and the use of ICT by government to improve administrative efficiency and enhance service delivery. [5]

The assumption that access to information through, for example, greater ICT diffusion leads to greater social and economic opportunities is technologically deterministic; it disregards the many other barriers to social and economic opportunities. An example quote is as follows: "Additionally, improving the accessibility of ICTs by people who cannot otherwise afford them (the digital divide) helps to ensure equitable, shared growth" [5].

Again, the following quote is technologically deterministic because it disregards the many divides that prevent growth in poor communities: "e-Services: digitally enabling the delivery of services to the community so as to provide seamless access to government" [4].

The assumption that by digitally enabling service delivery, communities can seamlessly access government, is false. As seen in the literature, a number of factors need to be in place for this to be a reality, e.g., communities need to have access to ICTs, IT systems across government departments must be integrated, and there must be people within government ready to provide services.

> [E]xpect to see the further invasion of many aspects of private and commercial life by technology. Dedicated chips will pop up in many common products – not just cars and phones. Rather than complex computers capable of doing many things, expect to find a multiplication of specialist devices each capable of doing a few things well. RFID (radio frequency identification devices) tags are already starting to appear as a replacement for bar codes. 'Smart cards' carrying digital information will fill our wallets soon. [4]

The invasion of technology into our lives has begun. The change to a world filled with a multiplication of specialist devices and where our wallets are filled with smart cards, is inevitable.

When the texts compare the information society with the industrial society, the former is often portrayed in a technologically deterministic way. For example, the resulting impacts of the information society include: price levels continually forced down, quality forced up and the constant evolution of new routines [4].

For the PGWC to ignore the "shift towards knowledge as the basic currency of economic activity" would be to "condemn communities to being left behind in a changing world" [3]. The world is changing, driven by the impending emergence of an information society based on a knowledge economy. The change for government departments is also necessary:

> Essentially, provincial ICT departments must reinvent themselves, and embrace the information society by adopting new ways of doing things, new ways of working, and continually examining and improving their own processes, efficiency and impact. [3]

Again, as in the section on Sincerity, the request is to embrace the information society. The notion is of a new way, an improved way, a more efficient and impactful way of working, all premised on the change sweeping the world.

Perhaps the claim that best summarises the technological determinism found in the discourse is as follows:

> The digital world is a world united by one language of ones and zeros; a world where people across continents (or across the passageway) share information with one another and work together to build ideas and projects. Through collaboration, more voluminous and accurate information is generated and accumulated, and distributed in a twinkling to an audience that understands exactly what was said. This in turn allows the recipients of the information to use it for their own purposes, to create new ideas and redistribute them. The result is progress. [1]

Here ICT unites people (as opposed to simply connecting them) and enables them to work together. The collaboration results in the production of more accurate information that is, through ICTs, distributed to other people who understand it perfectly and use it for the generation of new ideas. ICT is at the heart of this new world, free of the limitations of distance, time, inaccuracies and misunderstanding. ICT is the driver of progress.

Techno-optimism is very similar to technological determinism but is less concerned with the inevitability of technological change; it sees technology as providing solutions to existing problems and limitations (Berg, Mörtberg, & Jansson, 2005). An example claim is how "production in the knowledge economy can be fine-tuned in ways heretofore undreamed of" [1].

In the discourse, legitimacy is given through alignment with government developmental strategies and documents, for example, the Shared Growth Strategy, the Micro-

Economic Development Strategy, the Strategic Infrastructure Plan, the iKapa Elihlumayo Growth and Development Strategy, Spatial Development Framework and the Premier of the Western Cape's 2004 Budget Speech.

The discourse reveals other forms of legitimation, one of which is the necessity to serve the needs of the Western Cape and the interests of the region:

> If the Centre for e-Innovation is to meet the challenge of serving a more service delivery-focused Provincial Government, and is to contribute towards ensuring that the region is competitive in the globalised economy, then its strategy must itself be revolutionary rather and evolutionary. [1]

Best-practices and trends represent another means of legitimation that are used six times in the discourse. Citing experts or research is another means, e.g.:

> The World Bank has confirmed the important part that ICTs play in the development of a competitive economy. The direct connection between the expansion of information communication technologies and growth and economic development is well established by policy makers, researchers, funding organisations and others worldwide. [5]

Other expert opinions that are cited include the Gartner Group, "other global experts" [3] and the UNDP, whose framework for poverty alleviation using ICTs legitimates the pro-poor, pro-growth perspective that the discourse attempts to present in the context of the Shared Growth Strategy.

Inclusivity is a key element of Habermasian claims: whose voices are included or excluded? It is often only by examining the explicitly included voices that we can identify the silent ones. The quotes below illustrate the absence of the perspective of a developing country authority, e.g.:

> The OECD has also found a positive relationship between the diffusion and take-up of ICTs and economic growth. [5]
>
> Where it has been studied (mainly in the developed world), productivity gains are characterised by ICT intensive growth. [5]
>
> In our global, networked economy and society, information is an essential resource for capacity building and social and economic development. [5]

In the third example, the voice of those who don't live in a "global, networked economy and society", e.g., millions of people living in developing countries, is not heard.

When considering the gross imbalance between the benefits and disadvantages presented with regards to ICT-enablement, the voices "for" far outnumber the voices "against." The perspectives of those "for" are privileged, while the perspectives of those "against" are under represented, something that Cukier et al. (2004) call a "selective silence." In the *About this document* section of [4] and [5], only the CeI is speaking and therefore only its interests emerge. It describes how ICTs – the tool of the CeI - are integral in supporting the Provincial Government Shared Growth & Development Strategy.

5.5 Summary

Table 5.8 provides a summary of the analysis. The bulk of the communicative distortions are related to the claimed benefits of ICTs, and metaphors and connotative words.

Claim	*Summary of findings*
Truth	• Most of the discussion focuses on the benefits of ICTs with almost no mention of the related disadvantages. • There is little evidence (empirical or not) to support the claims. • Problems, or obstacles, associated with ICT-enablement are recognised, but these are distinct from the disadvantages of ICTs. • ICT-enablement is framed as necessary within the ideological role of the state.
Sincerity	• Metaphors and positive connotative words, e.g., revolution, critical, enabler, participation and global, strongly promote the value of ICTs.
Clarity	• There are a few cases of jargon and irrelevant information.
Legitimacy	• Assumptions of technological determinism, techno-optimism and about the inherent value of ICTs lend false legitimacy to the discourse. • Government developmental strategies, PGWC documents, trends and expert opinions are also used as forms of legitimation. • Experts and sources cited tend to be not relevant to the South African context.

Table 5.8: Summary of the findings of the discourse analysis in terms of Habermas' validity claims

6 Discussion of findings

The analysis revealed a range of distortions in the discourse. This chapter discusses insights from the analysis in the broader context of the Cel's strategies.

6.1 ICT hype

Studies on management fashion and fads (e.g., Abrahamson, 1996) are potentially relevant to the findings. These describe how exuberant support at the beginning of a trend fuels hype, which leads to an uncritical adoption of the trend by those taken in by the publicity, often resulting in large expenditures on technology. When the technology fails to live up to its promises, there is an understandable backlash (Abrahamson & Fairchild, 1999). The Gartner Hype Cycle (Figure 6.1) chronicles the phases as follows: technology trigger, peak of inflated expectations, trough of disillusionment, slope of enlightenment and plateau of productivity (Fenn, 2007).

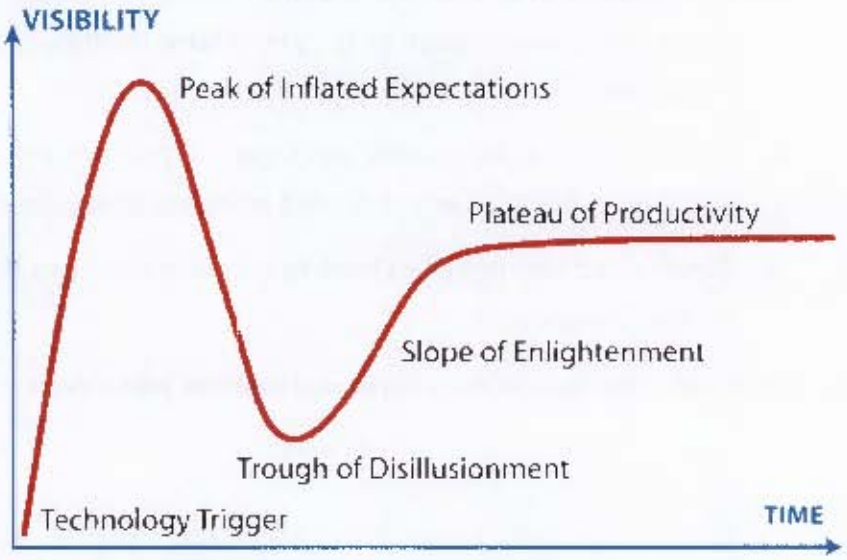

Figure 6.1: Gartner Hype Cycle (Kemp, 2007)

While I am not proposing a direct match between this hype cycle and the message of the discourse under analysis, there is a worrying overselling of ICT-related benefits in the texts akin to the peak of inflated expectations found in the studied management fads. The lack of a critical perspective can create unrealistic expectations that set up ICT implementation for failure.

6.2 Balanced view

While the communication of the discourse was clearly distorted, there were also cases of undistorted claims, texts that resonated with the ideal speech act. Credit should be given to the authors for taking a balanced view of the limited role of ICT. There is a recognition in the discourse that a holistic approach to ICT-enablement is necessary to maximise the potential benefits that ICTs offer. Complimentary factors include training, relevant content, and the need for multiple stakeholders to work together with government. There is also a recognition that ICTs alone cannot solve all problems, indeed, they are best utilised only by people who are first literate, housed and healthy.

6.3 Inherited distortions

A possible reason for the distorted communication that does occur in the discourse is that of "inherited distortions". Government departments often play a "catch-up" game, having to align themselves with the global, national or provincial development strategies of the day, e.g., AsgiSA is the umbrella initiative of the Western Cape's Shared Growth Strategy. The literature survey showed how ICTs are made to serve the developmental agenda of the day, e.g. how they supported sustainable development, how they supported the various development goals set out by the WSIS and, more recently in SA, how they can support AsgiSA.

Through this forced vertical alignment, there may well be a mismatch between what ICTs are best suited to and what strategies require them to be good at. For example, ICTs may be best utilised by the skilled labour of the first economy, but due to a pro-poor, pro-growth strategy handed down from national government, they suddenly need to be framed as vital tools for the unskilled people of the second economy. From time to time the CeI inherits these positions regarding the use and value of ICTs, which may be founded on false assumptions and embedded within distorted communications. The CeI has no choice but to support the higher directive, thereby being forced to promulgate the distortions in its own communications, e.g., its strategic documents.

6.4 Diluting effect of cross- and self-referencing

While aligning with broader government strategies – which happens 29 times in the discourse – is beneficial and important for obvious reasons, there is the danger of excessive self-referencing legitimation. In these cases, alignment with existing government strategies and documentation appears to be more important than the substance of each individual strategy document. In his critical content analysis of the two outcomes documents of the first WSIS, Pyati (2005) found that excessive

references to UN bodies, declarations and summits apparently justified the very broad scope of WSIS's views of the information society. However, "[i]n reality, WSIS loses power as its goals and principles become more diffuse and 'universal'" as a result of all the cross-referencing. Such a risk is real for the CeI's discourse.

6.5 Questionable relevance to SA

Throughout the discourse, the limited evidence that makes a case for ICT-based economic development comes mostly from international organisations, e.g., the World Bank, or developed country governments. How relevant is the information provided by these external sources to the developing country context of SA? Many of the references have i) a developed-world economic focus, e.g., Harvard Business School, ii) a developed-world e-government focus, e.g., the UK Office of the e-Envoy, the OECD and the Australian Government, and iii) an Asian developing country perspective, which emanates from countries with very different ICT penetration levels to SA.

In [1], there are "success factors and metrics to measure progress towards an information society" based on "international norms." Is it appropriate for SA to follow these norms? Considering models of e-government evolution, Alexander, Maumbe and De Tolly (2006) suggest that it is not desirable to follow developed country patterns. The study of ICT adoption in developed countries is useful, but should not be a guiding force for developing country strategies.

Ten global technology trends and forecasts are discussed in [4]. Referring to trends is a form of legitimation. It is assumed that because these trends are described in the South African e-government strategy documents, then they must be relevant to SA. Again, this is not necessarily true.

6.6 Dominant interests

While the ICT for development field is still relatively thin on empirical evidence as to what works and what does not, it is almost impossible to imagine a government in the world today that should not make effective and appropriate use of ICTs. Further, this is the role of the CeI within the PGWC. It is hardly surprising then that the CeI's interests are dominant in the discourse; it needs to justify its own existence. Essentially this is a battle for budget allocation within the Department of the Premier. If the CeI is critical for improving government service delivery and efficiency through ICTs, then it must be allocated its requested budget. Still, this does not mean that there is not another way of presenting the importance of ICTs and of the CeI, one where a more balanced picture is

painted, where the disadvantages and risks associated with ICT-enablement are noted, but ultimately shown to be outweighed by the advantages. Such a discourse would be far closer to Habermas' ideal speech act.

6.7 Implications for the successful implementation of government development programmes

Will the ICT strategies help to achieve the specific developmental programmes of the CeI and the broader PGWC, i.e. iKapa Elihlumayo and the pro-poor, Shared and Accelerated Growth Initiative? It is outside of the scope of this research to empirically answer the question. Based on the literature, the more that ICT for development initiatives focus on access, and are based on false assumptions of technological determinism, the greater the tendency they have to fail. The discourse is certainly guilty of these shortcomings, but not to the fullest extent. There are moments when a balanced view is taken, one that assesses the strengths and weaknesses of an intervention – ICTs – and realistically manages the expectations around it. By inference it can be said that there is thus a lesser chance of failure for it, a greater chance of success for the CeI's efforts.

6.8 Summary

The discussion touches on a number of issues. The strong ICT-benefits bias in the discourse is symptomatic of the first phase of a hype cycle: peak of inflated expectations. The many distortions in the discourse can be attributed, in part, to distortions inherited from influential developmental strategies. While these are in the minority, it is encouraging to find a number of undistorted claims that offer a balanced view of ICT for development. A further influence on the discourse is the dominant interests of the CeI; for the organisations' survival it is necessary to demonstrate the cruciality of ICTs to meet developmental goals and its own role in making this possible. Lastly, the implications of the findings for the successful implementation of government development programmes are considered.

7 Reflexivity

As mentioned in Chapter 4, critical researchers need to take a reflective look at the methods they themselves use. In the spirit of reflexivity, this short chapter describes issues that arose from the research methods as well as broader goals of critical research.

I am aware of the paradox of five strategic documents striving to address the multiplicity of divergent developmental needs of individuals, communities, businesses, civil society organisations and government departments of the Western Cape. The documents are necessarily macroscopic in nature, but their strategic objectives ultimately play out at the micro level. As such, their task is a very challenging and often problematic one. Subjecting these documents to CDA means putting them under a microscope; the problems that are inherent in the very nature of strategic-level documents are magnified. Thus I feel that detailed analysis may make the documents seem more distorted than what the authors intended for them to be.

Within social inquiry there is always a level of subjectivity (Thompson, 2005), a danger of over- or under-analysis. I experienced this when working through the text analyses for a second time and creating new themed groups and removing old ones. This process of regrouping and refinement could be done a third or a fourth time, probably with changes at every turn. At best, then, this dissertation is one analysis of the texts; it simply cannot be a definitive analysis, a realisation made very clear through the iterative refinement process in which some of other change is made with every pass.

Cases of jargon are particularly difficult to code. The negative view of jargon may be mitigated by the technical knowledge of the readers of the texts. To them, certain words and terms may not be jargon and therefore not needing an explanation. Deciding what is and is not jargon is thus difficult for the researcher.

It is hoped that the process of revealing communication distortions in strategic documents will ultimately lead to the writing of more undistorted texts in the future. The goal of emancipation is fundamental to critical research and to this dissertation. However, it is acknowledged that if authors of future texts do not act to create undistorted communications, no emancipation occurs. This research is thus a precursor to emancipation, but does not necessarily lead to it.

8 Conclusion

It was hoped that this study would add to the limited body of critical research in ICT for development and, by placing the discourse of the CeI's strategic frameworks under a critical light, ultimately lead to greater success in harnessing the potential of ICT for development in the Western Cape.

Building on the approach of Cukier et al. (2003), Cukier et al. (2004) and Stahl et al. (2005), the research demonstrated that discourse can be held up to Habermasian validity claims to expose distortions in communications. A thorough, multi-pass analysis was conducted of the five texts and instances of distorted as well as undistorted communication were identified and discussed within the broader ICT for development context. The overall findings point to the need for a more critical perspective with regard to strategies for the building of an information society in the Western Cape.

While on a Habermasian level the discourse is distorted, the focus of the texts is not on ICTs alone. Training, relevant content and the support of offline government structures are some of the factors also presented as part of a holistic view of ICT for development, which mitigate against the many communicative distortions.

Unfortunately the instances of undistorted communication in the discourse are in the minority. It is my suggestion that looking ahead, it will be beneficial for the ICT strategies of the CeI to take a more critical, and even *more* holistic, viewpoint as espoused by Currie (2004) and Roode et al. (2004). ICT strategies are influenced by broader developmental strategies, resulting in ICTs being made to serve ends that they might not be best suited to. ICTs could be put to more productive use if the strategists considered the needs of people (Jaffer, Ng'ambi, & Czerniewicz, 2007) and development organisations and matched those with the specific features of ICTs, e.g. the ability to store and analyse data, or to support communications.

Questions that should be asked by the authors of the strategy documents include: Do ICTs meet the developmental needs of the people of the Western Cape? If so, then how? What are the risks associated with ICTs? What are the costs? How does ICT expenditure rate against expenditure on education, housing or health? What is the return on investment for ICT expenditure in the context of poverty alleviation? Realistically, how are the disadvantages of ICT implementation outweighed by the advantages and benefits thereof?

Taking a more balanced approach to presenting the case for an ICT-enabled Western Cape may result in "a healthier decision making process" with regards to ICT expenditure and implementation (Cukier et al., 2003). Indeed, such a "critical perspective may reduce the chances of technology being oversold, and thereby, ironically, enhance its diffusion." A critical perspective espouses that decisions regarding ICT implementation are based on actual evidence that prove the claimed benefits, and are first weighed up against other development needs.

In terms of implications for the future research of strategic discourses, three potential studies would contribute to the body of critical research on ICT for development:

- A CDA, similar to this study, of the ICT strategies of other provinces in SA, making a comparison between the findings of the analyses possible.
- A CDA of the national Information Society and Development Plan and Implementation Strategy.
- Conducting research into the actual influence of ICTs in meeting shared growth ends. This enacted-vs-espoused view would provide much needed evidence to support or refute claims in future strategies that clearly connect ICTs with development.

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10 Appendix A

Millennium Development Goals (MDGs), targets and indicators for monitoring progress (Source: http://mdgs.un.org/unsd/mdg/Host.aspx?Content=Indicators/OfficialList.htm):

Goal 1: Eradicate extreme poverty and hunger	
Target 1: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day	1. Proportion of population below $1 (PPP) per day 2. Poverty gap ratio [incidence x depth of poverty] 3. Share of poorest quintile in national consumption
Target 2: Halve, between 1990 and 2015, the proportion of people who suffer from hunger	4. Prevalence of underweight children under-five years of age 5. Proportion of population below minimum level of dietary energy consumption
Goal 2: Achieve universal primary education	
Target 3: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	6. Net enrolment ratio in primary education 7. Proportion of pupils starting grade 1 who reach grade 5 8. Literacy rate of 15-24 year-olds
Goal 3: Promote gender equality and empower women	
Target 4: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015	9. Ratios of girls to boys in primary, secondary and tertiary education 10. Ratio of literate women to men, 15-24 years old 11. Share of women in wage employment in the non-agricultural sector 12. Proportion of seats held by women in national parliament
Goal 4: Reduce child mortality	
Target 5: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	13. Under-five mortality rate 14. Infant mortality rate 15. Proportion of 1 year-old children immunised against measles

Goal 5: Improve maternal health	
Target 6: Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio	16. Maternal mortality ratio 17. Proportion of births attended by skilled health personnel
Goal 6: Combat HIV/AIDS, malaria and other diseases	
Target 7: Have halted by 2015 and begun to reverse the spread of HIV/AIDS	18. HIV prevalence among pregnant women aged 15-24 years 19. Condom use rate of the contraceptive prevalence rate 19a. Condom use at last high-risk sex 19b. Percentage of population aged 15-24 years with comprehensive correct knowledge of HIV/AIDS 19c. Contraceptive prevalence rate 20. Ratio of school attendance of orphans to school attendance of non-orphans aged 10-14 years
Target 8: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	21. Prevalence and death rates associated with malaria 22. Proportion of population in malaria-risk areas using effective malaria prevention and treatment measures 23. Prevalence and death rates associated with tuberculosis 24. Proportion of tuberculosis cases detected and cured under directly observed treatment short course DOTS (Internationally recommended TB control strategy)
Goal 7: Ensure environmental sustainability	
Target 9: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources	25. Proportion of land area covered by forest 26. Ratio of area protected to maintain biological diversity to surface area 27. Energy use (kg oil equivalent) per $1 GDP (PPP) 28. Carbon dioxide emissions per capita and consumption of ozone-depleting CFCs (ODP tons) 29. Proportion of population using solid fuels

Target 10: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation	30. Proportion of population with sustainable access to an improved water source, urban and rural 31. Proportion of population with access to improved sanitation, urban and rural
Target 11: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers	32. Proportion of households with access to secure tenure

Goal 8: Develop a global partnership for development

Target 12: Develop further an open, rule-based, predictable, non-discriminatory trading and financial system Includes a commitment to good governance, development and poverty reduction – both nationally and internationally Target 13: Address the special needs of the least developed countries Includes: tariff and quota free access for the least developed countries' exports; enhanced programme of debt relief for heavily indebted poor countries (HIPC) and cancellation of official bilateral debt; and more generous ODA for countries committed to poverty reduction Target 14: Address the special needs of landlocked developing countries and small island developing States (through the Programme of Action for the Sustainable Development of Small Island Developing States and the outcome of the twenty-second special session of the General Assembly) Target 15: Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term	*Some of the indicators listed below are monitored separately for the least developed countries (LDCs), Africa, landlocked developing countries and small island developing States.* Official development assistance (ODA) 33. Net ODA, total and to the least developed countries, as percentage of OECD/DAC donors' gross national income 34. Proportion of total bilateral, sector-allocable ODA of OECD/DAC donors to basic social services (basic education, primary health care, nutrition, safe water and sanitation) 35. Proportion of bilateral official development assistance of OECD/DAC donors that is untied 36. ODA received in landlocked developing countries as a proportion of their gross national incomes 37. ODA received in small island developing States as a proportion of their gross national incomes Market access 38. Proportion of total developed country imports (by value and excluding arms) from developing countries and least developed countries, admitted free of duty 39. Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries 40. Agricultural support estimate for OECD countries as a percentage of their gross domestic product 41. Proportion of ODA provided to help build trade capacity

	Debt sustainability 42. Total number of countries that have reached their HIPC decision points and number that have reached their HIPC completion points (cumulative) 43. Debt relief committed under HIPC Initiative 44. Debt service as a percentage of exports of goods and services
Target 16: In cooperation with developing countries, develop and implement strategies for decent and productive work for youth	45. Unemployment rate of young people aged 15-24 years, each sex and total
Target 17: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries	46. Proportion of population with access to affordable essential drugs on a sustainable basis
Target 18: In cooperation with the private sector, make available the benefits of new technologies, especially information and communications	47. Telephone lines and cellular subscribers per 100 population 48. Personal computers in use per 100 population. Internet users per 100 population

11 Appendix B

Guiding questions for discourse analysis based on Cukier et al. (2003), Cukier et al. (2004) and Stahl et al. (2005):

Truth

T1. **What** is said about the technology?

T2. Are the issues and options **clearly defined**?

T3. What **costs** (financial and claimed negative effects) **and benefits** (claimed positive effects) have been identified and assessed?

T4. What **evidence** has been provided to support these arguments?

T5. Has the relevant information been communicated without **distortion or omission**?

T6. Are there underlying **problems** that are referred to – explicitly or implicitly – in the texts?

T7. Are there **ideological claims** which are unexamined?

Sincerity

S1. Are **metaphors** used, e.g., ICT revolution?

S2. Do metaphors and connotative words **promote or suppress understanding**?

S3. Do metaphors and connotative words create **false assurances**?

Clarity

C1. Is there use of **jargon**?

C2. Are there terms that are **not explained**?

C3. Is there evidence of **obfuscation**?

Legitimacy

L1. Who is **speaking**, who is **silent**, what are their interests?

L2. What is **privileged**? What is **not said** about the technology?

L3. What is **assumed** or **implied**?

L4. What is **missing or suppressed** in the discourse?

L5. How are the decisions **legitimised**?

L6. What are the **stakes and interests** involved or excluded?

12 Appendix C

The documents subjected to the CDA are as follows:

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