

**A SITUATIONAL ANALYSIS OF NATIONAL INFORMATION
POLICY, WITH SPECIAL REFERENCE TO SOUTH AFRICA**

by

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I declare that A SITUATIONAL ANALYSIS OF NATIONAL INFORMATION POLICY, WITH SPECIAL REFERENCE TO SOUTH AFRICA is my own work and that all sources that I have used or quoted have been indicated and acknowledged by means of complete references.

.....
SIGNATURE
(MRS A ARNOLD)

.....
DATE

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Deo juvante.

I wish to acknowledge, with appreciation, the guidance given by my promoter, Professor M P Machet throughout the study.

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SUMMARY

This thesis reviews trends and developments concerning national information policy both internationally and nationally and inform the understanding of the situation in South Africa.

Three research questions are investigated in this study, namely: (a) what are the main trends relevant to national information policy development worldwide, based on relevant literature, (b) what are the main trends and developments in other countries, and (c) what are the implications of the current global and national developments regarding national information policy for South Africa, based on the findings of the study? The methodology for this study involved a qualitative textual analysis, addressing these three research questions, and the selection of theoretical frameworks to define the scope of the research.

The study discussed the main aspects of concern regarding the following information-related issues: access to information; access to government information; literacy levels; computer literacy levels; levels of education and skills; information society development; the North-South Divide (including the digital divide); information content and industrial competitiveness; other issues such as e-commerce; telecommunication issues; copyright issues; industrial property rights; freedom of speech; censorship; information ownership; library services and archives; the value of information and the flow of information in the public domain in South Africa. The multiplicity of issues reviewed demonstrated the complexity regarding access to information and related issues in the country.

The study concludes with a situational analysis of developments relevant to national information policy for South Africa. The findings indicate that the South African government needs to take into account the unevenness of past developments and the challenges created by the emergent global information policy regime. The Government needs to develop a national information policy to address and balance two realities, namely: (a) the technocratic and capitalist values of globalisation pushing global information policy development from outside the country, and (b) national economic, social and cultural developmental needs inside the country. Both these realities are relevant and need to be addressed in a national information policy, as the Government needs to take into account the unevenness of past developments and the challenges created by the emergent global information policy regime.

Keywords

Access to information; Global Information Policy Regime; Information communication development; Information literacy; Information sector; Information society; National information policy; North-South Divide; Open access; Public domain; South Africa.

OPSOMMING

Hierdie tesis ondersoek die ontwikkelings aangaande nasionale inligtingsbeleid met spesifieke verwysing na Suid-Afrika. Die ondersoek sluit in ontwikkelings aangaande tendense op internasionale vlak en die situasie in Suid-Afrika.

Die navorsing is kwalitatief en die studiemetode sluit in kwalitatiewe teksanalise; die identifisering van navorsingsvrae en die selektering van teoretiese raamwerke vir die afbakening van die navorsingsveld. Die navorsingsvrae geselekteer in die studie is: (a) wat is die belangrikste tendense van nasionale inligtingsbeleid-ontwikkeling volgens relevante literatuur; (b) wat is die belangrikste tendense en ontwikkelings insake nasionale inligtingsbeleid in ander lande; en, (c) wat is die implikasies van hierdie tendense vir Suid-Afrika en die ontwikkeling van sy nasionale inligtingsbeleid.

Die studie gee 'n oorsig omtrent die belangrikste ontwikkelings van inligtingsverwante sake rakende: toegang tot inligting; toegang tot regerings-inligting; vlak van geletterdheid; rekenaargeletterdheid; opvoedkundige vlakke en vaardighede; die Noord-Suid verdeling (insluitende die digitale verdeling); inligtingsinhoud en industriële wedywing; die ontwikkeling van 'n inligtingsamelewing, ander sake soos e-handel ("*e-commerce*"), telekommunikasie aangeleenthede; kopieregsake; industriële eiendom; spraakvryheid; sensuur; eienaarskap van inligting; biblioteekdienste en argiewe; die waarde van inligting en die vloei van inligting in die openbare domein in Suid-Afrika.

Die studie sluit af met 'n situasionele analise van inligting-verwante ontwikkelings met spesifieke verwysing na Suid-Afrika. Die studie dui daarop dat die Suid-Afrikaanse regering 'n nasionale inligtingsbeleid moet ontwikkel vir twee diverse realiteite: op nasionale vlak die nagevolge van die oneweredige inligtingsverwante ontwikkelings van die verlede in Suid-Afrika, en op internasionale vlak die tegnokratiese uitdagings van die toenemende internasionale ("*global*") inligtings*regime*.

CONTENTS

ACKNOWLEDGEMENTS	i
SUMMARY	iv
OPSOMMING	vi
CHAPTER ONE	I
INTRODUCTION TO THE PROBLEM AND ITS CONTEXT	1
1.1 INTRODUCTION.....	1
1.2 BACKGROUND TO THE PROBLEM	5
1.2.1 INFORMATION TECHNOLOGY AND THE DEVELOPMENT OF NATIONAL INFORMATION POLICY	8
1.2.2 OTHER INFORMATION-RELATED DEVELOPMENTS AND CONCEPTS	14
1.2.3 BACKGROUND TO DEVELOPMENTS IN SOUTH AFRICA	16
1.3 PROBLEM STATEMENT	17
1.4 METHODOLOGY	17
1.4.1 DEFINING THE SCOPE OF NATIONAL INFORMATION POLICY	21
1.4.2 NATIONAL INFORMATION POLICY AS INTERDISCIPLINARY RESEARCH	21
1.4.3 NATIONAL INFORMATION POLICY AS PROCESS AND LINKED TO VALUES	22
1.4.4 COMPARATIVE POLICY STUDIES AND THE POLICY PROCESS.....	23
1.4.5 METHOD USED IN THE REVIEW OF THE LITERATURE REGARDING MOTIVATIONS FOR THE DEVELOPMENT OF NATIONAL INFORMATION POLICY	24
1.4.6 INFORMATION-RELATED ISSUES IDENTIFIED WITHIN THE FRAMEWORK	25
1.5 DEFINITIONS OF CORE TERMS	27
1.5.1 NATIONAL INFORMATION POLICY	27
1.5.2 INFORMATION	27
1.5.3 THE INFORMATION AGE.....	29
1.5.4 INFORMATION SOCIETY	30
1.5.5 ACCESS TO INFORMATION	30
1.5.5.1 <i>Universal Access to Information</i>	31
1.5.6 LITERACY	31
1.5.6.1 <i>Information Literacy</i>	32
1.5.7 INFORMATION INFRASTRUCTURE.....	32
1.5.8 INFORMATION SECTOR	34
1.5.9 INFORMATION ECONOMY.....	34
1.5.10 DIGITAL ECONOMY.....	35
1.6 ECONOMIC AND SOCIAL DEVELOPMENT AND NATIONAL INFORMATION POLICY	36
1.6.1 GOVERNMENT POLICIES AND DEVELOPMENT	37
1.6.2 GOVERNMENT POLICIES AND ACHIEVING ECONOMIC AND SOCIAL DEVELOPMENT	38
1.6.3 GOVERNMENT POLICIES AND ECONOMIC AND SOCIAL DEVELOPMENT IN AFRICA	39
1.6.4 GOVERNMENT POLICIES, INFORMATION AND THE ACHIEVEMENT OF DEVELOPMENT	40
1.7 VALUE, LIMITATIONS AND SCOPE OF THE STUDY	41
1.7.1 VALUE OF THE RESEARCH	41
1.7.2 LIMITATIONS AND CHALLENGES.....	41
1.8 EXPOSITION	43
CHAPTER TWO	45

GOVERNMENT POLICY, INFORMATION AND	45
NATIONAL INFORMATION POLICY	45
2.1 INTRODUCTION.....	45
2.2 THE MEANING OF GOVERNMENT POLICY	45
2.3 THE DEVELOPMENT OF A GOVERNMENT POLICY	46
2.3.1 THE DEVELOPMENT OF GOVERNMENT POLICY IN SOUTH AFRICA.....	47
2.4 THE PURPOSE AND FUNCTION OF A GOVERNMENT POLICY.....	48
2.4.1 MOTIVATIONS FOR THE DEVELOPMENT OF GOVERNMENT POLICIES	49
2.4.1.1 <i>Factors such as Time, place and Historical Circumstances.....</i>	49
2.4.1.2 <i>Policies implemented in other Countries.....</i>	50
2.4.1.3 <i>Policies with a Specific Application, Value Attached, or Intent held by a Government.....</i>	51
2.5 THE DEVELOPMENT PROCESS FOR GOVERNMENT POLICY WITHIN SOUTH AFRICA.....	52
2.5.1 INTEREST GROUPS AND THE ARTICULATION OF AN INTEREST	53
2.5.1.1 <i>Interest Articulation and the Media in South Africa.....</i>	55
2.5.2 INTEREST AGGREGATION.....	56
2.5.3 THE POLICY CYCLE	56
2.6 MOTIVATIONS FOR THE DEVELOPMENT OF NATIONAL INFORMATION POLICY 58	
2.6.1 POLICY MOTIVATED BY DEVELOPMENTS IN TIME, PLACE AND HISTORICAL CIRCUMSTANCES	59
2.6.1.1 <i>Access to Government Information and data protection</i>	60
2.6.1.2 <i>Information Literacy Skills in the Information Age</i>	64
2.6.1.3 <i>Developing an Information Society</i>	66
2.6.1.4 <i>The North / South Divide (including the Digital Divide).....</i>	68
2.6.1.5 <i>Information and Competitiveness (Scientific Information and Indigenous Information).....</i>	69
2.6.1.6 <i>Growth in Electronic Commerce (E-commerce)</i>	71
2.6.2 INFORMATION POLICY MOTIVATED BY POLICIES DEVELOPED IN OTHER COUNTRIES	72
2.6.2.1 <i>The Development of Information Infrastructure.....</i>	72
2.6.2.2 <i>Copyright and Intellectual Property Policies (Addressing Issues such as “fair practice”).....</i>	74
2.6.2.3 <i>Libraries and archives.....</i>	75
2.6.3 INFORMATION POLICY MOTIVATED BY SPECIFIC APPLICATION, VALUE OR INTENT	76
2.6.3.1 <i>Information Valued for Economic and Social Development</i>	77
2.7 THE SCOPE OF A NATIONAL INFORMATION POLICY	78
2.7.1 DEFINING “NATIONAL INFORMATION POLICY”	79
2.7.2 DEFINITIONS OF NATIONAL INFORMATION POLICY	80
2.7.3 NATIONAL INFORMATION POLICY WITHIN THE CONTEXT ECONOMIC, POLITICAL AND SOCIAL CONDITIONS	82
2.8 FIVE ELEMENTS OF A NATIONAL INFORMATION POLICY AND SOCIAL AND ECONOMIC DEVELOPMENT.....	83
2.8.1 NATIONAL INFORMATION POLICY GOALS	84
2.8.2 NATIONAL INFORMATION POLICY CONTENT	85
2.8.3 NATIONAL INFORMATION POLICY INSTRUMENTS	87
2.8.4 NATIONAL INFORMATION POLICY OUTCOMES.....	87
2.8.5 NATIONAL INFORMATION POLICY STYLES (POLICY IMPLEMENTATION).....	88
2.9 CONCLUSIONS.....	90
CHAPTER THREE.....	92
HISTORICAL OVERVIEW OF THE DEVELOPMENT OF NATIONAL INFORMATION POLICY..	92
3.1 INTRODUCTION.....	92

3.2	INTERNATIONAL TRENDS PRIOR TO 1980.....	93
3.3	MOTIVATION FOR THE DEVELOPMENT OF NATIONAL INFORMATION POLICY PRIOR TO THE 1980S	95
3.4	INTERNATIONAL TRENDS IN THE 1980S, 1990S AND 2000S	98
3.4.1	INTERNATIONAL TRENDS IN THE 1980S	98
3.4.2	INTERNATIONAL TRENDS IN THE 1990S	101
3.4.3	INTERNATIONAL TRENDS SINCE THE YEAR 2000.....	102
3.5	NATIONAL INFORMATION POLICY IN AFRICAN COUNTRIES.....	106
3.5.1	WESTERN INFLUENCES AND LIBRARIES IN AFRICA.....	106
3.5.2	WESTERN INFLUENCES AND INFORMATION TECHNOLOGY IN AFRICA	111
3.5.3	TELECENTRES OR MULTIPURPOSE COMMUNITY CENTRES IN COUNTRIES IN AFRICA	117
3.5.4	INTERNET IN AFRICAN COUNTRIES	119
3.6	NATIONAL INFORMATION POLICY INITIATIVES IN AFRICA	123
3.7	CONCLUSIONS	124
CHAPTER FOUR.....		126
NATIONAL INFORMATION POLICY ISSUES		126
4.1	INTRODUCTION.....	126
4.2	METHODOLOGICAL ASPECTS.....	127
4.3	ISSUES LINKED TO FACTORS SUCH AS TIME, PLACE AND HISTORICAL CIRCUMSTANCES	135
4.3.1	ACCESS TO INFORMATION	135
4.3.2	ACCESS TO GOVERNMENT INFORMATION	138
4.3.3	LITERACY LEVELS	145
4.3.4	COMPUTER LITERACY LEVEL	148
4.3.5	LEVELS OF EDUCATION AND SKILLS.....	150
4.3.6	INFORMATION SOCIETY DEVELOPMENT	153
4.3.7	THE NORTH-SOUTH DIVIDE (INCLUDING THE DIGITAL DIVIDE)	157
4.3.8	INFORMATION CONTENT, INDUSTRIAL COMPETITIVENESS	162
4.3.9	OTHER ISSUES - SUCH AS E-COMMERCE.....	166
4.4	ISSUES ADDRESSED IN INFORMATION POLICIES IN MANY COUNTRIES	167
4.4.1	TELECOMMUNICATION INFRASTRUCTURE ISSUES.....	167
4.4.2	COPYRIGHT ISSUES	170
4.4.3	INDUSTRIAL PROPERTY RIGHTS.....	174
4.4.4	FREEDOM OF SPEECH	176
4.4.5	CENSORSHIP	177
4.4.6	INFORMATION OWNERSHIP.....	178
4.4.7	LIBRARY SERVICES AND ARCHIVES.....	180
4.5	CONCLUSIONS	183
CHAPTER FIVE.....		185
GOVERNMENT INFORMATION POLICY IN SOUTH AFRICA		185
5.1	INTRODUCTION.....	185
5.2	INFLUENCES ON THE INFORMATION INDUSTRY	186
5.2.1	ECONOMIC CONDITIONS	188

5.2.2	SOCIAL AND CULTURAL FORCES	191
5.2.3	POLITICAL AND STATUTORY VARIABLES.....	195
5.2.4	INFORMATION COMMUNICATION INFRASTRUCTURE.....	197
5.3	PAST INITIATIVES AND CURRENT TRENDS.....	199
5.3.1	INFORMATION SERVICES TO ALL.....	200
5.3.2	ACCESS TO GOVERNMENT INFORMATION AND COMMUNITY CENTRES.....	203
5.3.3	INFORMATION POLICY LINKED TO EDUCATION	205
5.3.4	INFORMATION SOCIETY	205
5.3.5	DIGITAL LIBRARY AND E-ACCESS	208
5.3.6	LIBRARY CONSORTIA	212
5.4	INFORMATION INDUSTRY AND ACCESS TO INFORMATION.....	213
5.4.1	FOUR CATEGORIES OF THE INFORMATION INDUSTRY	214
5.5	MASS MEDIA.....	215
5.5.1	BROADCASTING AND COMMUNICATION CHANNELS	217
5.5.2	CONTENT SERVICES.....	221
5.5.2.1	<i>Newspaper Publishing.....</i>	221
5.5.2.1	<i>Magazines.....</i>	225
5.5.2.2	<i>Book publishing.....</i>	225
5.5.2.1.1	<i>Educational book publishing, 1994 - 2001.....</i>	231
5.5.2.1.2	<i>Book publishing, 1994 - 2001.....</i>	232
5.5.2.1.3	<i>New titles published, 1994 - 2001</i>	234
5.5.3	LIBRARY SERVICES.....	236
5.5.3.1	<i>National Library.....</i>	236
5.5.3.2	<i>Legal Deposit Libraries.....</i>	237
5.5.3.3	<i>Public/Community Libraries and Provincial Libraries.....</i>	238
5.5.3.4	<i>Academic Libraries</i>	243
5.5.3.5	<i>Special Libraries</i>	244
5.5.3.6	<i>Government Libraries</i>	245
5.5.3.7	<i>School Libraries</i>	247
5.6	COMMUNICATION TECHNOLOGY (TELEVISION SETS AND RADIOS).....	247
5.7	INFORMATION TECHNOLOGY SECTOR.....	248
5.8	CONCLUSIONS	249
CHAPTER SIX		252
NATIONAL INFORMATION POLICY AND GLOBALISATION.....		252
6.1	INTRODUCTION.....	252
6.2	BACKGROUND TO GLOBAL INFLUENCES.....	252
6.3	GLOBAL INFORMATION POLICY DEVELOPMENTS	256
6.3.1	ECONOMIC INFLUENCES	256
6.3.2	SOCIAL AND CULTURAL INFLUENCES	261
6.3.3	GLOBAL INFORMATION POLICY AND POLITICAL AND STATUTORY VARIABLES.....	263
	(AND INTERNATIONAL FORCES).....	263
6.3.4	ORGANIZATIONAL ISSUES (LINKED TO THE COMMUNICATION INFRASTRUCTURE AND WORLD TRADE)	266
	266
6.4	INFORMATION POLICY DEVELOPMENTS WITH SPECIAL REFERENCE TO SOUTH AFRICA.....	267
6.4.1	ACCESS TO INFORMATION IN A GLOBALISED WORLD.....	268
6.4.2	GOVERNMENT COMMUNICATION AND GLOBALISATION	270
6.4.3	LITERACY LEVELS AND GLOBALISATION	271
6.4.4	COMPUTER LITERACY LEVEL AND GLOBALISATION.....	272

6.4.5	LEVELS OF EDUCATION AND SKILLS AND GLOBALISATION	272
6.4.6	INFORMATION SOCIETY DEVELOPMENT	274
6.4.7	THE NORTH-SOUTH DIVIDE (INCLUDING THE DIGITAL DIVIDE)	275
6.4.8	INFORMATION CONTENT, INDUSTRIAL COMPETITIVENESS	276
6.4.9	OTHER ISSUES - SUCH AS E-COMMERCE.....	279
6.4.10	TELECOMMUNICATION INFRASTRUCTURE ISSUES.....	280
6.4.11	COPYRIGHT ISSUES	280
6.4.12	INDUSTRIAL PROPERTY RIGHTS.....	281
6.4.13	FREEDOM OF SPEECH.....	282
6.4.14	CENSORSHIP	283
6.4.15	INFORMATION OWNERSHIP	283
6.4.16	LIBRARY SERVICES AND ARCHIVES.....	284
6.5	CONCLUSIONS	284

CHAPTER SEVEN..... 286

SUMMARY AND CONCLUSIONS..... 286

7.1 INTRODUCTION..... 286

7.2 SUMMARY OF FINDINGS 287

7.2.1 THE MAIN TRENDS RELEVANT TO NATIONAL INFORMATION POLICY DEVELOPMENT 287

7.2.2 MAIN TRENDS RELEVANT TO NATIONAL INFORMATION POLICY DEVELOPMENT IN OTHER COUNTRIES 289

7.2.2.1 *Information as a Public Good* 290

7.2.2.2 *Access to Information and Human Skills*..... 292

7.2.2.3 *The Cost of Creating Information* 292

7.2.2.4 *Open Access and Digital Divide*..... 293

7.2.2.5 *Immediate Access to Information is Hastening Decision-Making*..... 294

7.2.2.6 *Political Power, Capitalism, Ownership and Control*..... 295

7.2.3 IMPLICATIONS FOR NATIONAL INFORMATION POLICY DEVELOPMENT FOR SOUTH AFRICA 295

7.2.3.1 *Information as a public good*..... 295

7.2.3.2 *Access to Information and Human Skills*..... 296

7.2.3.3 *The Cost of Creating Information* 296

7.2.3.4 *Open Access and Digital Divide*..... 296

7.2.3.5 *Political Power, Capitalism, Ownership and Control*..... 297

7.2.3.6 *The Dichotomy of Global and National Information Policy Development*..... 297

7.3 CONCLUSIONS 301

LIST OF FIGURES

Figure 1.1	Time-line indicating the changes regarding the values attached to information within the information economy.....	11
Figure 4.1	Comparison of access to internet connectivity and use in developed and developing countries.....	157
Figure 5.1	Relation between fixed-line telephone charges, contracts and mobile growth.....	198
Figure 5.2	Publishing trends for number of titles for 1994 to 2003.....	230
Figure 5.3	Educational book publishing: 1994 - 2001 based on ISBN numbers registered for publication.....	232
Figure 5.4	South African publishing statistics: 1994, 1999, 2001.....	233
Figure 5.5	New titles in indigenous languages published, 1994, 1999, 2001 - summary.....	235
Figure 5.6	Population per library in each province and average for South Africa....	239
Figure 5.7	Distribution of community libraries.....	241
Figure 7.1	National information policy defined by technological/capitalist values.....	298
Figure 7.2	National information policy defined by economic, social and cultural developmental needs.....	299

LIST OF TABLES

Table 1.1	Information attributes.....	7
Table 1.2	Main trends and developments regarding national information policy from 1960 onwards.....	13
Table 1.3	Motivations for the development of national information policy....	26
Table 2.1	The context defining the information sector.....	85
Table 2.2	The four categories of the information industry	89
Table 3.1	Survey of public library services in ten countries in Anglophone Africa	109
Table 3.2	Survey of automation of public library services in ten countries in Anglophone Africa....	110
Table 3.3	Survey of internet access in public library services in ten countries in Anglophone Africa	111
Table 3.4	Communication centres in Africa, listing the country, agency involved and nature of the development	113
Table 3.5	Africa, telecommunication projections, 1995-2005	116
Table 4.1	Timeline of normative lists of information policy issues since the 1970s.....	130
Table 4.2	Policy issues within the framework of motivations for the development of national information policy	133
Table 4.3	Scope of national information policy for this study.....	134
Table 5.1	Influences on the information industry.....	187
Table 5.2	Four entities within the information industry	214
Table 5.3	Information industry: content and infrastructure	215
Table 5.4	Number of titles published in 2002 and 2003	229
Table 5.5	Number of titles (1st edition) and total number of titles for 1994 to 2003.....	230
Table 5.6	Educational book publishing: 1994 - 2001.....	231
Table 5.7	Publishing statistics: 1994, 1999, 2001.....	233
Table 5.8	New titles in indigenous languages published, 1994, 1999, 2001.....	234
Table 5.9	Number of libraries related to the population of provinces	240
Table 5.10	Information technology in South Africa in 2005	248
Table 6.1	GII/GIS regime enforcement organisations	259

BIBLIOGRAPHY.....	304
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LIST OF ACRONYMS AND ABBREVIATIONS

.ZA ccTLD	.ZA [Top Level] Domain Name Authority
AIDS	Auto-Immune Deficiency Syndrome
AIP	Association of Independent Publishers
AISI	Africa's Information Society Initiative
AJOL	African Journals Online
ANC	African National Congress
APC	Association for Progressive Communications
ARC	Agricultural Research Council
ATM	Asynchronous Transfer Mode
AU	African Union
AVLIN	African Virtual Library and Information Network
BEE	Black Economic Empowerment
Blindlib	South African Library for the Blind
CALICO	Cape Library Consortium
CERN	European Particle Physics Laboratory
CGS	Council for Geoscience
CIDA	Canadian International Development Agency
COMTASK	Task Group on Government Communications
COSALC	Coalition of South African Library Consortia
Cosatu	Congress of South African Trade Unions
CSD	Canadian Dollar
CSIR	Council for Scientific and Industrial Research
DACST	Department of Arts, Culture, Science and Technology
DISA	Digital Imaging Project of South Africa
DMCA	Digital Millennium Copyright Act
DNS	global domain name system
DoC	Department of Communications
DPSA	Department of Public Service and Administration
ECA	Economic Commission for Africa
E-commerce	Electronic Commerce

ECT Act	Electronic Communications and Transactions Act
EDP	Electronic data processing
esAL	Eastern Seaboard Association of Libraries
EU	European Union
FOI	Freedom of Information
FOIA	Freedom of Information Act
FRD	National Research Foundation
FRELICO	Free State Library and Information Consortium
FSB	Financial Services Board
G8	Group of 8 Industrialized Countries
GAELIC	Gauteng and Environs Library Consortium
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GCCN	Government Common Control Network
GCIS	Government Communication and Information System
GEAR	Growth, Employment and Redistribution
GIBN	Global Interoperability for Broadband Networks
GII/GIS	Global Information Infrastructure and Global Information Society
GIIC/GBD	Global Information Infrastructure Commission/Global Business Dialogue
GIP	General Information Programme
GIP	government information project
HIV	Human Immune Virus
HSRC	Human Sciences Research Council
IBA	Independent Broadcasting Association
IBI	Intergovernmental Bureau for Informatics
ICANN	Internet Corporation for Assigned Names and Numbers
ICASA	Independent Communications Authority of South Africa
ICT	Information and Communication Technology
IDRC	International Development Research Centre
IETF	Internet Engineering Task Force
IP	Intellectual Property
IPR	Intellectual Property Right

ISAD	Information Society and Development
IT	Information Technology
ITU	International Telecommunication Union
ITU-D	International Telecommunication Union Telecommunication Development
ITU-R	International Telecommunication Union Radiocommunication
ITU-T	International Telecommunication Union Telecommunication
JSE	Johannesburg Stock Exchange
LDC	Less Developed Country
LIS	Library and Information Services
MCT	Multi-purpose Community Telecentre
MDDA	Media Development and Diversity Agency
Mintek	Council for Mineral Technology
MPCC	Multi-purpose Community Centre
MRC	Medical Research Council
NAFTA	North American Free Trade Agreement
NAFVSA	National Film, Video and Sound Archives
NASA	National Archives of South Africa
NAT	Network Address Translation
NATIS	National Information System Programme
NATIS	United Nations National Technical Information System
NCLIS	National Commission on Libraries and Information Science
NCOP	National Council of Provinces
NEICON	National Electronic Information Consortium
NEMISA	National Media Institute of South Africa
NEPAD	New Partnership for Africa's Development
NETA	No Electronic Theft Act
NGO	Non-Governmental Organisation
NII	National Information Infrastructure
NIP	National Information Project
NITF	National Information Technology Forum
NLPF	National Language Policy Framework
NLSA	National Library of South Africa
NLU	National Lexicography Unit

Nordinfo	Nordic Council for Information and Research Libraries
NRI	Networked Readiness Index
NWICO	New World Information and Communication Order
OA	Open Access
OAI-PMH	Open Archives Initiative Protocol for Metadata Harvesting
OAU	Organisation for African Unity
OAU	Organisation of African Unity
OECD	Organisation for Economic Co-operation and Development
OPAC	Online Public Access Catalogue
OPD	Official Publications Depository
PADIS	Pan African Development of Information System
PAIA	Promotion of Access to Information Act
PanSALB	Pan South African Language Board
PASA	Publishers' Association of South Africa
PC	Personal Computer
PICC	Print Industries Cluster Council
PICTA	Partnership for ICTs in Africa
PIT	Public Internet Terminal
PMSA	Print Media South Africa
PSM	Public Service Media
R&D	Research and Development
RDP	Reconstruction and Development Programme
RICA	Regulation of Interception of Communications and Provision of Communication-related Information Act
SABC	South African Broadcasting Corporation
SABS	South African Bureau of Standards
SACS	South African Communication Service
SADC	Southern African Development Community
SADF	South African Defence Force
SANEF	South African National Editors' Forum
SANLI	South African Literacy Agency
SANRIC	South African National Research Institute Consortium
SAPO	South African Post Office

SASLI	South African Site Licensing Initiative
SATRA	South African Telecommunications Regulatory Authority
SEALS	South Eastern Alliance of Library Systems
SED	Socio-economic Development Strategy
Seta	Sectoral Education and Training Authority
SITA	State Information Technology Agency
SMEs	Small and medium enterprises
SOEs	State-owned Enterprises
SPIN-I	Intergovernmental Conference on Strategy and Policies for Informatics
TAC	Treatment Action Campaign
TRIPS	Trade-Related Aspects of Intellectual Property Rights
U.S.A.	United States
UAP	Universal Availability of Publications
UBC	Universal Bibliographic Control
UN	United Nations
UNESCO	United Nations Education and Scientific Organisation
UNISIST	Intergovernmental Conference for the Establishment of a World Science Information System
USA	Universal Service Agency
USAID	United States Agency for International Development
USD	United States Dollar
Vans	Value added network services
VAT	Value Added Taxation
VPN	Virtual Private Network
W3C	World-Wide Web Consortium
WEF	World Economic Forum
WIPO	World Intellectual Property Organisation
WSIS	World Summit on the Information Society
WTO	World Trade Organisation
WWW	World-Wide Web

CHAPTER ONE

INTRODUCTION TO THE PROBLEM AND ITS CONTEXT

1.1 INTRODUCTION

This thesis investigates developments regarding national information policy with specific reference to South Africa. The investigation reviews trends and developments concerning national information policy internationally and nationally to inform the understanding of the situation in South Africa. The trends and developments are considered in view of the context of related developments in South Africa. The study concludes with a situational analysis of developments relevant to national information policy in South Africa.

The research approach applied in this thesis falls predominantly within the academic discipline of Information Science, and to a lesser extent, within the academic discipline of Policy Studies, with reference to the political environment of policy-making. Three basic questions guide and inform the research, in accordance with the principle that national (information) policies are motivated by three factors: time, place and historical circumstances; policies implemented in other countries; and, the values governments attach to the relevant issues. Thus the study concerns: (a) current factors of time, space and historical circumstances that have guided the development of national information policies, as a result of various influences such as developments linked to information communication technology; (b) the national information-related policies and potential link to the development in other countries. The findings of the investigation of international information-related trends and developments, and developments serve as further (c) background for the research regarding the situation and context of South Africa. A review of the history of the development of a national information policy in South Africa, is followed by an outline of salient information-related legislation and a review of the information sector. The research concludes with a situational analysis of national information policy developments internationally, with specific reference to South Africa and the implications of these developments for South Africa as a developing country.

Motivations for the problem investigated in this thesis are based on calls for systematic research from a theoretical perspective (as explained in Par. 1.4.1 later on in this chapter); as well as research on a national or more applied perspective, within the context of South Africa (Dick, 2002a: 131). On a theoretical level, there is a need for research on national information policy, to address aspects such as, amongst others, the development of a normative approach to national information policy (Duff, 2004: 77; Browne, 1997b: 340). On a practical level the application within the context of South Africa requires research on the subject due to ongoing global information communication and networking developments; issues concerning technological convergence, information-related issues and the digital divide in the public domain; the need to build on past research and new developments. These motivations are explained briefly below:

(a) Ongoing global information communication and networking developments

In the period starting from the 1960s onwards, international information developmental trends linked to global information technology and global information communication networking, have been moving information-related issues into the public domain, forcing governments to develop national information-related policies or agreements to address various relevant issues. A recent example of such an issue is the call for an intergovernmental agency within the United Nations, to take over the functions of the United States of American-based Internet Corporation for Assigned Names and Numbers (ICANN) (Mincio, 2006). Ongoing global information communication and networking developments such as the management of ICANN, call for the updating of relevant research on a national as well as international level. Thus, although some past studies (listed under (c) below) are available regarding information-policy issues within the context of South Africa, there is a need for new and continuous efforts concerning research such as covered in this study. The study deals with information and the changes related to information-communication developments of the Information Age internationally and nationally within the context of South Africa. Braman (2003a: 2) points out that there is a need for this type of research to help with the conceptualisation of the new influences on information communication and related policy problems. This study addresses the above and presents a situational analysis of national information policy developments and information-communication developments internationally and in

South Africa. An extensive review of the literature suggests that there is no similar study covering these developments, linked to the developments with particular reference to South Africa.

(b) Technological convergence, information-related issues and the digital divide

Muir and Oppenheim (2002b: 263) refer to the influence of recent developments in information technology and point out that they have changed the call for the right to access to information. This right is no longer a simple right linked to the individual's situation and circumstances. The emphasis of government policies is to call for the provision of equal access to universal information for all, introducing the ideal of universal access to universal information. The ideal of providing universal access to electronic information for all, is linked to the vision of the bridging of the so-called digital divide. This and other related issues are making it imperative for governments in countries around the world, including South Africa, to address various information-related issues in national policies. Scholarly investigations regarding information-related issues can be useful to inform policy decisions, thus not leaving these only to politicians for them to debate and legislate on. For this reason, this study addresses the South African situation by conducting a situational analysis regarding national information policy.

(c) National information policy research and Information Science

This study contributes to Information Science as a qualitative study on national information policy research in bringing together previous research by using content analysis on national information policy and its scope. National information policy research is conceptually underdeveloped, (Duff, 2004: 70), as explained further on in Chapter one (Par. 1.7.2), Chapter two (Par. 2.7.1), and in particular in Chapter four (Par. 4.2). Chapter Six (Par. 6.3.3) in this study, also explains the development of a global information policy regime (Braman, 2003d). The study addresses the scope of national information policy by identifying relevant issues and global developments and contributes to the understanding of this type of policy within the discipline of Information Science.

This study is also relevant to Information Science as it tracks the development of national information policy and the implications of these developments regarding the value of information in the public domain. From the qualitative content analysis the study creates a situational analysis of the development of national information policy embedded in the context of the literature and relates these developments to the value attached to information in the political environment with reference to the political environment of a developing country. Relevant to Information Science, this study found that (a) *social factors* should guide national information policy development in a developing country like South Africa; (b) the development of national information policy requires government to value information for development; while (c) *economic factors* are guiding global information policy developments, ignoring social factors in developing countries. This study identifies some of the implications for national information policy development in developing countries by showing that while the social factors need to pull governments to address information for development, global information policy developments are pushing the economic value of information. The implications of these findings are explained in Chapter Seven.

(d) Building on past studies to help inform public policy

Some relevant and useful studies on the situation in South Africa have been done and are referred to in this study. These include: a book by Dick (2002a) on the philosophy, politics and economics of information with reference to South Africa; a Master's dissertation of the theoretical foundation for the formulation of a national information policy for South Africa, by Henrici (2001); a chapter by Nassimbeni (1999a) on library and information policy in South Africa; an article by Nassimbeni (1998) on the information society in South Africa; an article by Braman (1998) on the information society, the information economy, and South Africa; and, a study, edited by James (2001), on information policy in Southern Africa. This study, funded by the International Development Research Centre (IDRC), is the outcome of a three-year study, covering the period 1995 onwards. Its aim was to "... reinforce South Africa's capacity to make policy changes that would apply information and the new technologies more effectively to the development needs of the newly democratic country, and align it more closely with the emerging global information society" (James, 2001: iii). This study illustrates the high

level of involvement of organisations such as the IDRC, an organisation from a developed country, in promoting information-related policy development in African countries. This trend is explained further later on in the thesis. The studies listed above serve as background to this more recent study.

In addition, particular attention is paid to information about the media in South Africa (Chapter 5), an area not well covered in the existing work published so far on the situation in South Africa, or internationally under the umbrella of information policy (Duff, 2004: 78). In this regard, the descriptive information given in Chapter 5 on the media and related issues in South Africa, serve as additional information towards a normative for national information policy development (Browne, 1997b: 340), as this information could point the way for aspects that need to be addressed in the future.

1.2 BACKGROUND TO THE PROBLEM

Various factors and historical influences have guided the development of national information policies, particularly in the period since the beginning of the 1960s. During this period, the potential economic value of information started to become relevant on managerial and governmental levels, and these developments introduced the conceptualisation of the *information economy*. This conceptualisation was to a large extent observed as a result of the publication of two reports. In 1962, Machlup, studied and described knowledge production and its distribution in relation to the Gross Domestic Product (GDP) of the United States of America (U.S.A.), and in 1967 Porat produced a comprehensive study of information activities in the U.S.A. (Freeman and Katz, 1978: 43). Braman (2003d: 33) identified three conceptualisations of the information economy over the past decades since the 1960s:

- (a) In the 1960s and 1970s the information economy is defined in terms of its *products*, because the “percentage of information goods and services exchanged [in the economy] is relatively higher proportionately than it was in the past”, due to the influences of the development of the computer industry;
- (b) During the late 1970s into the 1980s, the information economy is defined in terms of its *domain*, because the domain of the economy itself has expanded “through commodification of types of information, both privately and publicly, never before

- commodified” (Braman, 2003d: 33), with developments linked to the increases in the use of computers, computer software, computer networking and databases;
- (c) Since the early 1990s, the information economy is defined in terms of its *processes*, because it operates in a qualitatively different way from the ways in which it operated previously over the last several hundred years, with the development of the Internet and World-Wide Web, the flow of information and information communication and processes.

The conceptualisation of the information economy is linked to the understanding of the *value of information* within the economy. With the development of modern information technology and modern applications of information communication technology, information is seen to be increasingly valued as a commodity or resource in the world (Dick, 2002a: 82; Nonaka and Nishiguchi, 2001: 13; Braman, 1998: 67). Traditionally, researchers preferred to define information from a philosophical or social point of view, but due to modern developments during the current Information Age, information tends to be defined in a number of ways, including:

- (a) *Information defined as a process*

Information is defined as a process, for instance, when an individual obtains information to become informed about an issue or with reference to the informatisation of a society, to develop towards an information society.

- (b) *Information as a commodity*

Information is defined as a commodity in an environment where it is sold, distributed, and used commercially (Dick, 2002a: 11, 25; Nassimbeni, 1998: 14; Freeman and Katz, 1978: 47).

- (c) *Information as a resource*

Information is defined as a resource for individuals as well as organisations if it is available as a source or supply, such as a library collection (Meadow and Yuan, 1997: 707).

(d) *Information as infrastructure*

Information is defined as infrastructure when understood in terms of information systems, such as computer networks, which are objects, thus understood as “information-as-thing” as it defines information without its meaning (Meadow and Yuan, 1997: 707).

(e) *Information attributes*

When information is defined in accordance to its attributes, the following definitions would apply, according to (Meadow and Yuan, 1997: 708). These definitions also denote the value attached to information and are listed in the table below:

Table 1.1 Information attributes

Attribute	Value
<i>Commodification</i>	Information is a commodity when price or cost is an important factor. [In this context the price is based on the uniqueness of the content of the publication.]
<i>Value</i>	Price is not the same as value. Value may vary from person to person or organisation to organisation.
<i>Reliability of content</i>	Information is reliable when it is accurate, credible, correct and valid.
<i>Reliability of source</i>	The source can refer to the author or corporate source of information as well as its content, as being reliable.
<i>Time</i>	The date or time of creation of the message or the elapsed time since its creation.
<i>Generality</i>	Is the content applicable to a broad subject or to a highly specific one?
<i>Novelty</i>	The extent to which the content is original, or its relation to other works.
<i>Subject domain</i>	What is this information about, expressed as subject matter or named or implied persons, places, institutions, devices, etc.
<i>Specificity or depth</i>	This refers to depth of coverage or degree of the information in a message.
<i>Clarity</i>	Comprehensibility - This is clearly an attribute that will vary with the individual reader.
<i>Amount</i>	The amount of information content can be measured in many different ways.
<i>Instructional value</i>	The extent to which this information instructs about its subject rather than simply reports on it.

(Source: Meadow and Yuan, 1997: 708.)

However, the information-related developments mentioned above, and the resulting growth in the uses of and applications of information (socially, economically, and in the workplace), make it necessary for information to be understood as that which can potentially benefit:

- (i) the individual by reducing uncertainty in the individual (information valued as *process*);
- (ii) society in its social, cultural and political life, especially if such a society literate, educated, skilled and knowledgeable (information as a *resource* and *commodity*); and,
- (iii) the economy of a country as a *resource*.

Information is thus, understood and defined in this thesis as a commodity that can benefit the individual, society, and the economy of a country, (as explained in Par. 1.5.2). This approach defines information as a “... final good (primary product), as well as secondary good (used in the production of other goods and services)” (Braman, 2003d: 35). This definition is used as found appropriate within the context of the developments of information technology and the related changes linked to developments such as the information economy, information society and national information policy during the Information Age as explained further in this chapter.

1.2.1 Information Technology and the Development of National Information Policy

The 1960s introduced the utilisation of computers for data processing and governments started to regulate issues such as the efficient procurement and use of computers, computer standards and compatibility, introducing and enacting “computer utilisation policies”, later referred to as “informatics policies”. These policies became the forerunner of national information policy (Pipe, 1987: 202).

In view of the growing awareness of the development of information technology and the concept of the economics and pricing of information, the American Library Association (ALA) produced a draft statement in a document in 1977, “*Toward a conceptual foundation for a national information policy*”. Its basic proposition was that “All information must be available to all people in all formats purveyed through all communication channels and

delivered at all levels of comprehension” (American Library Association, 1977: 1-2, as quoted in Freeman and Katz, 1978: 46).

During this period, governments started to consider it necessary to develop national policies for the management of information-related issues. Examples of this are:

- In 1964, the Brazilian government attempted to implement an information and communication policy which could address a variety of disparate informational and communicative issues in a common policy (Braman, 2003d: 31; Braman, 1998: 67).
- In the early 1970s concepts such as “transborder data flow” (TDF) originated and information became internationalised, in view of the impact of automatic processing of information, information content and electronic transmission of information nationally and across national borders (Pipe, 1987: 201). This development called on governments to address issues concerning data protection and privacy (Pipe, 1987: 201).
- In 1976, the National Commission on Libraries and Information Science, in the United States of America (U.S.A.), published a report prepared by the Domestic Council Committee on the Right of Privacy, on national information policy. (*National Information Policy. Report to the President of the United States*. 1976). The focus of the National Commission on Libraries and Information Science report, was on four issues or elements: a) information privacy, freedom of information and open access to information, and their effect on government and private sector use of information; b) issues relating to pressures on the communication infrastructure; c) the result of the phenomenal spread of the use of computers; and, d) attempts to improve the utilisation of scientific and technical information and its wider application (*National Information Policy. Report to the President of the United States*. 1976: vii).
- Gray (1988: 12) identified two sets of information-policy making, with the library and information approaches on the one hand and the general and specialized approaches on the other hand. Gray explains the purpose of national information policy as “... to ensure that the best possible network of information services is created and sustained with the limited resources available” (Gray, 1988: 6). Examples of such policies would include the development of programmes by the French and German governments for the development of computer-based systems and services for

scientific information in the mid-1970s (Gray, 1988: 20, 21); the development of the National Technical Information Service (NTIS) in the U.S.A. to supply reports; and, the development on the British Library's Document Supply Centre in Great Britain (Gray, 1988: 25).

- Databases were developed during the 1980s of information produced outside the countries by the Documentation Centre for Science and Technology in France, document supply centres in the United Kingdom (U.K.); Spain; Sweden; the Netherlands; the U.S.A., Australia and Japan (Gray, 1988: 28, 29). Databases were developed to provide access to literature produced by organisations such as the International Nuclear Information System (NTIS), Commonwealth Agricultural Bureaux (CAB), Chemical Abstracts Services, BIOSIS, MEDLARS (U.S.A.), INSPEC (U.K.) and Excerpta Medica (the Netherlands). The development of these databases had implications regarding copyright laws (of articles published in primary periodicals) as well as the protection of classified information (such as classified defense information).

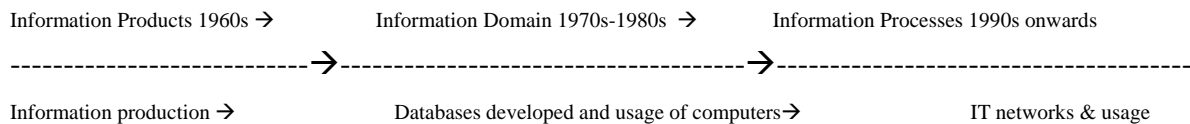
The above are examples of information-related policies, including policies for the development of databases, developed to address the information-related developments of information-related *products* or the products within the information *domain* of the period from the 1960s to the late 1980s (Explained according to the stages identified by Braman, linking the information economy first to *products* then at a later stage, to the *domain*, as explained in the paragraphs above).

Empirical changes of the 1990s onwards changed the political status of national information policies (Braman, 2003d: 31). The empirical changes were due to the development of information and communication network technology. During the 1990s global communication networks were developed, linking all sections of the public through the mass media. The linking of the media resulted in the convergence of the mass media, including newspapers, popular books and periodicals, radio, television, films, exhibitions and other information (Gray, 1988: 49).

The digitisation and convergence of technologies, required the convergence of the regulatory system for the technical matter of international news flow, entertainment programming,

telephone calls and related legal system on national level, and in the Internet environment, also on international level (Braman, 2003d: 31).

Figure 1.1 Time-line indicating the changes regarding the values attached to information within the information economy.



Examples of general and specialised national information policies developed in various countries, linked to the usage of information, include:

- The Danish government developed a national information technology strategy to create an information society for the country, by providing a favourable business climate for the country's small and medium-sized businesses. The aim is to use the advanced information technology and networking in the public sector (i.e. education, health care, libraries, traffic and government services), and the early breakup of existing telecommunications monopolies (Riis, 1997: 246). This strategy aimed to encourage wider participation information technology development, stimulate competition and lower the cost of telecommunication infrastructure development and application.
- Japan developed a national plan which supports the codification of policies and the implementation of schedules for its national information programme. This national information programme is aimed at attaining international preeminence (Day, 1989: 160). The national information programme and policies developed in Japan, illustrate the important use of knowledge and information as the country's most important economic resource, as these resources have contributed to the successful growth of the Japanese economy in the period since the end of the Second World War (Dedijer, 1996: 315).
- The European Commission of the European Union (E.U.) has been involved in working on information plans for some time and aims to gain dominance in the Information Age. Amongst others, the European Commission identified the following

seven areas to be included in a formulated a plan of action for the region: patent information, biotechnology information, materials data, electronic publishing and image data, information for industry and research, reduction in regional discrepancies, and libraries (Hill, 1990: 22). The initial focus of the E.U. was to address research and development for innovation and competitiveness in their information policies. This remained an important aspect of the national information policies in the E.U. and contributed later to the strong support given to open access publishing especially in the years 2004 onwards.

- In 1999, the United States of America was reported to have a library strategy, but not a federal information policy nor an information technology strategy (Niegaard, 1998). During the 1990s, the Clinton Administration expressed its commitment to develop an information policy for the United States under the generic title of a “National Information Infrastructure (NII) (*I*M Europe Legal Issues*, 1999: 4). This initiative resulted in the national network of telecommunication connectivity aiming to achieve Internet access to the majority of the American citizens.

Table 1.2 below lists some of the main trends and developments regarding national information policy from 1960 onwards as mentioned in this study.

Table 1.2 Main Trends and Developments Regarding National Information Policy from 1960 onwards

Information Products 1960s	Information Domain 1970s-1980s	Information Processes 1990s onwards
1960s Japan and conceptualisation of “information society	1970 - Freedom of Information Act passed in Denmark and Norway	Gore used the concept of information superhighway in the early 1990s (Braman: 2003a: 1)
1962 Machlup’s report on economic value of information	1974 Nam June Paik conceptualized the network as superhighway (Braman, 2003a:1)	1995 - G7 countries meet in Brussels at Information Society Conference (They address the development of the information society as a global movement.)
1964 Brazil - Information and communication policy	1977 - American Library Association report on National Information Policy and concept of access to information for all	1995 - Data Protection Directive (of the G7 countries)
1966 - Freedom of Information Act in the U.S.A.	1978 - Freedom of Information Act passed in France and the Netherlands	1995 - Convergence of Information Technology and convergence of policies relevant to public and private information
1967 Porat’s study on economy and information activities in the U.S.A.	1980s - Data protection legislation in various countries	1995 - Canadian International Development Research Centre’s (IDRC) three-year effort to reinforce South Africa’s capacity to make policy changes that should apply information and the new technologies more effectively (James, 2001)
1969 Conceptualisation of “knowledge society” in U.S.A.		1996 Information Society Conference held in South Africa (AISI)
		2002 Promotion of Access to Information Act in South Africa
		2001 Freedom of Information Act (FOIA) revisited in U.S.A.
		2006 FOIA introduced in Great Britain and Mexico

The following paragraphs explain other developments and concepts relevant to this research.

1.2.2 Other Information-related Developments and Concepts

Since the 1960s, the modern understanding of information is that it is an important resource or commodity, used extensively in businesses, trade, communication, education and society in general. During this period other information-related developments led to the conceptualized of terms used to describe related trends, concepts and applications. Examples of these terms, currently frequently used in the literature, business world, and popular conversation of today, include:

- (a) the development of the *information society* (Grantham and Tsekouras, 2004: 359; Butcher, 1999: 71; Webster, 1996: 74; Braman, 1998: 67; Shillinglaw, 1988: 10). The idea of the “information society” was first observed in Japan in the early 1960s. (Webster, 1996: 74; Braman, 1998: 67; Footnote1). During the 1960s onwards, the societies in some countries recognized the trend that information was becoming an important resource. Since the 1970s these societies realized the important role that information was playing in the economies of these countries. The realization of the societal changes and the recognition that information was an important resource turned these societies into information societies. Such societies are characterized as societies that have changed the way information is organised, communicated, stored and used (Ricci, 2000: 142). The ideal for countries to develop an information society, has grown in acceptance since the 1970s, and in 1995, during the *G7 Ministerial Conference on the Information Society*, held in Brussels, the G7 countries agreed to ensure the information society as a global movement and committed themselves to assist developing countries in their growth as information societies (Nassimbeni, 1998: 15).

According to the literature, attempts to develop an information society seem to be approached from one of two viewpoints:

- a technological view (with the proliferation of information technologies in a society and the convergence of the information and media industries); or

1 . The term, information society, was conceptualised by the Japanese scholar, Umesao, who explained the term “information society” as the process of “informatisation” (Webster, 1996: 74; Braman, 1998: 67).

- an ideological view (set in accordance with the type of society to be developed, with a growing information-intensive society and workforce) (Moore, ND: 271; Browne, 1997a: 263).

With regards to policy-making, Moore (2004: 282) observed that there has been a sudden “... burst of policy-making related to the creation of information societies...”. Moore (2004: 282-283) observed that while most of these policies aim to develop information infrastructure, they are increasingly focused on the social implications of this infrastructure, and, “... Governments are recognizing the need for policies to shape the development of information societies.” (Moore, 2004: 283).

- (b) *information literacy, computer literacy, media literacy, and library literacy* (Rockman, 2003: 209; Correia and Teixeira, 2003: 318) are all different forms of literacy encompassing skills and have become important in the current Information Age. These concepts have been receiving much attention in recent years. The concepts are explained later in this thesis (Par. 1.5.6; Par. 2.5.1.2).
- (c) the *knowledge society* (UNESCO, 2005; Chimura, Hadebe, Shapiro, Tlhabanelo and Wijenaik, 2000: 1; *Knowledge societies*, 1998). The concept of the *knowledge society* was first observed in 1969 in the United States of America (U.S.A.) (UNESCO 2005: 20). The term also tends to be used interchangeably with *information society*.
- (d) the development of the *knowledge economy* (Ondari-Okemwa, 2004: 361). The terms *information economy* and *knowledge economy* are synonymous and are often used interchangeably. The term is used to refer to the changes brought about as a result of the uses of information technology and its diffusion through the formal economy and society in general. The term *information economy* is used in this study and explained in Par. 1.5.9.
- (e) a growing belief in the concept that information and communication technologies (ICTs) can be useful for development (*Information and communication technologies for African development*, 2003; Meyer, 2002: 93; Butcher, 1999:71), as explained further in Par. 1.6.3.

- (f) *learning societies* and the notion of lifelong education (in the late 1960s and early 1970s) (UNESCO, 2005: 20). This concept is understood as a characteristic of the information society with the ideal that learning and personal development should take place throughout life, indicating the need for society to encourage adult education and learning as a continuous process after completing school and tertiary education.

The meaning or understanding of the above concepts are not always clearly understood because many of these terms still require further research to improve and extend our understanding of them (Nonaka and Nishiguchi, 2001: 1; Meadow and Yuan, 1997: 707). However, these concepts are useful as they serve as points of reference for discussion and debate of modern information-related developments. Explanations of the meaning of the above and other related terms, are given later in this chapter, as core terms used in this study.

1.2.3 Background to Developments in South Africa

The year after the *G7 Ministerial Conference on the Information Society*, at the *Africa Information Society Initiative (AISI)*, held in Midrand, South Africa, in 1996, the South African government expressed its interest in developing an information society in South Africa. During the *AISI Conference*, the chairperson of the National Information Technology Forum, stated that the *Governmental Forum*, a specific body founded by the government, intended to develop an information society in South Africa (Abrahams, 1996: 1; Dick, 2002: 129). At the conference, Thabo Mbeki, the then deputy president of South Africa, also stated the government's intention to develop a national information policy. The aim of this policy would be to develop an information society in the context of the country's *Reconstruction and Development Programme (RDP)* (Dick, 2002a: 129).

In 1996, the South African government's main interest, concerning the development of a national information policy and information society, centred on the development of South Africa's information infrastructure (AISI, 1996: 28). This development had four main objectives. Van Audenhove (1998: 79) summarised the objectives as: (a) to roll out an information and telecommunication network for Africa; (b) to ensure regional and international flow of information; (c) supporting initiatives to improve and create services in

different sectors of society; and, (d) supporting the development of information communication and technology (ICT) skills. These objectives emphasised the government's interest in the country's information technology and infrastructure development. It is important to note that the government's objectives were linking information semantically as infrastructure and not as a resource for building an information society to have "...the necessary capacity to maximally use ... ICTs to accelerate social and economic development" as stated by the Presidential National Commission on Information Society and Development (ND: 1).

1.3 PROBLEM STATEMENT

The research problem in this thesis concerns a situational analysis of developments relevant to *national information policy* as observed globally, mainly in the period since the early 1960s to date. The understanding concerning relevant global (international) developments, is reviewed and interpreted within the context of relevant developments in South Africa.

The main research questions investigated in the study are:

- (a) What are the main trends relevant to national information policy development worldwide, based on relevant literature?
- (b) What are the main trends and developments in other countries?
- (c) What are the implications of the current global and national developments regarding national information policy for South Africa, based on the findings of the study?

The first and second questions, (a) and (b) above, required the investigation of international developments concerning national information policy. The findings concerning the first two research questions were interpreted within the context of South Africa. The global and national developments were reviewed and interpreted for the situational analysis of the study.

1.4 METHODOLOGY

The research focus in this thesis is on developments regarding national information policy with specific reference to South Africa. The methodology for this study essentially involved

(a) qualitative textual analysis; (b) setting the research questions, and, (c) the selection of theoretical frameworks to define the scope of the research, based on the qualitative judgment of the researcher. Further detail regarding the methodological aspects is included in Chapter four, Par. 4.2.

The research methodologies used for this research are taken from two academic disciplines, namely the Information Sciences and Policy Studies as indicated in the introduction to this chapter. Aspects concerning the research method taken from Policy Studies are explained in Par. 1.4.4 below.

In the Information Sciences literature, this type of study is referred to as *comparative* or *international librarianship* (Buckland and Gathlegi, 1991: 64; Powell, 1991: 20). This type of research seeks to improve and extend the understanding of international developments, concerning national information policy with regard to basic theory. This understanding is then interpreted in this study in the context of South Africa as a developing country.

Developments with regard to national information policy were investigated based on a literature review of relevant literature. Elements of comparative or international librarianship were used to review the literature on national information policy issues and developments, based on qualitative textual analysis as explained in the paragraphs below. This review of the research served to improve and extend understanding of the basic theory of concepts linked to *national information policy* and their application.

The problem identified in this study required background information on and a reflection of historical developments concerning:

- (a) the development of information technology and the development of national information policy;
- (b) information-related developments and concepts; and,
- (c) related developments in South Africa.

From the background concerning the historical developments of the above, the three research questions were formulated for this research requiring a review and analysis of the content and context of relevant literature.

The research is a qualitative study conducted by means of *content* or *textual analysis*. Content analysis is a systematic approach to analyzing documents obtained in the course of research as explained by White and Marsh (2006: 41). They (2006: 223-23, 27) define content analysis as a research technique for making valid inferences from texts to the contexts of their use. In the process of content analysis the researcher moved from the texts and their context, to answer the three research questions. The research questions guided the research and influenced the data selected and gathered for this study.

The selected literature was read and examined identifying trends and developments based on qualitative content analysis. The process of qualitative content analysis was used to recontextualise and redefine the research in order to interpret the findings within the context of the study. This process is described a *hermeneutic loop* as the researcher moves along exploring the literature to reach a satisfactory level of interpretation of the literature (White and Marsh, 2006: 24).

The content analysis of the selected literature involved a *constant comparison* (White and Marsh, 2006: 37) of the literature regarding (a) how the different concepts or issues relate to each other; (b) searching for trends or new historical developments; and (c) identifying relevant implications based on the situational analysis emerging from the hermeneutic process of recontextualising the content. Throughout the study the hermeneutic process was influenced by emerging concepts and the relationships of these concepts regarding information policy issues and the value of information for development. The emerging concepts included the core terms defined in Chapter one (Par. 1.5) as well as the trends linked to the emergent global information policy regime and Global Information Infrastructure and Global Information Society regime (Chapter six, Par. 6.3).

This focus of the process of qualitative content analysis was to create a situational analysis searching for trends or new historical development relevant to national information policy within the given context of South Africa as a developing country. In this type of qualitative research, the researcher tried to place her findings within a theoretical paradigm, with the understanding that the findings can be applied to another similar situation (White and Marsh, 2006: 38). The content analysis regarding motivations for the development of national information policy was structured based on (a) factors such as time, place and historical

circumstances; (b) policies implemented in other countries; and, (c) policies with specific applications, value attached or intent relevant to information (Chapter one, Table 1.3). This theoretical framework was selected by the researcher and is described in Par. 1.4.4 below.

The study also makes use of quotations included in the study, taken from the literature to support the findings in the study. The use of quotations serves to support the credibility of the study. This practice is used in qualitative content analysis, as explained below:

... reviewers [readers] can better judge the confirmability or public credibility of a qualitative content analysis if the researcher submits his original data set, codings, and justification for particular codes if necessary along with a manuscript...(White and Marsh, 2006: 40).

This study did not use codings, but included quotations from the original data used while conducting the research to support the credibility of its descriptions and findings. The developments and findings regarding national information policy as found in this study are based on the qualitative textual analysis of the literature.

Methodological challenges were encountered in this research due to the following issues:

- the issue of defining the *scope* of national information policy;
- the issue of national information policy as interdisciplinary research;
- national information policy as process and linked to values;
- comparative policy analysis;
- method used in the review of the literature regarding motivations for the development of national information policy.

The above methodological challenges are explained briefly below, together with the explanation of the research methodology applied in this study. The methodological aspects are also discussed in Chapter four, Par. 4.2, with specific reference to the literature reviewed.

Based on the judgment of the researcher theoretical frameworks were selected from relevant previous research to address the development of a framework to define the scope of the study. The selection of the frameworks was based on qualitative decisions based on the researcher's

judgment. The explanations are considered essential explanatory notes in support of the methodology selected and used in this study.

1.4.1 Defining the Scope of National Information Policy

A literature review indicated that although the literature on national information policy research has been growing since the 1970s onwards, there is still no general agreement over the scope of national information policy (Duff, 2004: 74; Browne, 1997a: 261). Furthermore, the literature revealed a continued lack of clear parameters as to what should be included in a national information policy, thus, reflecting continued uncertainties in this regard (Browne, 1997a: 262). One of the uncertainties frequently encountered, for instance, is illustrated by questions regarding issues such as: should information technology (IT) industry policies and information resource management issues be included as part of national information policy? (Duff, 2004: 75). In this study, information technology policy (ITP), is not directly included as part of national information policy as ITP refers to government-wide information policies that aim to improve the management of information through information-related technologies by government agencies (Gil-Garcia, 2004: 549).

Content analysis was used to identify the issues by reviewing previous research and using the constant comparative approach to data analysis to identify and list relevant national information policies addressed in other countries. Seventeen issues were identified, as mentioned in Par. 1.4.6 below, as a result of research done prior to this study. The findings of that research were not published. In this study these issues were reviewed within a theoretical framework. As mentioned earlier above, the researcher developed a theoretical framework, based on relevant previous research to define the scope of the study. This theoretical framework was developed (Table 1.3) for the research to include the issues addressed in national information policy in the literature, as explained in Par. 1.4.5 below.

1.4.2 National Information Policy as Interdisciplinary Research

One of the reasons for the continued uncertainty regarding the scope of national information policy is due to the academic identity of information policy research. The academic identity of information policy touches on many disciplines. The disciplines include, amongst others, “library and information studies, economics, politics, computer studies, sociology, and

communication” (Duff, 2004: 77). For this reason, national information policy was researched in this study as an interdisciplinary academic entity.

1.4.3 National Information Policy as Process and Linked to Values

Considerations used according to Policy Studies, include aspects regarding the policy process and how values influence, shape and direct of the policy process (Browne, 1997b: 344).

Crawford and Stimatz (2000: 14) link the poor understanding regarding the scope of national information policy to the definition given for information and the relationship between the definition of information and the notions of power associated with it. In the context of this thesis, national information policy is understood as a policy that can address several issues and have various aims. For example, a national information policy can be used to ensure an awareness of the vital role of information in society (Stone, 1996b: 2); or, it can be linked to the understanding that information is vital for a society. Such a national information policy can serve as an instrument to provide guidance and strategies for the development and use of information resources, systems and services (Yumba, 2002: 240).

Dick (2002a: 138) explains his understanding of an information policy as:

... Information policy is used by international bodies, governments, organisations and individuals to guide their information activities, and these policies are often adapted to the special circumstances in which they are expected to apply (Dick, 2002: 138).

In this study a national information policy is understood as a policy that can be used to address several issues and that such a policy needs to be, like most national policies in democratic countries, developed within the political system of a country, generally in the interest of its public. In the South African context, Dick (2002a: 138) observed, that there are many issues that a national information policy needs to take into account.

A public policy is influenced by the country’s political system, the country’s economic policy, national and international influences (Parsons, 1995: 7; Theodoulou and Cahn, 1995: 1, 2). A further important aspect within South Africa’s political environment, is that the country’s policies must be led the by the principle that social and economic development needs to form the foundation for all government-led policy initiatives (Abrahams, 1996: 1).

Social and economic development would therefore also be relevant with regard to any initiatives or considerations for a national information policy for South Africa (Abrahams, 1996: 1).

1.4.4 Comparative Policy Studies and the Policy Process

In the literature of the academic discipline of Policy Studies, the development of policies is explained as a cyclical policy process. The methodology of comparative policy analysis is summed up below (Par 2.1.2.3):

... the policy process suffers from certain deficiencies. It lacks any normative considerations in the methodology applied to a problem. In the absence of any normative considerations, any available choices and assumptions can be made by the various parties involved in the policy process. Lacking in norms, additional problems are also reasons for deficiencies experienced in the policy process. The shortage experienced in factors such as time and money, different approaches, and different goals, the parties involved in the policy process often struggle to assemble all the necessary information and to analyse what they have gathered adequately. These factors impact on the final policy formulated ... (Heineman, 1997: 26).

The above summary explains that no simple method is in place that can be used to compare the policies and policy processes implemented in different countries, as every country's policies are developed and implemented for the political environment of the country itself. However, although there are thus no normative considerations for the development of policies, countries' policies are influenced by trends in other countries. For this reason, this study draws upon information concerning national information policies and uses in other countries and global developments as influences relevant to national information policy development in South Africa (Kahin and Wilson, 1997: 1). The findings serve as a theoretical base regarding national information policy developments globally, for the interpretation of the situation in South Africa and its information-related issues, based on the theoretical findings, comparative findings in other countries and the national information-related developments.

The investigation was conducted based on the following framework based on Comparative Policy Studies:

- (a) historical data for background and content to follow the evolution of “national information policy” and related developments and influences. This data is useful to gain a more accurate understanding of the current context of the research undertaken in this study.
- (b) Basic facts identified regarding information-related developments and related influences or uncertainties.
- (c) The political environment and political process or public policy in South Africa as reviewed with reference to information-related national policies.
- (d) Future trends considered regarding possible influences and developments (Patton and Sawicki, 1993: 98).

The research approach in the thesis is theoretical and does not aim to establish any causal relationships regarding national information policy and economic, social and cultural development.

1.4.5 Method used in the Review of the Literature Regarding Motivations for the Development of National Information Policy

The three points listed below in Table 1.3, (a), (b) and (c), were used, as taken from the academic discipline of Policy Studies, to form the basic structure for the review of the literature regarding motivations for the development of national information policies. Within this structure relevant aspects typically currently included and discussed in the literature in the Information Sciences literature, were identified and listed, thus facilitating:

- (a) an interdisciplinary framework;
- (b) allowing the coverage of media and communication policy issues;
- (c) considerations regarding value-related aspects of information and information policy issues.

The application of a descriptive model used in public policy, serves as a normative framework (Browne, 1997b: 340) in this study on developments regarding national information policy, both internationally and nationally.

1.4.6 Information-Related Issues Identified within the Framework

In the literature of national information policy, many issues are identified. Braman (2003d: 23) explains that such issues are dealt with in common negotiations or by closely coordinated negotiations. There is, however, no common understanding or definition of specific issue areas identified within the framework of a national information policy. For this reason, the understanding of specific information policy issues depends on the perceptions of actors within the policy process and their actions (behaviours), rather than on the inherent qualities of the issues or subject matter. The perceptions regarding information as an issue area has been subject to many changes and also grown (expanded) in the international information domain during the Information Age (Braman, 2003d: 23), contributing to the failure to reach a standard or commonly accepted understanding or definition of the issues. Rowlands, Eisenschitz and Bawden (2002: 32) list the following issues as historically relevant to national information policy:

- (a) Freedom of access to official information and legal aspects such as privacy;
- (b) Copyright and intellectual property rights.

The above two issues do not, however, serve as a normative or regulatory framework for information policy issues (Braman, 1989: 234), and it was therefore necessary to find an applicable framework for this study (Table 1.3). In the literature on national information policy, the author identified the following seventeen issues, including: the north/south divide (and the digital divide) ; information for innovation and industrial competitiveness; literacy; computer literacy, education and skills training; information society development; telecommunication issues; copyright; industrial property rights; government communication; access to information; censorship; information ownership; freedom of speech; privacy and intellectual freedom; and libraries. These issues were incorporated in the framework developed for this research as they are listed below. The framework (Table 1.3) lists:

- (a) issues that are found in the literature on information-related developments of the current Information Age;
- (b) issues typically addressed in countries around the world, as discussed and observed in the literature;
- (c) the trends on a national level, linked to the value attached to information or the intent of the government for the application or use of information nationally.

Table 1.3 Motivations for the development of national information policy

(a)	<p>Factors such as time, place and historical circumstances - currently typically including</p> <ul style="list-style-type: none"> • Access to government information and the increase in information related legislation; • Information literacy skills required in the Information Age; • Developing of an information society; • The North / South divide (including the digital divide); • Information and competitiveness (scientific information, and indigenous information); • Electronic commerce (e-commerce).
(b)	<p>Information policies implemented in many countries - currently typically including</p> <ul style="list-style-type: none"> • The development of information infrastructure • Copyright and intellectual property (addressing issues such as <i>fair practice</i>, etc.); • Libraries and archives (including policies such as introducing budget restrictions on libraries are making it difficult to provide and ensure access to information for all);
(c)	<p>Policies with a specific application, value attached, or intent - currently typically including</p> <ul style="list-style-type: none"> • Information valued for economic competitiveness • Information valued for social, economic and cultural development in the Information Age (including media and communication policy, and international information flows).

The points listed above (Table 1.3) form the basic structure used and guides the research of this thesis. Relevant literature is reviewed on national information policy development,

internationally and then on a national level with reference to practices in various countries as found in the literature, and then nationally within the borders of South Africa.

1.5 DEFINITIONS OF CORE TERMS

The following main information-related concepts, relevant to the research, are defined in the following paragraphs: *national information policy*; *information*; the *Information Age*; *information society*; *access to information*; *universal access to information*; *literacy*; *information literacy*; *information infrastructure*; *information sector*; *information economy*; *digital economy*; concepts related to information and *economic and social development*.

These concepts are used consistently in the thesis according to the definitions given below.

1.5.1 National Information Policy

The definition of *national information policy* accepted for this thesis (Chapter two, Par. 2.6.2) is that of Duran (1991: 153). According to this definition, a national information policy is

... a set of interrelated principles, laws, guidelines, rules, regulations, and procedures guiding the oversight and management of the information *life-cycle*: the production, collection, distribution/dissemination, retrieval and retirement of information. Information policy also embraces access to, and the use of information... (Duran, 1991: 153)

As explained earlier (Par. 1.4.3), in the context of this thesis, national information policy is understood as a policy that can address several issues and have various aims. For example, a national information policy can be used to ensure an awareness of the vital role of information in society (Stone, 1996a: 2); or, it can be linked to the understanding that information is vital for a society. Such a national information policy can serve as an instrument to provide guidance and strategies for the development and use of information resources, systems and services (Yumba, 2002: 240).

1.5.2 Information

As explained earlier in this chapter, traditionally *information* is understood as that which reduces uncertainty or changes an individual's degree of belief or understanding (Glazier, 1993: 100). In a wider context, information can also be understood to include abridged or

non-scientific material, and emotive and cultural information (Ingwersen, 1992: 85). Users seek information when they are experiencing uncertainty about something and need to reduce the “state of uncertainty”. The state of uncertainty in the user of the information is changed when the user finds the information needed. This information then changes the state of the knowledge of the user of the information (Ingwersen 1992: 30- 31).

Since the 1960s, information tends to be defined as a *special kind of commodity*, in the form of an information good or product, or an information service (Dick, 2002a: 85; Porat, 1977: 4), as applied in the primary or secondary sector (Porat, 1977: 4). Information is a special kind of commodity in the sense that the information that can be sold as an:

- (a) information good or product or commodity in the primary sector where the information is linked to the carrier of the information (a book, video, compact disc) (Evans, 1987: 2; Porat, 1977: 4). Other specific characteristics of information products include the transportability, intangibility, compressability and expandability, storability (in a variety of forms and formats) and manipulability (Evans, 1987: 2). Information products are also governed by intellectual property laws (Dick, 2002a: 84) (unlike other commodities that are owned once purchased from a vendor or supplier).
- (b) information service includes the activities performed in the process of building a collection, organisation, storage or retrieval of information (Dick, 2002a: 86). An example in the secondary sector can be seen where information is embedded in some other good or services and not explicitly exchanged (Porat, 1977: 4); or information services made available as news or editorial research, library and information services and electronic information services from commercial databases.

The understanding of information as a commodity, defines information for its economic value only. However, the value of information is related to its meaning and, therefore, it has both current value and potential value (Meadow and Yuan, 1997: 701). Morales (1999: 2) argues that it is the society that generates and uses the information, who assigns the value and function of that information. Information cannot be instrumental in itself for the achievement of development, but that information has potential value as well as current value within society (Meyer, 2002: 99; Thorngate, 1997: 195). Information does have economic value, but

it is also essential for achieving a desired quality of social, cultural and political life (Rai and Lal, 2000: 231). In this regard, Rai and Lal (2000: 231) explain the relevance of literacy, and a skilled and knowledgeable workforce in the current Information Age.

Dick (2002a: 37) explains that there are two broad categories of definitions of information, emphasising its material attributes or immaterial attributes. Ideally the definition used from the perspective of national information policy should be comprehensive and take into account both the material (economic or commercial) attributes, as well as the immaterial (social and cultural) attributes. In this study, therefore, information is understood as that which can potentially benefit the individual by reducing uncertainty (a) in the individual; (b) society in its social, cultural and political life, especially if such a society is literate, educated, skilled and knowledgeable, and (c) the economy of a country.

1.5.3 The Information Age

Modern society is experiencing a new period in history referred to as the *Information Age*. In this period information is used as a primary resource, making material resources less central to countries' economic performance. Information and the application of information have since the beginning of the industrial era developed as a significant resource in the economic, political and social life of nations worldwide (Eyre, 2003: 219; Batty, 1984: 21; Shillinglaw, 1988). The period since the 1970s has been characterised worldwide by the globalisation of financial activities, the deregulation of financial markets, a growing awareness of the relevance of international business information (James, 1991: 83) and the need for information for development (Burger, 1993: 36-37; Line, 1987: 6). Furthermore, information is increasingly being valued for governmental affairs (Herman, 1996: 34), business and trade (James, 1991: 83), and as a primary resource for society (Yumba, 2002: 237; McQuail, 1999: 255; Glazier, 1993: 100; Bell, 1973). The period is also characterised by considerable advances in the development of new information technology. The information technology referred to here includes machine-based technology and wireless technology used to store, process and transmit information (Miles, 1990: 14). These developments have influenced modern society and introduced a new period in history referred to as the Information Age.

1.5.4 Information Society

The impact of information on economic, social and cultural development tends to lead to, amongst other influences, an increase in the size of the workforce employed in the information sector (Hazel, 1988: 31). Furthermore, the changes brought about during the current Information Age, can give rise to the development of societies where information processes are central. These societies are referred to as *information societies* (Bell, 1973). This term was used for the first time in Japan in the late 1960s (McQuail, 1999: 257; Braman, 1998: 67). One of the characteristics of the information society is that information processes become increasingly central to the economy, and social institutions tend to rely increasingly on information systems for their operations and functioning while the society becomes more and more uncertain as the social environment experiences constant change (McQuail, 1999: 257; Moore, 1999: 702). The constant change brought about by the information revolution tends to continuously force people to try and cope with new developments and changes with ongoing developments such as new information technology applications and information processing systems (Dick, 2002a: 3).

There is no generally accepted definition for the term *information society* (Ricci, 2000: 2), but in this thesis it is used with reference to a society characterised by information-intensive organisations, a significant information sector within the economy, widespread social use of information, and extensive provision of lifelong learning opportunities (Moore, 1999: 702).

1.5.5 Access to Information

The concept of having access to information is strongly emphasised in an information society. *Access to information* requires equity of access to information and its sources for individuals, groups and businesses, and access to the information, the technology, the training and the assistance needed by public institutions to provide this access. This access is also required for the physically challenged, illiterate, and economically disadvantaged (Stone, 1996a: 3). In line with the concept of access to information, we see developments from about 1966 onwards with countries passing legislation concerning “freedom of information”, privacy laws and data protection legislation development (*Freedom of Information Act*, 2004: 1-3; Dick, 2002a: 64; Toffler, 1990: 315, 316), thus indicating a growing awareness of issues concerning information-related legislation, ownership, rights and management.

1.5.5.1 Universal Access to Information

The concept of a global information infrastructure developed in the mid-1990s (Borgman, 2000: 75). The ideal to facilitate global or *universal access to information* developed along with the new information technologies and the ideal of a national information infrastructure (NII) (explained in Par. 1.5.7). This view or approach is, for instance, applied by the European Union, based on the principle that information is a public good that can contribute to the minimum threshold of human need and equality in economic, social and cultural areas and that citizens have the right to have access to network infrastructure and communications services (Venturelli, 1997: 464).

This ideal poses an infinite number of challenges to governments and is, for practical reasons, not currently attainable in the world political climate (Borgman, 2000: 75; Rosen and Carr, 1997: 1439-1445).

Furthermore, the setting of the ideal to enable universal access to information and the provision of access to information for all, has been making it necessary for governments to put measures in place to protect the public and itself from undesirable information and information systems. Examples of such measures include, competition policies, content policies, copyright laws and consumer protection.

1.5.6 Literacy

Illiteracy can be a major problem or hindrance for a society striving to move towards becoming an information society. A person needs to be literate in order to utilise information in written, digital (computer) or other formats. There are a number of ways in which *literacy* is defined. A person can be considered to be literate if he or she is 13 years, and over, with at least Grade six. The adult literacy rate, on the other hand, can be defined as the proportion of the population that can read, write and speak in their home language. In this study, literacy is understood in its most simple form as a person who has the ability to read, write and understand his or her native language and express thought in simple language (Correia and Teixeira, 2003: 312).

1.5.6.1 Information Literacy

Information literacy is a term first introduced in 1974 by Zurkowski, the then President of the US Information Industry Association. According to his understanding information literacy refers to people who are “trained in the application of information resources to their work” (Correia and Teixeira’s, 2003: 312). Later definitions of information literacy are less specific regarding the environment where this type of literacy is needed. The definition accepted in this study is that of the American Library Association (ALA) as defined in 1989:

... to be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information” (American Library Association, cited in Eyre, 2003: 220).

A review of publications on *information literacy* over the period 1973-2002 identified a trend indicating that training for information literacy skills used to be mainly addressed by librarians. More recently information literacy is addressed not only by librarians but also in higher education, businesses and other disciplines (Rader, 2002: 243).

1.5.7 Information Infrastructure

Access to information, in modern-day society, is facilitated by the information infrastructure of a country. The *information infrastructure* of a country forms its national information infrastructure (NII), and includes all the stages in the flow of information and involves the various institutions and facilities active in the production, storage and dissemination of information. Information technology has developed to bring about the convergence of technologies of broadcasting, telecommunications and computer networks. The converging of the technologies has brought about a need for the convergence of regulatory frameworks (Organisation for Economic Co-operation and Development., 1999: 8).

Four sectors form part of the information infrastructure of a country:

- (a) The technology sector (equipment and materials manufacturing and its development, including electronic components, computer equipment, telecommunication equipment, and other electronic equipments);

- (b) Industry and the structures that are developed through growth in this sector;
- (c) The telecommunication sector (including telecommunications and IT services) as it is created and developed;
- (d) The media infrastructure for the provision of information, including electronic and non-electronic media content (publishing, including book publishing, newspaper and periodical publishing, cinema producing, radio publishing, television publishing, database publishing and web portals, software publishing, electronic game publishing, and printing and reproduction services (Bruneau, 2002: 5).

The identification of these sectors is based on the approach held by the United Nations Commission on Science and Technology for Development regarding the governance of information services (Mansell and Wehn, 1998: 232). The information infrastructure and information technology market includes the sectors involved with resources such as information communications, computing and information content. These resources cannot be clearly divided (Riis, 1997: 247). Mansell and Wehn (1998: 231) stress that it is important to clarify the boundaries between the relevant related sectors, namely industry, technology, telecommunication and media content. In instances where the boundaries are not demarcated, the complexity and apparent overlapping of the sectors, can become major stumbling blocks regarding considerations towards the development of national policies for the information infrastructure and the sectors involving technology, industry, telecommunications and media policies.

The information infrastructure can be defined in terms of modern information technology. The following definition of information infrastructure reflects its complexity particularly with reference to the many institutions and facilities included:

“The NII will include current and future public and private high-speed, interactive, narrow-band networks. It is the satellite, terrestrial, and wireless communications systems that deliver companies, businesses, and other public and private institutions. It is the information and content that flows over the infrastructure, whether in the form of databases, the written word, a film, a piece of music, a picture, or computer software. It is the computers, televisions, telephones, radios, and other products people employ to access the infrastructure. It is the people who will provide, manage and benefit from the NII. The term NII is a term that encompasses all these components and captures the vision of a nationwide, invisible, seamless, dynamic web of transmission mechanisms, information appliances and people.”
(The Free Online Dictionary of Computing, 2002).

The above definition does not specifically refer to conventional information providers within the information infrastructure, such as publishers and libraries. Entities such as publishers and libraries cannot be identified or separated within the information infrastructure and are more easily identifiable within the media infrastructure which includes the provision of information, including electronic and non-electronic media content, as mentioned above. Information technology, on the other hand, tends to be more closely relevant to industry, while closer links can be found with media and telecommunication developments.

1.5.8 Information Sector

The information sector can be defined according to one of three possibilities: to be inclusive, partially inclusive, or with a limited focus. The *information sector* can be understood to include (a) only the electronic display, processing, storing and transmission of information; or, (b) the establishments involved in the producing and distributing of information and cultural products; or, (c) the activities engaged in publishing and electronic distribution of information contents (Bruneau, 2002: 1-2). In this study the definition of the Information Industry Association is used. This definition defines the information industry as “...companies interested in the business opportunities associated with the creation, dissemination, and use of information” (Van Gorder, 1988: ii). This definition includes the following four categories of businesses or companies: (a) broadcasting and communication channels; (b) content services and content packages (including publishers, libraries and archives); (c) communication technologies; (d) facilitation services (Schwartz, 1991: 242). According to this definition, for example, information provided and made accessible in the media (the press, radio or television), is created within the information sector, and could have involved any of the four categories of businesses in the creation and production of the information.

1.5.9 Information Economy

The *information economy* refers to a number of changes associated with information technology and its diffusion through the formal economy and society at large. The information economy refers to the whole economy and not only to the information sector in a country (Miles, 1990: 10-11). In a society where information is produced as a primary

product, the information occupations will form a major component within the society. The economy of such a society is an information economy (Porat, 1977: 104-105).

The information economy includes the hardware, software and information services. These are increasing in their strategic value for national economies and various sectors of the economy and occupations where information technology is being used. Miles (1990: 17) links the development of microelectronics and the capability it provides for the processing of information as a central part of the information economy. It is difficult to measure the *size of a country's information economy* mainly due to the lack of statistical data on information-technology-related activities. These activities refer to the production, procurement and applications involving the hardware, software and services in social and economic affairs. Thus, the size of an information economy would include the trade in information technology products (information technology goods and services); expenditure on IT training and management; and basic research and development in information technology and its applications (Miles, 1990: 224-228).

1.5.10 Digital Economy

A concept linked to the information economy of a country is the digital economy. A definition of the *digital economy* refers more specifically to the computing and communications technologies and applications such as the World-Wide Web, Internet connectivity and the resulting flow of information and technology that is stimulating all of electronic commerce and the change in its organisation (Lane, 1999: 317). The information economy is built on the ownership of personal computers (PCs) and the Internet, which facilitates personal communication (e-mail) and information publishing (the World-Wide Web) on a single service platform (Lane, 1999: 317). The benefits in the application of microelectronics in industry are mainly linked to the increase in production, benefits to the production processes, and control and product quality and number of employees required to do the work. However, the more advanced applications of the digital or information economy require skills and financial means for its implementation and use.

In the digital (electronic) economy we find the information technology (IT) processes performed by workers in electronic engineering, programming and network management.

Other workers apply information technology for the processing (control or management) of the tasks they perform (Miles, 1990: 21).

1.6 ECONOMIC AND SOCIAL DEVELOPMENT AND NATIONAL INFORMATION POLICY

The main concepts regarding national information policy and economic and social development are explained in this section, as used in this thesis. They include: national policy; development; gross domestic product and social development.

The governments of various countries have been responding to the changes brought about by globalisation and the Information Age by formulating and implementing a national information policy. A *national (public) policy* is developed and implemented as an action taken by a government authority to commit resources in support of a preferred value (Considine, 1994: 3-4). A useful and appropriate example of a national policy or strategy reflecting a commitment to the value of information, is that of the actions taken in 1994 by the Danish government. The Danish government addressed the ideal to develop an information society by promoting the privatisation telecommunication services. It allocated resources for the development of information technology and education and the deregulation of information technology in Denmark (Riis, 1997: 248). The actions of the Danish government illustrates a government's use of a policy to allocate resources to promote the development of the infrastructure for electronic access to and the uses of digital connectivity, and educate and promote the development of its information society.

All policy documents tend to link economic and social development (Mehrotra, 2000: 22). The governments in countries with national information policies are, therefore, also inclined to value information for the achievement of economic and social development. This was also, for instance, the case in Denmark where the development of an information society was motivated by the potential economic and social benefit in the country.

1.6.1 Government Policies and Development

Development within a country is generally linked to the country's economy. According to this understanding, a country's economic development can be the major stimulus for general development. The economic development of a country is generally measured by the country's gross domestic product (*GDP*). The *GDP* of a country is the sum of the value of the goods and services produced in an economy in a certain period, and economic growth and development is measured by the growth of the *GDP* in an economy.

Social development emphasises basic needs such as education, health and welfare services, nutrition, safety and aspects linked to the country's infrastructure. The main measures applied to social development are longevity and knowledge (Mehrotra, 2000: 21). Knowledge is measurable by quantifying a combination of adult literacy, the mean years of schooling, and income (as mentioned again lower down in this section). Social development means an improved quality of life with the provision of health facilities, food, shelter and education (Yumba, 2002: 238).

Different views are held as to how economic and social development can be realised. Economic growth and development are not always associated with the occurrence of social development although social development can be a major contributor to economic growth (Mehrotra, 2000: 22). Most governments aim to enhance the human capabilities of their populations and, through this aim, strive to achieve economic and social development. Human capabilities are, for instance, enhanced in most societies through education and many countries have laws stipulating the number of compulsory school-going years for children. The schools educate their learners to develop various basic skills. With these basic skills and knowledge the learners are enabled to contribute more towards economic and social development in the business world and society in general.

The human capabilities governments aim to enhance are linked to the building of the population's capabilities to achieve human development (Mehrotra 2000: 21). Governments also tend to develop national information policies to formalise the development of the human capabilities of their populations.

Over a given period the success of a government to achieve its goal of human development can be measured. Human development can be measured in the human development index. According to this index, as presented in the *Human Development Report*, human development is measured by quantifying in equal measure longevity, knowledge and income. The measures or quantities applied are life expectancy, a combination of adult literacy and mean years of schooling, and income (measured by average purchasing power) (UNDP, 1996).

1.6.2 Government Policies and Achieving Economic and Social Development

In the period after the Second World War, socio-economic planning was adopted as an instrument for achieving development. This socio-economic planning was conducted on the basis of socio-economic statistics (Das Gupta, 1984: 209). Reliable indicators of quality in key areas such as education, health, and water are, however, not always available (Mehrotra and Jolly, 2000: 14), which makes it difficult to compare developments in these areas. However, countries are striving worldwide to be economically competitive and to be rated as first world countries. In various regions countries have been developing dramatically over the past decade. These countries are situated in Asia, Latin America and the Middle East. These countries have been experiencing socio-economic development as reflected in reduced mortality rates, improved health and education, and increased incomes for a considerable part of the population (Mehrotra and Jolly, 2000: 14).

Unlike some of the developing countries in Asia, the countries in Sub-Saharan Africa are struggling to overcome their high rate of poverty and other socio-economic difficulties. These African countries gained political independence during the 1960s and 1970s but their socio-economic indicators indicate that their economies are slowing down (Yumba, 2002: 238) and that the poor form even more than half of the populations of the countries in the Sub-Saharan region today.

One of the explanations put forward for the regression in this region of the world during this period is the fact that the government policies in these countries were focused on macro-economic stability over the 1980s. During this period the world economy started to change towards a global economy and the poor countries felt themselves in the disadvantageous

position of having to compete with the countries with strong economies. This led to the weakening of the economies of poor countries, with the devaluation of their currencies, outflow of capital, and resulting drop in production and economic growth. Social conditions also deteriorated in these regions, which impacted negatively on the quality of schooling and health services (Mehrotra and Jolly, 2000: 13-14).

Another reason given for the slow rate in socio-economic growth in the Sub-Saharan region is the lack of reliable and timely information to support development planning during this time. Governments were therefore making decisions on the basis of inadequate or inaccurate information (Yumba, 2002: 238). Their government policies were developed without taking into account the influences of the global economy on their development, failing to develop protective measures for their economic and social development, and failing to address the global changes regarding the role of information, information technology and their impact on the world economy.

1.6.3 Government Policies and Economic and Social Development in Africa

As shown above, a number of different reasons are given for the slow or poor economic and social development in the poorer countries of the world, especially in the countries in Sub-Saharan Africa. Currently, various recommendations are being proposed by various parties such as the African Information Society Initiative (AISI) (*Information and Communication Technologies for African Development*, 2003: 126), the World Bank (1991), and the IDRC (James, 2001: iii), on how to address the problem of slow development in the poorer developing countries. World trends indicate that countries need to (i) participate in the global economy and develop protective measures to protect their own economies and, (ii) become better equipped for the changes brought about in the Information Age and the information economy.

Evidence in successful countries has shown that a comprehensive approach to development planning tends to be more successful than a narrow focus on the development of a specific sector or aspect of a country's development. This is also the approach recommended by the World Bank in its report in 1991. The report stresses two strategies for the achievement of social and economic development: (i) to invest in human capital, and (ii) to move towards

market liberalisation (World Bank, 1991). Another study recommends investment in basic education and health (Mehrotra and Jolly, 2000: 14). The *Human Development Report* of 1996 recommends the need to focus on education and health at the early stages of development (UNDP, 1996). Evidence that this approach has been successful is reflected in the social and economic growth experienced in industrialised countries such as Sweden and Japan, and more recently in other Asian countries, such as Singapore (Mehrotra and Jolly, 2000: 15; Dedijer, 1996: 306).

1.6.4 Government Policies, Information and the Achievement of Development

Both the World Bank (1991) and the study done ten years later by Mehrotra and Jolly (2000) on development in countries, recommend the need to focus on the education and health of their people for the achievement of development. The changes in the global economy over the past two decades and the impact of the Information Age on national economies require countries to pay attention to the development of their people by focusing on national education and health care (Mehrotra and Jolly, 2000: 15; Chronin, 1996a: 192). The information sector is important to both national education and health care.

As a result of the growing awareness of the importance of information for decision-making and society, countries are increasingly developing national information policies to promote, influence, or regulate information and its dissemination. A *national information policy* is a tool used to restrict, regulate, or promote the flow of information in a country.

The development of the population can be achieved or influenced by, amongst other things, reducing or addressing ignorance. Ignorance can be addressed by providing access to health care, basic education and other basic facilities, such as the development of the infrastructure to provide basic needs such as facilitating access to drinking water and sanitation. The policy needs to balance social and economic goals, as explained by James, 2001:

While universal access is still at the centre of the information policy and development debate, a number of other issues are now clamouring for attention. These are shaped on the one hand by the challenges that have been faced by regulators and operators in their attempts to balance social and economic goals, and on the other by the opportunities and constraints to the application of ICTs in key development sectors (James, 2001: iii).

A national information policy in the current age therefore needs to address issues such as the development of the competences of the population to benefit from (having access to) and contribute to national and global information resources. The population of a country needs to be equipped to deal with the challenges of the Information Age such as being aware of international standards, being information and computer literate, and being able to make informed decisions. A government generally aims to act in such a manner that it enhances the capabilities of the population.

1.7 VALUE, LIMITATIONS AND SCOPE OF THE STUDY

The value, limitations and scope of the study are explained in the paragraphs below.

1.7.1 Value of the Research

The government of South Africa has expressed the desire to develop a national information policy for South Africa (*Information Society and Government Initiatives in Economic Development*, 1996). The thesis aims to contribute to the body of knowledge regarding relevant trends linked to the development of a national information policy and information related issues. The subject of the research is relevant nationally and internationally. It also looks at world trends by looking at information-related issues, such as access to information and related policies in various countries as found in the literature. The study investigates the current situation regarding access to information, the flow of information and the value attached to information for development in South Africa.

1.7.2 Limitations and Challenges

Throughout the research the researcher was aware of the major challenges concerning this study, as listed below:

- (a) national information policy research is conceptually underdeveloped (Duff, 2004: 70);
- (b) the scope covered in national information policy as academic entity has not yet been defined in the literature (as mentioned in Par 1.4.1);

- (c) the process of policy development available to the various parties, lacks any normative considerations to guide the process of policy development (Par. 1.4.4; Par 2.4.3);
- (d) a potential lack of objectivity exists in official publications (as explained by Muir and Oppenheim (2002a: 174)), and this created some uncertainties while reviewing the literature published in official government publications and government websites, as government publications tend to leave the reader with information what the governments “wished their readers to read” (Muir and Oppenheim, 2002a: 174). For this reason, this research was conducted based on official publications, such as government reports on national information policy as found on government websites; published articles and book chapters, and newspaper articles. Newspaper articles were included as a very important and accepted resource informing policy-related issues in Policy Studies.
- (e) A further shortcoming concerns the researcher’s review of the country’s relevant information-related legislation, based on available literature which aimed to establish what current policies are guiding the information life cycle in the country and which government departments are involved in the information-related legislation. The review did not attempt to cover all information-related legislation in depth as this would have entailed an entire study on its own. An in-depth study of the information-related legislation could therefore not be attempted by the researcher within the parameters of this study. This understanding is supported by what was found in the literature. In the literature Portugal was the only country found to have attempted to review all its information-related legislation in one study. The study was conducted by a group of researchers to identify the main legal initiatives concerning national information policy in Portugal over the period 1980 to 1992 (Trigo, Correia and Wilson, 1996).
- (f) Another shortcoming in this thesis can be found concerning the review of aspects such as access to information, the state of the information sector concerning the flow of information in South Africa, and the country’s preparedness for the changes of the Information Age briefly. The review or scenario concerning the state of the information sector and the flow and use of information, did not attempt to be comprehensive as such a study could not realistically be undertaken by an individual and is not the main focus of this research. Only one South African-based study was found covering the media in South Africa during the 1990s (Louw, 1993). The study

was conducted by a Task Group and its main objective was to encourage public debate on broadcasting.

- (g) Another shortcoming was that of the potential subjectivity of the research and the research findings. This is a shortcoming typically experienced in policy studies as mentioned in Par 2.2.3.1 (Muir and Oppenheim, 2002a: 174).

The above challenges were addressed by applying a structured interdisciplinary research methodology, thus succeeding in structuring the framework of the research, which facilitated the scoping and potentially more objective findings of the research.

1.8 EXPOSITION

The introductory chapter to the study explained some of the information-related developments of the Information Age as background to the research problem. The main terms used in this study were defined and explained as used and understood in the research. Chapter two explains the context and purpose of a government policy and how a government policy is developed. Government policies are developed within the political environment of the country where the policy is to be implemented. The political environment and the process of policy development for South Africa are explained as background to the problem regarding developments concerning information policy. Background information is given in chapter two on the political situation in South Africa in order to explain the process of policy development in that country.

Chapter three reviews relevant literature regarding national information policy in the Information Age. National information policy is shown to address issues such as global trends leading to the politicisation of information, information-related legislation, information literacy, the development of the information society, information dependence and indigenous information, information and competitiveness, and e-commerce.

Chapter four explains the development of national information policy and the various information-related issues addressed within its scope. The issues are addressed differently in

different countries. Examples of how these issues are addressed are included, also with reference to South Africa.

Chapter five reviews past and current information-related legislation in South Africa and looks at the information sector and access to information in South Africa. This is followed by a brief review of the information sector in South Africa with regard to the media, information content, communication technology (“hardware”) and information technology (“software”). The chapter aims to establish if information is valued for development, based on available literature.

Chapter six reviews developments regarding national information policy and globalisation, with special reference to South Africa.

Chapter seven concludes the study with the main findings of the research, followed by recommendations of topics for future research.

CHAPTER TWO

GOVERNMENT POLICY, INFORMATION AND NATIONAL INFORMATION POLICY

2.1 INTRODUCTION

Chapter one explained the background to the research and listed the research questions to be investigated in this study. It also included definitions and explanations of the core terms relevant to the research. This chapter presents further background to the research as it explains the meaning, purpose and function of government policy, how a government policy is developed, and the policy process within the political environment of South Africa. The chapter also discusses what is entailed in a national information policy and the unique features of this type of policy.

2.2 THE MEANING OF GOVERNMENT POLICY

The main characteristic of a government policy is that it is implemented to provide a way to enforce the exercising power or action to achieve a specific goal based on certain values. On a national level, the power is enforced to be exercised by the government. Considine's (1994: 3) definition of a standard view of public policy reads as follows: "A public policy is an action which employs governmental authority to commit resources in support of a preferred value". However, this definition does not indicate what the intention of the policy is, and for this reason a more complete definition is the following:

... Policy is the continuing work done by groups of policy actors who use available public institutions to articulate and express the things they value (Considine, 1994: 3, 4).

Government policies in South Africa are required to be developed based on the principle that the policy will be in the interest of the country's social and economic development. Government policies are also not developed in a static environment as societies are continuously changing and developing into new directions. The continuous changing nature of society makes it necessary to revise and reconsider policy options with time. This is

particularly necessary in South Africa as the country has been characterised by extensive political and constitutional reform since 1996 onwards (Cloete and Wissink, 2004: 145).

It is generally accepted that government policy formulation and implementation will be carried out in the interest of the population of a country. This approach ties in with Foucault (1994: 21) who argues that the ultimate goal of government centers on the welfare of the population of the country being governed. The theory of government, therefore, concerns things that are governed in a manner that benefits the national population. However, in some instances a policy may be implemented to support some members of society in particular. This means that the policy may give legal rights to particular groups within the society. A policy of Affirmative Action for women (Considine, 1994: 2) or the Black Economic Empowerment (BEE) policy (Turok, 2006: 59) are examples of this type of policy. Thus, a public policy may be formulated with the particular intention to benefit a section of the population in a country. In order to support and benefit the population at large or a particular group, the government will allocate the necessary funding and services towards the development of the policy programme, and the policy will spell out the rights and entitlements granted to the population or particular group addressed by the policy.

Thus, a public policy is expressed as one of, or all of, the following:

- (a) clarification of public values and intentions;
- (b) manner in which money and services are committed or allocated;
- (c) granting of rights and entitlements (Considine, 1994: 3).

The development of government policy is explained in the following section.

2.3 THE DEVELOPMENT OF A GOVERNMENT POLICY

Government policies in democratic countries are generally developed in the perceived interest of the public or interest groups. Most public policies are developed over a lengthy period and as a result of a unique rational process (for each policy) (Parsons, 1995: 7). The process of policy development is part of governmental activity and can result in legislation or in (formal

or informal) executive orders, rules and, or, regulations (Theodoulou and Cahn, 1995: 1, 2). Public policy development takes place within the political system of a country and is influenced by the country's political system, economic policy, and national and international influences. Such a political system may, for instance, be democratic, partially democratic, or autocratic or totalitarian. . Many of the countries in Europe are democracies. The countries in Africa have had various dictatorships, but many are now more democratic. Many of the countries in Africa do not have effective opposition parties, thus allowing the ruling parties the freedom to rule without the restraint of the opposition, as currently seen in a country like Zimbabwe (Bradley, 2002).

2.3.1 The Development of Government Policy in South Africa

A culture of democracy needs to be developed by the people in the country as they participate in the public debate on matters of interest or concern within the public domain. This participation is facilitated in a number of ways, such as the interest groups formed by people who wish to be involved in the public debate, voting for political party representatives, and others. South Africa has enjoyed democratic rule for a period of more than ten years, since 1994. South Africa's constitution has the following traditional features of: (i) inclusiveness (franchise for all adults and the right to stand for political office); (ii) public contestation (protection of political debate); (iii) the rule of law (implying a commitment to obey laws, a commitment which applies to both citizens and government); (iv) responsiveness and accountability (regular elections) (Murray, 1996: 38-39).

South Africa currently lacks an effective opposition because of the dominant role of the ruling political party, the African National Congress (ANC) (Fabricius, 2004: 11). This has resulted in the absence of the basic democratic requirement of a multiparty democracy (Quintal, 2004b: 2). The ANC is thus empowered to determine policy not only on the national level but also on provincial level. The dominant position of the ANC has influenced the political debate in South Africa towards ethnic issues (or Africanism) rather than policy-driven politics (De Klerk, 2004: 9; Haffajee and Stolper, 2004: 5). The policies of the ANC-led Government are also being influenced by the party's tripartite alliance with the South African Communist Party and the Congress of South African Trade Unions (Cosatu) (De Klerk, 2004: 9). This alliance is currently under strain.

A country's policies are generally influenced by its economic system. The political system of a country may be based on a free-market economic system (capitalist), or it could be based on mixed economic principles (capitalist and socialist). A system that allows for uncontrolled free markets is based on profit motive and allows for unrestricted ownership of the means of the production of capital. This policy allows for the rise of monopolies, the extensive inequitable distribution of wealth, and the exploitation of labour. The negative or undesirable aspects of capitalism can be restricted by substantial government regulation. Most of the western economies have implemented mixed economies and use government regulations to direct their economies. A mixed economic system allows for the simultaneous operation of publicly and privately owned enterprises. The Communist countries favour the centralisation of their economies in the hands of the government (MSN Encarta Dictionary, 2006).

South Africa's macro-economic policy of the past ten years has focused efforts towards the stabilising of the national economy, but the government intends to move towards the development of a globally competitive development economy over the next period (Buhlungu and Webster, 2005: 258; Haffajee and Stolper, 2004: 5). The Government's current and continued focus in the country is the transformation of South Africa's economy through Black Economic Empowerment (Freund, 2005: 325; Hunter-Gault, 2004: 5). Currently the national economic policies need to address urgent issues, such as the country's high unemployment rate (Terre Blanche, 2006: 73); and shortcomings in the education and health systems. It is particularly urgent to address the latter, with regard to the high infection rates in the country of the Human Immune Virus and Auto-Immune Deficiency Syndrome (HIV/AIDS) (Bowman, Seedat, Duncan and Burrows, 2006: 91; Govender, 2006: 109; Bernstein, 2004: 13; Mthomboti, 2004: 9).

2.4 THE PURPOSE AND FUNCTION OF A GOVERNMENT POLICY

Government policies are used to address issues or areas of disagreement (dissensus) on matters of (wide) public interest (Doty and Wyllys, 2002: 1). The disagreement or differences could be based on economic, political, social, environmental, cultural or other factors. For instance, free public schooling might be the preferred option for a country, but the country might not have the economic means to provide this and will have to reach agreement on the

school fees that parents will have to pay for the education of their children. A policy to address such an issue needs to be developed by government as this issue cannot be addressed by private institutions or the public on their own. Examples of issues that cannot be addressed by private institutions during the current Information Age would include the formulation of the required standards that should be applied to the information technology infrastructure of a country, or the decision regarding the bibliographic standards required for a national bibliographic information database. Governments respond to matters of public interest such as these and, where it is considered to be the best option, legislation is passed to address the issues.

2.4.1 Motivations for the Development of Government Policies

Policy-making is generally informed and motivated by the following:

- Factors such as time, place and historical circumstances
- Policies implemented in other countries
- Policies with a specific application, value attached, or intent (Gray, 1994: 24).

The above three factors are explained briefly below.

2.4.1.1 Factors such as Time, place and Historical Circumstances

The scope and limits of government policies are determined by factors such as time, place, and historical circumstances (Gray, 1994: 24). The developments of the past will influence new developments and new policies. For example, since the introduction of a democratic government in 1994 in South Africa, policies have been developed to address issues such as Black Economic Empowerment (BEE) and the redistribution of land. South Africa needs to address other issues linked to the economic and social influences of the developments implemented in the past, such as the following two.

- (i) The industrial economy of South Africa reflects an imbalance in its production of industrial goods (Bernstein, 2004: 13). One aspect of the imbalance is, for instance, that in some areas industrial goods of a high standard are produced, while

there is a limited production in inexpensive goods for the mass market. This has resulted in a limited capacity to produce manufactured goods for the mass market for export and trade making it necessary to increase the international competitiveness of South African-produced goods (Makgetla, 2006: 1; Rodrik, 2006: 25; Blumenfield, 2005: 427). Rodrik (2006: 25) explains that South Africa has begun to de-industrialise its economy resulting in the decline in the manufacturing sector. This has not been in the interest of the country's economy as it has contributed to the weakness in particular of export-oriented manufacturing depriving the country from growth opportunities Rodrik (2006: 25).

- (ii) The patterns of South African society have resulted in an extremely unequal society in economic and social terms as a result of apartheid laws (Freund, 1999: 431-441). This has resulted in an imbalance in the education of the population, infrastructure developed, pockets of high development in contrast with poorly developed areas and extreme poverty.

Policies need to address social and economic issues such as the above.

2.4.1.2 Policies implemented in other Countries

Government policies may also be motivated by the policies in other countries. One example of this trend is the development of the *Freedom of Information Act*, developed and implemented first in the United States of America in 1966. The legislation defines the rules for governmental secrecy and public access to government information and became a global trend. Denmark and Norway followed this example and issued their *Freedom of Information Acts* in 1970, followed by France and the Netherlands in 1978, and Canada and Australia in 1982 (Wikipedia, 2006b; Toffler, 1990: 315-6). To date, over 60 countries have developed some form of freedom of information legislation (Wikipedia, 2006b). Some countries introduce additional legislation to define a legal process by which government information is available to the public, such as the U. S. A. access laws. These laws may also be described as “open records” (especially in the United States). In many countries, “privacy” or “data

protection” laws may be part of the freedom of information legislation as these concepts are often closely tied together in political discourse (Wikipedia, 2006b).

South Africa passed its Freedom of Information Act in 2000. In South Africa the *Promotion of Access to Information Act* (*South Africa Yearbook 2005/06*, 2005: 722). The Act promotes transparency and effective governance of all public and private bodies (*South Africa Yearbook 2005/06*, 2005: 432). This act is intended "To give effect to the constitutional right of access to any information held by the State and any information that is held by another person and that is required for the exercise or protection of any rights" (Wikipedia, 2006b). Within the South African context, the right of access to *privately* held information is an additional feature, as most freedom of information laws only cover governmental bodies (Wikipedia, 2006b).

2.4.1.3 Policies with a Specific Application, Value Attached, or Intent held by a Government

Governments need to develop policies for their own countries according to their circumstances, values, and national or international developments. Government policies are not always developed or implemented successfully. Not all government policies are developed in the national interest, such as policies which:

- (i) favour a sector of the population to the detriment of the rest of the population (such as the apartheid policy in South Africa under the previous government);
- (ii) are developed for purely economic reasons such as the policy in China which discouraged parents to have more than two children. This policy was introduced for economic reasons only, but had a socially undesirable outcome and has resulted in an unbalanced sex ratio, with fewer males than females (MSN Encarta. 2006. *China.*);
- (iii) are based on misinformation (such as the policy in Nigeria not to inoculate babies against polio with the result of renewed outbreaks of this disease.) (Hondros, 2005);
- (iv) are not implemented in time (such as the government’s delay in the implementation of a policy to provide treatment to sufferers of the Human

Immune Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) in South Africa where HIV and AIDS is the cause of a national epidemic. More people would have been helped if the policy had been implemented sooner and more widely.);

- (v) are developed in the interest of the government, such as currently in Zimbabwe with the group favouring President Mugabe's rule (such as the land redistribution policy which forces white farmers off their farms in order to give land to black farmers in the country) (Bradley, 2002).

Government policies should also be motivated by the expectations of society for the government to intervene on public issues in the interest of the public good (Gray, 1994: 24). In such instances, a government should decide on the need for public policy development or take alternative measures. This is not always the case, as governments can act purely in their own interest and fail to meet the expectations of their public. One such example is the information policy of the Soviet Union not to disclose the failure at the Chernobyl nuclear station (Toffler, 1990: 318). Although the failure was the cause of a major ecological disaster threatening the lives and health of people living in the area affected by the radioactive fallout from the reactor, the Soviet authority chose not to alert the world or its citizens about it at the time of the incident.

The above examples indicate that not all public policies are developed in the interest of the majority of the citizens. The failure of governments to act in the interest of the public is reflected in the examples of the countries referred to in the above paragraph. The failure of public policy is more often due to governments in the pursuit of political and economic gain (Othman and Willams, 1999: 70).

2.5 THE DEVELOPMENT PROCESS FOR GOVERNMENT POLICY WITHIN SOUTH AFRICA

The ruling function or governmental process is performed within the government structure. The private sector institutions (or civil society) constitute the other sector within a modern country. The government structure is constituted as a group of hierarchically structured institutions within the public sector.

The focus of this study is on democratic countries with specific reference to South Africa as a democratic country. Democratic governments establish public institutions within their political, legal or constitutional structures. It is generally accepted that these institutions strive to serve the collective goals of the country. Public and private institutions co-operate in the provision of goods and services. Their co-operation is facilitated by regulations and laws (*Politics in developing countries*, 1995: 33). The government rules with authority according to the laws and policies it has formulated and implemented. These laws and policies represent the expressed meaning given to the intention of the legislature and formulate the guidelines for the practices and functioning of a society (Cloete, 1996: 6).

Policies or laws may be formulated in response to external influences or events, or in response to the pressure exerted by interest groups within the country. The process for the formulation of a policy should ensure that all parties are in a position to influence policies if they wish, and the government needs to ensure that full factual information is obtained, together with openness to all to ensure input by all parties in the formulation of policies (Cloete, 1996: 147).

The government structure of South Africa consists of a parliament and a president as the head of parliament. Parliament is the legislative authority of South Africa and has the power to make laws in the country in accordance with the Constitution. The parliament has two houses: the National Assembly (with about 400 members, elected through a system of proportional representation for a term of five years), and the National Council of Provinces (with 90 members). The National Council of Provinces (NCOP) provides a national forum for public consideration of issues and by passing legislation. The president has executive power. The country has nine provinces and the Constitutional Court is the highest court in the country (Chaskalson, 1996: 10-12). The NCOP cannot initiate a Bill concerning money, for instance, it cannot make decisions such as the allocation of funds for a specific purpose. Any Bill may be introduced in the National Assembly. A Bill passed by the National Assembly must be referred to the NCOP for consideration (Government Communications, 2002: 1-2).

2.5.1 Interest Groups and the Articulation of an Interest

Interest groups may exert pressure on a government to address issues. An interest group can demand the development of a public policy. It will express its demands by articulating an

issue within the political environment of a country. It can do this through physical demonstrations, personal connection channels, or elite presentation (Almond and Powell, 1966: 80-83). Almond and Powell (1966: 86-87) identify four ways in which the interest can be articulated:

- (i) explicitly, latently (by creating a mood), directly, in particular, or in general;
- (ii) by the degree of specificity of demands – particular or in general;
- (iii) instrumental, or affective;
- (iv) pragmatic / ideological.

The political communication structures normally determine to what extent access is available for the articulation of interests in the political environment (Almond and Powell, 1966: 91). Interest groups play a major role in the development of public policy as they interact continuously with the policy-makers and form a link between the policy-makers and the individual. The study of policy formulation indicates that the processes for different policies will differ across different domains even within the same political system (Dobuzinskis, Howlett, and Laycock, 1996: 195).

Advisory bodies can be attached to the legislative, governmental and administrative institutions of a government. Advisory bodies act as a formal interest group and consist of citizens who represent the public. These advisory bodies formulate policies within a particular field and aim primarily to serve the general interest of the population. These policies are statements of intention to perform specific functions (Cloete, 1996: 8).

The interest groups can articulate their interest in one of three ways: namely, through physical demonstrations, personal connection channels, or by means of elite representation (Almond and Powell, 1966: 80-83). The articulated idea can then be channelled through one of three media:

- (i) formal and institutional channels of access, e.g. the mass media;
- (ii) political parties;
- (iii) legislatures, bureaucracies and cabinets (Almond and Powell, 1966: 80-83).

Much of the public debate in South Africa takes place in the law courts as well as partially within Cosatu, the Communist Party, and the African National Congress, the current ruling party in Parliament. The press is still trying to define its role within the new democracy as discussed in chapter five. Ideally the media debate should take place in the public domain where issues can be debated openly.

2.5.1.1 Interest Articulation and the Media in South Africa

Within the current political environment, interest articulation in South Africa has not fully developed to take place through formal and institutional channels of access, such as the mass media, as explained in chapter five.

In South Africa the political parties have proportional representation in government. The party members in parliament influence the minister or president to consider the need for a policy. The considerations can be taken to the Cabinet and may then result in legislation after approval in Parliament. It may then be considered as a Bill and then, if approved, enacted by Parliament (Ginwala, 1996: 204). The National Assembly works together with parliamentary committees and it is also in the National Assembly where legislation is discussed. South Africa does not currently fully benefit from being a multiparty democracy due to the dominant position of the ANC (more than 70 per cent of the seats), both in Parliament and at provincial level. This situation has implications for the development of government policy, as the minority group of the opposition parties cannot perform its important role in the policy process by articulating policy alternatives. The minority parties can articulate and debate issues, but may not have the power to stop legislation they do not agree with. The national political debate will therefore be inclined to move out into the structures of civil society, and civil society will rely on the media to act as the platform for the political issues that are debated.

One fairly recent example of an effective group that came forward from the civil society in South Africa is the Treatment Action Campaign (TAC). This action group confronted the Government on its policy regarding the delivery of free drugs for the treatment of AIDS sufferers in the country. Government has changed its policies and agreed to provide for this

treatment for the many sufferers in the country (Schneider, Barron and Fonn, 2007: 304). Another issue currently debated in South Africa, is the move to legalize same-sex marriages. Parliament approved the legislation of same-sex marriages in December 2006.

2.5.2 Interest Aggregation

The demands of interest groups are converted into policy alternatives by the political parties of the country. The function of converting demands into general policy alternatives is called aggregation (Almond and Powell, 1966: 98). The policy statements of political parties are in fact the interest articulation of demands set by interest groups.

Political parties play an important role in aggregating individual opinions and, also, the interests of groups such as members of a political party (Bekker, 1994: 217). With the 2004 national election in South Africa, the African National Congress (ANC) gained the majority of the seats in the National Assembly. This means that any Bill introduced in the National Assembly will need the approval by the ruling party, the ANC representatives, before it is referred to the National Council of Provinces for consideration, as also explained earlier.

2.5.3 The Policy Cycle

According to the policy cycle approach, policy-making is a dynamic process during which the policy is developed and improved. This developmental cycle involves interaction among many participants who may be holding different points of view (Theodoulou and Cahn, 1995: 8). Parsons (1995) identifies four phases within the policy cycle. Each of the four phases forms a substantive stage or part of the policy cycle in the process of policy development. Every phase within the policy cycle informs the public debate. The public debate is never static and during each phase new issues come to light, new arguments become topical, new audience changes take place and new authors become involved in the writing on issues.

The four phases identified by Parsons involve the following stages and issues:

Phase 1: Technical Phase – Technical issues are involved – Engineers, scientists and economists are actively involved.

- Phase 2:** **Societal Phase** – Social problems and issues are of concern – Social theorists and journalists are involved.
- Phase 3:** **Non-technical Phase** – Institutional, political and distributional issues are involved – Social scientists are actively involved.
- Phase 4:** **Social Science Phase** – University-based scholars become involved in the policy cycle with a Social Science approach, reviewing the outcome of the previous three phases, identifying other relevant issues.

Although the four stages are identifiable, Parsons states quite clearly that in the real world, “... there are no defined or distinct phases in the product cycle” (Parsons, 1995: 10). Furthermore, as explained in chapter one, the policy process suffers from certain deficiencies. It lacks any normative considerations in the methodology applied to a problem. In the absence of any normative considerations, any available choices and assumptions can be made by the various parties involved in the policy process. Lacking in norms, additional problems are also reasons for deficiencies experienced in the policy process. The shortage experienced in factors such as time and money, different approaches, and different goals, means that the parties involved in the policy process often struggle to assemble all the necessary information and to analyse what they have gathered adequately. These factors impact on the final policy formulated (Heineman, 1997: 26).

The process of political communication depends on the degree to which interest groups have access to the political elites who are engaged in the making of relevant decisions. Three main interest groups are identifiable, and these are outlined briefly below.

- (i) Anomic interest groups
Anomic interest groups are generally represented by individuals. These groups exist with limited levels of organisation, and the individuals tend to act according to a pattern of intermittent articulation.

- (ii) Institutional interest groups
Institutional interest groups are organisations such as political parties, and legislatures with designated political functions other than interest articulation. Political parties are generally considered to be the most important mediating institutions between the citizenry and the government. Political parties play an

important role in the influencing of laws, policies and coalitions (*Politics in developing countries*, 1995: 34). The political parties identify conflicting viewpoints among groups and problem areas within society that may influence the functioning of the political system.

- iii) Associational interest groups
 These interest groups include trade unions and other similar associations (*Politics in developing countries*, 1995: 34).

The following section reviews some of the main motivators for the development of national information policy in the Information Age.

2.6 MOTIVATIONS FOR THE DEVELOPMENT OF NATIONAL INFORMATION POLICY

The development of national information policy in the Information Age, is to a large extent linked to the development of modern information technology (James, 2001: iii; Morales, 1999: 1; Menou, 1991: 53; Slamecka, 1979: 1), as stated in the now dated publication *National Information Policy: Report to the President of the United States*:

...The advent of computer and communications technology is causing a quiet revolution to occur in the field of information. It is quiet because the signs of change are subtle and not always visible. It is a revolution because the rate of change is very rapid ...information technology has brought about problems as well as opportunities... (*National Information Policy: Report to the President of the United States*, 1976: 3).

The development of information technology in the current Information Age has, amongst others, significantly changed the way in which information is handled (processed) and managed. Information technology has given rise to the development of information technology hardware (such as computers and computer networks); information processing software (such as computer programmes and programming for specific applications); and, electronic information content and on-line access to information content. Furthermore, the emerging technologies have created:

- the need for skills to manage the computer hardware (information technologists);

- skills to write and manage computer programmes and processing software; and,
- the need for advanced information literacy skills.

The development of information technology in the Information Age has moved information into the political arena regarding the need for governments to address national issues concerning access to information and information infrastructure development, information content and control, and the developing information economy. An important aspect concerning the internationalisation and development of information infrastructure and telecommunication facilities, is that these facilities are subject to government control by national governments. However, although the information infrastructure and telecommunication facilities are controlled by national government, the information content is not bound by country or place with the development of the World-Wide Web and Internet, although countries such as China, have put effective firewalls in place restricting access to certain information in that country. The on-going increase in the uses of information and information technology and communication are also forcing governments to pay attention to information-related issues, such as information secrecy, public access and privacy (Muir and Oppenheim, 2002b: 263; Toffler, 1990: 315).

2.6.1 Policy Motivated by Developments in Time, Place and Historical Circumstances

Information-related developments, during the current Information Age have influenced the value attached to information, with the result that information has become considerably more *politicised* than in the past. Reasons for this include developments such as: the wide usage of personal computers (PCs) linked by computer networks which make it easier to merge databases, allowing personal information to flow across jurisdictional boundaries; the variety of technologies that can be used to track the movements of people and things; and, data can be gathered surreptitiously from individuals or sold by third parties (Agre and Rotenberg, 1998: 3). Information technology made it possible for information acquired and organized in the public domain, to be made available to all. This information is valued increasingly for its potential for the achievement of social and economic development (Meyer, 2002: 97; Morales, 1999: 2), as the global economy continues to rely more heavily on data, data processing, information and knowledge.

The politicisation of information in the Information Age is linked to a shift in the balance away from the use of military power (forces) to the use of information (knowledge) in politics for financial and political dominance. The shift in the use of information in politics as the dominant element in modern politics and economies, was observed by researchers such as Chronin (1996b: 191), Thorngate (1997: 195-200) and Toffler (1990: 313). Globally, information-related issues have been moved into the political arena, addressing issues such as press freedom, freedom of expression, data protection, and privacy (Wikipedia, 2006b). Governments tend to have to address issues such as those referred to above. The politicisation of information is influencing governments to introduce legislation to address a wide range of information-related issues. The wide range or spectrum of issues covered under the umbrella of information policy makes it necessary to formulate several information policies in order to manage information in one country, such as telecommunication, telecommunication infrastructure development, the regulation of information content (such as the mass media) and access to information. Hill (1990: 20) identifies seven policies within the information policy domain: patent law; data protection law; telecommunication regulations; libel and slander laws; freedom of access to official information; providing for access to agricultural extension services, or distance learning resources. The need to address issues such as information privacy, piracy, telecommunications policy, computer security, education and insider trading, and many others, are making the regulation and legislation of information-related issues increasingly relevant in the current Information Age.

2.6.1.1 Access to Government Information and data protection

Access to information, addressed under the umbrella of information policy, seems to address four issues: (a) access to government information; (b) electronic access to government information; (c) privacy rights; (d) data protection or proprietary rights (Crawford and Stimatz, 2000: 16).

- Access to government information

Citizens need access to government information as this allows them to obtain information about government policies and issues, necessary for the citizens to participate knowledgeably

in the government of a country (Crawford and Stimatz, 2000: 16). In this regard, the *Freedom of Information Act* (FOIA) is understood to represent the legal basis for public access to the records of the executive branch of government (Crawford and Stimatz, 2000: 17).

Seeking to address knowledge-related issues like secrecy, public access to government documentation, and privacy, the government of the United States passed its *Freedom of Information Act* in 1966. This Act broadened the right of citizens to access government documents. The concept of the right of citizens to have access to information influenced other countries, such as Denmark and Norway (in 1970), France and the Netherlands (in 1978), Canada and Australia (in 1982) to implement a *Freedom of Information Act* (Toffler, 1990: 315-316).

As stated in Par. 2.4.1.2, the *Promotion of Access to Information Act (Act 2 of 2000)* came into effect in South Africa in 2000 (Government Communication 2002). This Act came into effect as a direct response to Section 32(2) of the Constitution of South Africa, regarding the right to access to information. The right to access to information requires that the government "... implements laws that make information pertaining to both public and private bodies more accessible to all". The Act stipulated the requirement to compile a manual, by 28 February 2003 that provides information on both type of information and records and the requirements to be in compliance with the Act (PricewaterhouseCoopers, 2003: 1).

The United States also enacted the *Electronic Freedom of Information Act Amendments* in 1996 (Thefreedictionary, [2004?]). The United Kingdom has not completed the final version of its freedom of information Act and the full provisions of the Act were enforced in January 2005.

After the terrorist attack in the U.S.A. on September 11, 2001, the *Freedom of Information Act* (FOIA) in the U.S.A. was revised, in order to limit the ability of the general public to keep watch on how elected government officials govern. The revised FOIA required the creation of a new cabinet level department to coordinate homeland security, allowing for the potential to claim private sector information to be critical for the country's security and not available to the public (Sleeman, 2004: 21). It can be reasoned that the new legislation in the U.S.A. has restricted the right to privacy, with the introduction of "... bills such as the *Patriot Act* and the

new government organisations such as the United States Department of Homeland Security, and the Information Awareness Office (Privacy, 2006: 5). According to Sleeman (2004: 22), many other governmental organisations have also seized the opportunity observed in the tightening of access to information in the U.S.A. to limit access to information required by citizens.

- Electronic access to government information

Governments around the world appear to be committed to e-government (Sleeman, 2004: 22), and provide Internet sites for the delivery of electronic information and services to citizens. Governments' efforts to deliver electronic information to their citizens in this manner have been found to be not fully successful as these Internet sites do not provide fully in the citizens needs and desires (Sleeman, 2004: 22; Lor, 2002). The situation in South Africa is discussed later in this thesis (chapter four, Par. 4.3.2).

- Privacy rights

Other laws, such as laws defining the *right to privacy* were passed in countries such as Sweden (in 1973), the United States (in 1974), and shortly afterwards in Canada (1983), Denmark, France, and West Germany (Toffler, 1990: 315-316). The European Union has the most stringent information privacy laws and framework for the protection of personal data.

Braman (2003d: 37) observed the existence of the tension between the desire for personal and communal privacy and related information policy. This tension becomes particularly obvious under exceptional circumstances, such as during the 9/11 terrorist attacks in New York in 2001. In recent years, South Africa has also been experiencing stricter laws with regard to privacy of information. The government has enacted the *Electronic Communications and Transactions (ECT) Act*. This act governs all electronic communications and transactions in the country. The *Regulation of Interception of Communications and Provision of Communication-related Information Act (RICA)*, Act 70 of 2002, gives employers right to access information on the personal computers of employees and their e-mail. Government also has the right to access e-mail and to intercept conversations on cellular telephones in the country. The government has also brought in the *Film and Publications Amendment Bill 2006*

making the media subject to pre-publication censorship and the right for government to interfere with publications, the press and broadcasting.

- Data protection or proprietary rights

Other legislation was also implemented, such as *data protection* (Toffler, 1990: 315-316). *Data protection* is a set of acts or regulations placed over personal record-keeping practices that are to be supervised by a public authority, independent of central government ministries. The purpose of this legislation is to protect personal data against unauthorised access by the implementation of administrative, technical or physical measures (Pipe, 1987: 205).

Towards the end of the 1980s, various countries' or regions' *data protection policies* differed in scope, application and control. Agre and Rotenberg (1998: 101) explain that:

- (a) the European countries applied the same statutory principles to both the private and public sector, while the United States, Canada, Australia and Japan preferred to regulate only the public sector's practices and to govern the private sector by a few "... sectoral laws and voluntary codes of practice";
- (b) Most countries chose to make no distinction regarding laws applicable to computerised (automated) personal data, and manual record-keeping systems, with the exception of countries such as Sweden, the United Kingdom and Austria (Agre and Rotenberg, 1998: 101);
- (c) The policy instruments used in the regulation of these policies differed, with stricter licensing and registration regimes in force in Sweden and Britain, to more advisory and less regulatory systems in countries such as Germany, Canada, and Australia (Agre and Rotenberg, 1998: 102).

According to Agre and Rotenberg (1998: 100-103) data protection and privacy have converged and data protection is now extensively regulated. By the end of 1996, of the 24 member countries of the Organisation for Economic Co-operation and Development (OECD), only six countries had not yet enacted a comprehensive privacy law for the application of fair information principles to all organisations that process personal data. These countries include

Canada, Australia and the United States. In the United States the public sector is largely regulated through the 1974 *Privacy Act* (Agre and Rotenberg, 1998: 113).

The growth in the access to electronic data available on the World-Wide Web over the past decade has necessitated measures to ensure data protection to address the threat of cybercrime and the spread of computer viruses onto the network.

2.6.1.2 Information Literacy Skills in the Information Age

Information is needed for informed decision-making processing and decision-making for planning and development (Yumba, 2002: 238). Information is needed, for instance, to conduct an environmental-impact study to assess the suitability of a particular area for consideration for industrial or commercial development. This information is a prerequisite for a proper assessment of the viability and suitability of any development for a given application or area. The best decision at the time can be taken provided the decision is based on relevant, accurate, current and comprehensive information. During the current Information Age, information content is exchanged increasingly in electronic format on the World-Wide Web, or the Internet. This allows information to be freely available to anyone who has access to this resource. Furthermore, computers enable users to manipulate complete data sets not previously possible. The quality of the information is not controlled, edited, verified for accuracy, comprehensiveness, or correctness of content or interpretation. The user of the information needs to have the ability to evaluate the information used for decision-making. The electronic age requires a level of information literacy necessary for informed decision-making as more information becomes more freely available without any standard set by a publisher as generally applied in the print media (Eyre, 2003: 219).

Information literacy forms an intellectual framework for understanding, finding, evaluating, and using information. It involves critical reasoning and discernment. (American Library Association. Association of College and Research Libraries, 2000: 3). Thus, information literacy has become accepted as a prerequisite in this Information Age, requiring high levels of literacy, critical thinking, problem solving, personal, social and communication skills, library and computer literacy (Eyre, 2003: 221).

Information overload (having too much information) and the possibility of not retrieving essential information for decision-making is another potential problem for informed decision making. Machine or electronic processing reduces information into data. Computerised information processing is very simplistic in comparison to human mental activities in the sourcing of information resources. The search and retrieval of computerised data is mechanical. Mechanised searching does not allow for the interpretation of meaning, and relevant information may be “lost” due to a lack of human interpretation or intervention in the search for and retrieval of relevant information.

Another difficulty in the gathering of information for decision-making is to know when all relevant information has been obtained, thus ensuring that all the important or relevant facts have been taken into consideration.

Literacy and information literacy is addressed to a large extent, by the education sector in a country (Nassimbeni and de Jager, 2000: 193).

In South Africa the education and training in literacy and information literacy are two issues for concern. South Africa’s illiteracy rate is reported to be very high (Organisation for Economic Co-operation and Development (OECD), 2003: 277). According to the OECD, 29 per cent of the adult population in South Africa is functionally illiterate. A survey done in 2000 also revealed that nine year old children in South Africa have among the worst literacy and numeracy skills in Africa (Organisation for Economic Co-operation and Development, 2003: 277). Information literacy in South Africa concerns existing shortcomings regarding digital access to information and the distribution of electronic access to information and the uneven distribution of this access in the country, as well as the lack of school libraries and training in information literacy at schools and many universities in the country. These two issues are discussed further in chapter four, Par. 4.3.3.

2.6.1.3 Developing an Information Society

Countries like Japan and Singapore have linked the potential value of the provision of electronic connectivity and access to information to the population to benefit higher growth in the achievement of national economic and social development. This approach is linked to the concept of developing an information society. According to Moore (2004: 271), the “... goal of creating an information society is shared by the capitalist states of North America as well as the communist states of China and Viet Nam” .

Knowledge and information were accepted as the future key to economic growth in Japan as early as 1970 (Toffler, 1990: 9). On the basis of this approach to information, Japan implemented an information strategy over a number of decades to become world leaders in science and technology, based on a worldwide information network that they developed for this purpose (Harbulot, 1996: 57). According to Harbulot (1996: 57) the Japanese mastered the flow of information in that country with the way information is communicated, and knowledge is shared, within the business structures of enterprises, as well as socially. The information flow within Japanese companies and their employees, and the network of worldwide information resources formed the foundation of the country’s remarkable economic growth and success over a period of 45 years. As mentioned in chapter one (Par. 1.5.4), the linking of the value of information to the collective benefit of a society or country as in the case of Japan (Chimura, et al., 2000) has given rise to the concept of the “information society”. Japan has, for instance, since 1995, been participating in the 11 pilot projects endorsed by the G7 ministers in Brussels. These projects include the Global Inventory, Global Interoperability for Broadband Networks (GIBN), and the Electronic Libraries and Global Marketplace for SMEs. An information society (like that of Japan), has distinctive economic, social and cultural characteristics as listed below:

- Economic characteristics

Much of the work in the country concerns information processes, the leading industries are based on advanced scientific knowledge, and a higher percentage of the work force is employed in information work. Business organisations are also dependent on electronic communication for the integration of their processes. These

organisations use information to increase their efficiency, stimulate innovation (Economic Commission of Latin America, 2005: 9, 10; Moore, 2004: 271-272).

In countries where governments give high priority status to the development of electronic communication, national ICT expenditure as a percentage of GDP will be high. Development of electronic communication is linked to the development of information societies. This development can be encouraged in various ways, such as by: (a) reducing the purchase price of equipment and the cost of network access; (b) the public sector needs to use digital technologies to improve efficiency and transparency by making documents digitally accessible to all concerned; (c) institutions can make use of digital networks to provide digital access for the purchase of goods and services, providing their clients opportunity for direct access for electronic transactions and information on their products to clients; (d) digital networks are needed in the form of public access, such as the Internet, Internet service providers, or private access such as personal computers and cellular telephones (Economic Commission of Latin America, 2005: 9, 10).

- Social characteristics

Education and training in skills are regarded as very important for the success of an information society. Much time is spent on education and training and on the resources needed for education (Moore, 2004: 271). The Japanese government has, for instance, worked since 1970 to develop and create its information-based economy and is working very hard to expand its general knowledge base as a nation (Chimura, et al., 2000; Dedijer, 1996: 309; Toffler, 1990: 425-427).

- Cultural characteristics

Everyday life in information societies is also characterised by some dependence on computers and information technology. This dependence renders the information society vulnerable to the threat of any system failure (McQuail, 1999: 257) and related concerns (Organisation for Economic Co-operation and Development, 2000: 23).

The concept of an *information society* originated in Japan and has become accepted as an ideal in many other countries (Webster, 1996: 74). The ideal to develop towards an

information society was also expressed by the National Information Technology Forum (NITF) in South Africa in 1995. The NITF was disbanded in 1997. From 1997 onwards the Department of Communications has been given the lead in guiding South Africa towards becoming an information society (*Information Policy Handbook*, 2003:1-2). More recently the African Union has also expressed the desire for Africa to become an information society while South Africa began to address the concept of the development of an information society in principle since 1996 (Nassimbeni, 1998: 14).

2.6.1.4 The North / South Divide (including the Digital Divide)

The North / South divide refers to the dependence of developing countries in the South on information originating in the developed or First World countries of the North. The developed countries dominate the publishing of books, research articles and online-information due to factors linked to a higher rate of research output, high literacy levels, more advanced reading culture, well developed information infrastructures, financial support by government and industry for research, well-developed publishing infrastructures, and a large number of research libraries. This has resulted in the situation that most of the information that becomes available on the World-Wide Web and other media, originates from the developed world. This trend leads to the information dominance of the First World countries, a continued information dependence in developing countries, and a limited access to indigenous information in developing countries and developed countries.

Other relevant aspects contributing to the North / South divide include the different languages spoken in the developed and developing world are being overshadowed on the Internet with English as the preferred language for Internet communication. The outcome of the dominant position given to English on the Internet is that people who are less fluent in English might be disadvantaged in understanding the information accessed. Cost of publications and online access to information is more expensive in most of the developing countries, while developed countries, such as the U.S.A. provides free access to Internet connectivity. Publishing costs are also much higher in most developing countries as there are smaller book-buying markets due to affordability and a non-reading culture. Less funding is also available in most developing countries to provide for adequate budgets for the establishment and running of

public libraries accessible to all. There is also less money for them to purchase books for purposes of research or general reading.

Africa is described by Mchombu, Neill and Sturges (1996: 121) as an “... extreme case of information dependence, rooted in and underlying cognitive dependence acquired in the colonial period”. Matula (2004: 94) explains the inadequacy of local content by referring to various statistics. For example, by 2003, Sub-Saharan Africa had about 0.2 per cent of global Internet hosts compared to 79.6 per cent for the Americas, 10,84 per cent for Europe, and 7.5 per cent for Asia Matula. Awareness of the significance and the importance for countries to introduce policies to oversee the introduction of digital access via information technology for transborder data flow and communication, was expressed as the focus of the *Intergovernmental Conference on Strategy and Policies for Informatics (SPIN-I)*. This conference, held in Torrimolinos, Spain in 1978, was sponsored by the United Nations Education and Scientific Organisation (UNESCO) and the Intergovernmental Bureau for Informatics (IBI). The conference paid attention to both the content and telecommunication infrastructure necessary for the TBF of information (Pipe, 1987: 203-4). Despite the expressed awareness of the significance of international communication connectivity and networks at the SPIN conference which was attended by 78 countries, almost thirty years ago, many developing countries are currently still struggling to develop their telecommunication infrastructures to enable and extend Internet and WWW-networking connectivity countrywide. Shortcomings in the communication networking connectivity have contributed to the so-called digital divide. The *digital divide* can be viewed in terms of inequitable access to information and communication technology, such as personal computers (PCs), Internet connections, telephones, by individuals or groups in a country (Matula, 2004: 89).

2.6.1.5 Information and Competitiveness (Scientific Information and Indigenous Information)

Human knowledge is central to man’s existence and survival. De Beer (1996: 117) explains that the electronic media of the Information Age have influenced man’s domain of knowledge, human thinking and intellectual work. The prosperity of societies in the Information Age can depend on their capabilities to source, find and use the information that is available in the media for their particular need or application (De Beer, 1996: 118). Yumba

(2002: 238) and Line (1987: 13) link access to information to societies' competitiveness and see access to information as an essential and advantageous tool for nations to compete or collaborate as they maximise the use of available national information resources. In this sense, Toffler (1990: 313) views the apparent relevance of access to information as a shift in the global arena towards an era of info-politics with complex information-related issues such as information piracy, information security, and electronic fraud (Yumba, 2002: 241; Browne, 1997b: 347; Harbulot 1996: 57).

The neglect of indigenous information has left the African continent with an imperfect knowledge base and ignorance about local conditions. Indigenous knowledge about customs, historical facts, legends and knowledge concerning remedies made from plants and other agricultural practices are in many instances not passed on to the next generations or written up for posterity. The loss of indigenous information and knowledge impoverishes the cultural heritage of the society and country concerned. In 1980 the Organisation of African Unity (OAU) drew up the Lagos Plan of Action in which it agreed that the need to create knowledge about the countries in Africa was a vital prerequisite for the future development of policies for development decisions on the continent (Mchombu, Neill and Sturges, 1996: 127).

Moore (2004: 274) explains that most countries are actively encouraging their indigenous information industry. Moore divides the information industry into three segments, namely the information-content industry which includes both the private and public sectors that produce intellectual property material, such as writers, film producers, television producers, and broadcasters; the information delivery industry (which includes the telecommunication companies, broadcasters, radio and television stations); and the information-processing industry (which includes the hardware and software producers). The print, broadcasting and electronic media enable the process of research and public debate. Without the media the process of developing new ideas would be hindered as there would be less opportunity for the expression, transmission or evaluation of these ideas in public debate. Almost all facets of the publishing industry have been influenced by technology, including the production process, distribution and selling of publications. These developments are enabling the digitization of books for online access, as well as online access to electronic scientific material and articles used for research and competitiveness.

2.6.1.6 Growth in Electronic Commerce (E-commerce)

Electronic commerce can be defined as:

... The use of electronic networks to exchange information, products and services and payments for commercial and communication purposes between individuals (consumers) and businesses, between businesses themselves, and between individuals themselves, within government, or between the public and government and, between business and government (South Africa. Department of Communications, 2000).

Growth in e-commerce is an important factor for a country and its business and trade. Growth in e-commerce is beneficial as it plays a role in a country's global competitiveness. E-commerce is enabled by information and communication technology (ICT). ICT is currently central to the debate concerning economic growth and the performance of advanced economies. Information technology includes equipment within the following six categories: electronic data processing (EDP) mainly produced in countries such as Ireland and the United Kingdom; office equipment; radio communication and radar equipment, largely produced in countries such as Sweden; telecommunication equipment, produced, for instance, in Finland by the well-known company, Nokia; consumer equipment produced for instance in Malaysia, Brazil, Hong Kong China, Singapore and Indonesia; electronic components, largely produced in countries in Europe and others.

E-commerce requires more than the equipment listed above. It also requires the infrastructure, the required access to the infrastructure, the relevant skills for the development and maintenance of the infrastructure, the required literacy levels, and adequate investment in the development of the technology for the infrastructure (South Africa. Department of Communications, 2000: 9-10). Countries need to develop their infrastructure in collaboration with other countries for the implementation of their e-commerce (South Africa. Department of Communications, 2000: 16). E-commerce is growing in South Africa, but it is not widely used by smaller and medium businesses in the country for a number of reasons, as explained further on in this study (chapter four, Par. 4.3.9).

2.6.2 Information Policy Motivated by Policies Developed in Other Countries

A national information policy is a government policy that is developed within the context of the country. As with other government policies, it is developed by a government body with a particular aim and needs to be developed in such a manner that it is effective in order for the goals set for it to be achieved. A government or public policy expresses public values and intentions, the commitment of money and services, or the granting of rights and entitlements (Considine, 1994: 3, 4). In the context of a national information policy, the policy needs to take into account the roles of information in the interest of the country (Doty and Wyllys, 2002: 1). Typical issues that have become relevant to national information policies include the development of information infrastructures and Internet governance; copyright and intellectual property policies; and, libraries and archives, as discussed briefly below.

2.6.2.1 The Development of Information Infrastructure

Both broadcasting and telecommunications have traditionally been regulated by national governments to meet a variety of social and economic goals (Organisation for Economic Co-operation and Development, 1999: 8). Similarly telecommunications infrastructure is generally subject to government control by national governments. The content of the networked information, however, is not bound to country or place because of its inter-continental nature and the development of the Internet. The development of the Internet has drastically influenced the communication of information as explained below:

...The Internet has revolutionized the computer and communications world like nothing before. The invention of the telegraph, telephone, radio, and computer set the stage for this unprecedented integration of capabilities. The Internet is at once a world-wide broadcasting capability, a mechanism for information dissemination, and a medium for collaboration and interaction between individuals and their computers without regard for geographic location (Leiner, et al., 2003).

Many countries tend to focus their information infrastructures policies on issues such as innovation, economic growth and competitive advantage.

In 1986 the State-of-the-Art Institute, Washington (United States. State-of-the-Art Institute, 1986: x, xi), identified six issues with regard to access to information within the contemporary development of information technology in the United States (U.S.A.). The issues that were listed at the time are still widely applicable in developed and less developed countries of today.

- ... Government is shifting its information policies (for instance, increasing legislation concerning open access legislation, the regulation of digital communication and access);
- Public / private sector partnerships are a viable alternative to ensure accessibility to government information;
- Legislation does not keep pace with technology;
- New technology is having an impact on the workplace. The marketplace is flooded with innovations in electronic technology;
- Information malpractice / liability is a growing concern to information professionals;
- Information has global impact (United States of America. State-of-the-Art Institute 1986: x, xi).

One area of growing concern in relation to information infrastructure development is Internet governance. The Internet was developed in the U.S.A., but it has, since 1995 onwards, evolved into a "...global commercial and information resource and a potential tool for development" (Matume, 2004: 1). Matume (2004: 1) explains that only three of the 13 computers that are essential for the functioning of the Internet are located outside the U.S.A. (in Japan, Sweden and the U.K.) and the U.S.A. government has only contracted out the services of administering the resources to a non-profit agency, the Internet Corporation for Assigned Names and Numbers (ICANN) in 1998. ICANN is a California based agency and countries are in disagreement on the role of the agency which is also in charge of the Internet's infrastructure of domain name and address identifiers. According to Matume (2004: 1), ICANN is confronted by two main issues, one of equity and the other of legitimacy. Africa was the only continent without a regional ICANN representative to manage its domain name registration system but in December 2004 the non-profit African Network Information Centre was to take over this task, in order to allow Africa "... more control over its own domain names and the Internet traffic that uses them, and a greater say in the way the global Internet is run." (Matume, 2004: 2). In a meeting in July 2006 the U.S.A. government agreed to make ICANN a more international body. This event introduced the beginning of change in Internet governance and changes in the ICANN board membership (Mincio, 2006).

2.6.2.2 Copyright and Intellectual Property Policies (Addressing Issues such as “fair practice”)

Fair practice within areas such as copyright is another field of concern in most countries today (IFLA, 2002; Lall, 2003). The application of new technologies has moved the question of the control of information content to a large extent to the political domain (May, 2003: 20). The National Academy's intellectual property website explains the changes regarding related aspects from “...Internet content protection to human gene patenting to intellectual property (IP) in many forms have emerged from legal obscurity to public debate” (The National Academy. *Intellectual Property website Homepage*).

May (2003) explains that:

... at both the level of international relations, and more localised socio-economic interactions, the realm of copyright is subject to considerable upheaval, and the public realm of knowledge access is under continued attack... Limitations to access through copyright, as well as other high-profile issues centred on access to knowledge-related goods (such as the disputes around patents for AIDS-related pharmaceuticals) represent serious socio-political problems, yet they are still too often treated as arcane non-political legal issues (May, 2003: 20-21).

Generally speaking, the publishing industry has been influenced over the past thirty years by three main forces: technological changes in the publishing, production and distribution channels of books, consumer demand shifts, and mergers and acquisitions of publishing houses worldwide. These changes have also influenced thinking around copyright and intellectual property rights, which are also contested by many, especially in the developing or less developed countries, where the argument is that these rights are elitist and aimed to enrich the first world or developed countries of the world (IFLA 2002: 1-14; Toffler 1990: 322). In addition to this, the Internet is also providing for the creation of new distribution channels for publishers. Several book publishing houses have Web sites on the Internet, allowing consumers access to view content pages, abstracts, book reviews, authors biographies, and order books. Google, an Internet search engine, has also launched a project which involves the full text publishing of books for open access. These developments are not accepted by all, due to the potential violation of the intellectual property and copyright of authors and publishers, and calls in various countries for governments to review their intellectual property laws (Chillingworth, 2006: 1).

Difficulties are experienced in First World and the developing countries in the regulation of information-related areas, with or without an awareness of information-related issues. The complexity of the regulation of these concerns may be explained in reference to some issues in this field in the U.S.A.. By 1986 the United States government had invested 15 billion dollars in information technology, but, the State-of-the-Art Institute found that the issues were still not properly addressed as “... there was no national information policy protecting the government’s huge investment in information” (United States. State-of-the-Art Institute, 1986: xi). This was the finding of the Institute despite the fact that at that time more than 200 laws had been promulgated since 1977 to regulate government information policy. These laws included *Copyright* and *Freedom to Information* Acts which were designed to “... protect access to publicly-funded information” (United States. State-of-the-Art Institute, 1986: xi). In the same document, Gellman argues that “... whoever controls the technology has the ability to control the information that is in the system” (Gellman, 1986: 2). Gellman supports this viewpoint by referring to online information such as the medical database, MEDLARS, which does not have copyright on their database information but controls access to the technology that facilitates the access to the information. The government, on the other hand, does not have copyright over its information as government data is to be “... freely disseminated, freely distributed, and freely reproduced” (Gellman, 1986: 10). Control over information maintained in electronic information systems is increasing, mainly due to the cost involved in maintaining the data (Gellman 1986: 12). If the data does not have copyright (as with government information in the U.S.A.), the data cannot be sold at a high price, but only at the cost of dissemination (such as, reproduction or photocopying and mailing costs) (Gellman1986: 13).

2.5.2.3 Libraries and archives

Libraries can co-operate across national borders including, for example inter-library loan agreements, compliance with the cataloguing standards set for *online public access cataloguing (OPAC)* rules, as well as agreements between various countries or regions, such as the proposed *African Virtual Library and Information Network (AVLIN) Project*. This project concerns the countries on the continent of Africa as it is to develop the means to provide Africa’s information content on the global information depository (Kawooya, 2004:

31). Another example of a co-operative agreement amongst Kenya, Tanzania and Uganda is the *East African Community Framework* for the establishment of access to national and international information resources to these countries (Kibaya, 2004: 41, 42). The *African Access to Knowledge Alliance*, established as a Trust in Botswana in 2006, is another example of co-operation across national borders aiming to address access to information and copyright issues for countries in Africa (Nicholson, 2007). Projects such as these require joint information policy frameworks.

The growth in electronic resources such as collections of databases, electronic journals, books and newspapers influenced libraries to form library consortia in order to increase their bargaining power with the purchasing of these products from commercial suppliers and to share knowledge and costs in the purchasing thereof. Libraries can work together under a license and form consortia with other libraries. Consortia can be national, such as *National Electronic Information Consortium* (NEICON) in Russia, regional, such the U.S.A.'s network *NELINET*, or they can represent similar types of libraries, such as university libraries in the *Coalition of South African Library Consortia* (COSALC) (eIFL, 2007: 5).

2.6.3 Information Policy Motivated by Specific Application, Value or Intent

UNESCO (2004: 10-11) explains that the economic role and value of government public domain information to the larger economy and society is increased by how much the economically productive society can use and benefit from the information found. However, the value of information to a country is linked to the situation in the country. A country with poor literacy levels, high levels of poverty and poor health conditions, will for instance, not be in a position to attach the same value to information than a country with advanced literacy and limited poverty or health-related problems.

Demac (1986: 38) touches on the issue of categories of information that may need to be in "... two places, both in the private sector and in the hands of the government". She argues that the new patterns of access may seriously harm a multiplicity of interests (Demac, 1986: 38). She refers, for instance, to scientific research and the sharing of scientific information versus government restrictions on research information regarding military applications (Demac, 1986: 36). She argues that all information should be considered of importance to the country's

economy, technological progress and the spirit of scientific endeavour as all are relevant and require attention, based on an appreciation of the value of information as a resource.

2.6.3.1 Information Valued for Economic and Social Development

Although the real impact of the Information Age on the world economy and economic competitiveness is uncertain, the effective sharing and communication of information are vital abilities for nations to have, in order to progress economically, socially, and culturally. The effective sharing and communication of information rely on human skills for the creation, management and utilisation of the information content. The value attached to information for economic and social development can be seen in changes in the workplace and in social communications as information is increasingly accessed and shared in the workplace and socially as indicated below:

- The shift in the economies from industrial production to information-related services in the post-industrial era (Schultz, 1989: 161) resulted in a shift in countries' economies from industrial production to information-related goals and services. This change was also seen in South Africa's economy during the period 1960 to 1997 (Wray, 2004: 11; Arnold, 2000: 72;). Currently Makgetla (2006: 1) reports that South Africa's market-based services account for 47 per cent of total employment, while manufacturing generates only 14 per cent of formal employment. As mentioned earlier, South Africa had begun to de-industrialise its economy resulting in the decline in the manufacturing sector (Rodrik, 2006: 25).
- Changes in the way information is managed socially (using Internet connections, e-mail communications and cellular telephones for social interaction, entertainment and information), economically (on-line marketing, banking and e-commerce) and culturally (changing patterns of interaction, social customs, increasing exposure to global influences and values of other cultures and languages) (UNESCO, 2004: 23).
- Work is performed differently (relying increasingly on electronic and micro-electronic applications - this, in turn requires skills in information technology and application).

- Research relies increasingly on the use of electronic modelling and virtual applications.
- Management decision-making relies increasingly on electronic modelling and other tools, such as statistical prediction.
- The digital economy of the Information Age is changing commercial transactions relying increasingly on the use of electronic communications and trade and electronic payment and banking.
- Governments are increasingly using electronic means to communicate within the political system, as well as nationally and internationally creating web sites on the World-Wide Web for electronic connectivity and access.

These above developments or changes are world trends and countries are drawn into these trends as the changes of the Information Age continue to become the norm, both socially and in the workplace. These developments are making it necessary for countries to follow these trends in order to participate successfully economically in the Information Age.

Governments of countries wishing to participate in the global economy are influenced by trends such as the above to develop access to public domain information and telecommunication connectivity in their countries.

2.7 THE SCOPE OF A NATIONAL INFORMATION POLICY

National information policy addresses the processing and communication of information. This involves the flow of information and the information lifecycle. Ayoo and Otiye (2002: 350) explain the regulation of the flow of information as two elements aiming to:

- (i) ensure that the transfer of information can take place “...through appropriate laws and regulations to orchestrate the harmonious development of information transfer activities, in order to satisfy the information needs of the country” ;
- (ii) it must formulate guidelines for the information sectors for the generation of information, and the related acquisition and dissemination activities.

The regulation of the flow of information in a country is not always understood as two distinct elements as explained by Ayoo and Otiye, but in many countries the distinction can be made

between the regulations and laws guiding access to information, privacy and copyright issues on the one hand, and the regulation and legislation guiding the media in a country .

2.7.1 Defining “National Information Policy”

The pervasiveness and multidisciplinary nature of information makes it difficult to formulate a definition for “national information policy” (Par. 1.4.2). Stone (1996b) questioned the possibility of formulating or defining the meaning of “national information policies”.

Reasons why *information policy* is difficult to define includes factors such as:

- it addresses a wide diversity of issues. It is also a type of policy that can be linked to disciplines concerning legislation, economics, political science and ethics. Each of these disciplines defines information policy from a different perspective or application. The trans-disciplinary nature seems to be an integral characteristic of this type of policy. However, for a national information policy to be effective, it needs to address legal, economic, political and management issues that apply either specifically to “... the information itself or, in some cases, to the information technology used to collect, store, or disseminate that information” (Bushkin and Yurow, 1997: 1755), such as the flow and regulation of information in a country.
- International developments continue to raise new information-related policy issues, such as copyright protection versus open access to information, or, access to information versus ownership of intellectual property and other information.
- Standardisation and the regulation of interoperability of information and communication technology need to adopt market-based approaches rather than be governed by government regulations (Kagami, Tsuji and Giovannetti, 2004: 89). Market-based approaches are not determined by governments, but by international trends and standards, making it necessary for these government policies to follow international developments.

2.7.2 Definitions of National Information Policy

The definition accepted for *national information policy* was explained in Par. 1.5.1. Other definitions of the concept “national information policy” found in the literature are discussed below:

A simple definition explains *the flow and application of information*, defining national information policies as policies “about making information available to, or withholding it from, those who want or need it” (Bushkin and Yurow, 1997: 1755). This definition seems to explain the purpose of the policies and the effect it aims to have on society. It also implies the flow of information from the origin to its use and application.

A more comprehensive definition explains how the policy is applied and the link to the *information life-cycle*. According to this definition, information policy is

... a set of interrelated principles, laws, guidelines, rules, regulations, and procedures guiding the oversight and management of the *information life-cycle*: the production, collection, distribution/dissemination, retrieval and retirement of information. Information policy also embraces access to, and the use of information ... (Duran, 1991: 153).

This definition is suitable for most types of national information policies as it includes regulations, laws and other formal controls. Duran continues with his discussion of what constitutes a national information policy and quotes Mason, writing that information policies “... form a framework that impacts the economic, political, and social choices available to individuals and society itself.” (Mason, 1983: 93, as quoted by Duran, 1991: 153).

National information policy can also be described as a *series of policies*. The fact that a national information policy may require a single policy or include a group of policies is mainly due to the complexity of the field it aims to address. For this reason, many countries use more than one policy to regulate the field of information. An inclusive definition, indicating this trend, is given by Hill (as quoted by Trigo, Correia and Wilson, 1996: 221):

...When one examines the situation in detail it is clear that the information field is in practice regulated by a series of policies which, while they may not make a coherent whole, nevertheless do add up to an almost comprehensive policy .

A list of diverse aspects that could be considered relevant to a national information policy is given by Haddock (1990):

... Information technology, libraries, databases, and other information services, guidelines for the direct development of resource sharing networks, holding facilities, and coordinating centres, radio frequency spectrum allocation, geostationary satellite orbit slots, direct broadcast satellites and signal spillover, remote satellite sensing, personal privacy, data protection, trans-border data flow, press and media censorship, standardisation, copyright, free dissemination versus the protection of cultural, political, social, and economic sovereignty, and restrictions of information and technology transfer (Haddock, 1990: 45).

One could also add electronic commerce (e-commerce) to the list. This more recent application of information technology practice allows for the application of electronic business and commercial transactions and the transfer of funds. This practice also requires regulation and legislation and is relevant to national information policy. The growth in electronic crime calls for governments to address issues such as computer security, electronic privacy and electronic piracy (Toffler, 1990: 313).

National information policy can also be understood in terms of its function regarding *information protection*. In this context, national information policy is linked to the protection of information rights, such as the protection of intellectual property rights (copyright and patent rights), the right to the privacy of the individual, and the protection of decency (protection against access to undesirable information material such as child pornography). These require some form of legislation or policy initiatives. The difficulty in addressing such diverse and interrelated issues is that legislation on one issue may affect another related issue unintentionally, making the regulation of this area very complex, as policy initiatives may impact on the related areas and then the legislation in one area may "... have unintended effects elsewhere" (Haddock, 1990: 45). One example of an act which was promulgated in South Africa 2003 is the *Regulation of Interception of Communication Act 70 of 2002*. Herd (2004: 35) reports that the Act involves both security concerns and rights to privacy. This legislation gives law enforcement agencies wide-ranging powers including the right to intercept the e-mails, cellphone and fixed -line calls of suspected criminals and, in some cases, the right to do this without an order from the courts (Herd, 2004: 35). According to Agre and Rotenberg (1998: 211), this development can be explained due to the fact that

privacy interests are not easy to maintain in an environment where technology develops without any inherent privacy restrictions. The information technology of the Information Age is developed for the use and manipulation of data, and for this reason, it would be difficult to oppose this practice and to argue that it would be unreasonable to do so (Agre and Rotenberg, 1998: 211).

Additional areas of information application are likely to increase the need for legislation, as it may be necessary to address the new developments through legislation or regulations. This trend is likely to increase the diversity of areas national information policy needs to address, regulate or legislate. These areas include aspects such as the trans-border flow of information. Malley (1990: 93) explains that, although "... policy is not legislation", it is often necessary to introduce legislation in the field of information due to trends in the field internationally.

Moore (2004: 282) observes that many countries have been involved in policy-making related to the creation of information societies over the last five years. Their policies are either shaped by specific policies (as in Singapore), or by almost no formal policies, but rather by market forces alone (as in Hong Kong).

2.7.3 National Information Policy within the context of Economic, Political and Social Conditions

The formulation of a national information policy needs to be developed within the context of a country's economic, political, cultural, educational and social conditions. These conditions are unique to a specific country. As Haddock (1990: 45) states:

... nations create information policy based on their own history, values, prevailing social, cultural, political, and economic needs; the current state of technology, and last, but not least, as a response to or anticipation of other nations' information policy issues.

Although various policy guidelines for the development of national information policy have been compiled by organisations such as UNESCO (2004), there are no commonly accepted stimuli or motivations for the development of a national information policy. Different countries develop their policies based on different stimuli (Malley, 1990: 92) as governments are motivated to develop their national information policy within the country itself. This

approach allows governments to develop a national information policy according to the country's unique circumstances at the time.

Although the policy aims to address the unique circumstances, other influencing factors also tend to impact on governments in their planning and development of a national information policy. The freedom or scope of governments to regulate and legislate on the information-related issues and develop a national information policy is likely to be influenced by factors such as:

- past developments relevant to information-related issues (nationally and internationally);
- the values governments attach to information as a commodity or resource at the time of the development of the policy;
- commonly held concepts regarding information-related issues;
- current international information-related trends (Par. 2.4.1).

Also, the apparent successes of certain countries in their national information policies could influence governments in the development of their national information policies as observed in the strategy followed by Japan (Harbulot, 1996: 57). Japan made information a key element to their entry to the world economic market, by, amongst others, multiplying data sources and opening up access to the information sources. The strategic use of information by the Japanese government for economic growth and social development has received much attention over the past three decades and influenced many other countries to be aware of the value of information for decision-making and growth. Other laws have also been implemented in many countries, such as the Freedom of Information Laws, mentioned earlier in this study.

2.8 FIVE ELEMENTS OF A NATIONAL INFORMATION POLICY AND SOCIAL AND ECONOMIC DEVELOPMENT

Most government policies consist of five basic identifiable elements (Dye, 1995: 2), namely:

- policy goals;
- policy content;
- policy instruments (regulating the policy);
- policy outcomes;
- policy styles (or the processes through which policy is formulated).

These five elements are explained briefly below within the context of the development and implementation of a national information policy.

2.8.1 National Information Policy Goals

The goals of national information policies tend to be linked to national economic, political and social development. Mason (1983: 93) explained the goal of information policies for the collective value to the economy, politics, and all individuals:

... Collectively, information policies form a framework that impacts on the economic, political, and social choices available to individuals and a society itself.

Thorngate (1997: 195-200) conducted a study in which he measured the effects of information on development. As a social psychologist he argues that it is easier to evaluate the effects of knowledge on development, as information has potential value (and cannot be evaluated) as well as current value within a society. He warns that the value or impact of information on development may "... lie elsewhere" and that we may be "... looking in the wrong place for the evaluation of the impact of information". Thorngate stresses that an evaluation of the effects of information needs to include the relation between information and prior knowledge. The concept of prior knowledge is also held by Foucault in that we know things in relation to other things (Skinner 1998: 274). Without the necessary prior knowledge certain information might not be of any value. Thorngate (1997: 195-200) also explains that information is necessary for development, but not sufficient itself to bring about development. His main argument is that time needs to be spent in order to become informed, meaning that efforts are required for individuals to become informed.

The ideals and functions that are to be embodied in a national information policy are put very aptly by Menou (1991: 57), who summarises the intention of a national information policy as:

... a continuous effort toward the establishment in the shortest possible time of a strong, integrated and balanced information sector.

The table below sets out the context defining conditions for the development of the information sector in a country.

Table 2.1 The Context Defining the Information Sector

(i)	Economic conditions (and technological changes and physical variables such as limited resources)
	Moore (in Menou, 1991: 58) lists the following issues as macro-economic issues: "... defining and analysing the information sector, measuring the size and growth of the information sector, international comparisons, infra-structural investment, knowledge centres as determinants of economic growth, investment in human capital".
(ii)	Social and cultural forces
	Moore enumerates the following as social issues: "... the requirement to provide information to consumers, reliability, objectivity and quality of information, extent of unmet needs, ways of meeting the needs, levels of literacy and numeracy, educational requirements, alternatives to print, role of information and advice services, division between the information rich and information poor".
(iii)	Political and statutory variables (and also international forces)
	Moore explains this variable as one which includes legislative and regulatory issues, such as "... copyright, data protection, privacy, freedom of information, information as a tradable commodity, legal liability for information, international trade in information services, trans-border data flows, self-regulation by industry, standardisation".
(iv)	Organisational issues
	Moore includes the following under this heading in his matrix: "... use of information as a management resource, relationship between information and productivity, need for new approaches to management, new skill requirements for managers, division of labour and the emergence of new information specialists".

(Source: Menou 1991: 58).

The table above is based on the table provided by Menou, and summarises the goals set for the information sector within a national information policy. The table serves as background to the review in chapter five in this study of the role of the information sector and the flow of information in South Africa.

2.8.2 National Information Policy Content

Information is of importance to the public in a democratic society where the right to know is considered a basic right (Chartrand, 1986: 10). Information products and information sources are relevant to the content of a national information policy and include all published and documented information and unrecorded information in the public domain, such as indigenous information that has not yet been documented.

- Documented information is information stored in a document which is “... intended to store or convey information in textual, graphic, visual, auditory, or other intelligible format through any medium ...” (South Africa.1997, *Legal Deposit Act 1997*: 336).
- Published information is produced when multiple copies are made available to locations for (a) “... any member of the public, whether through purchase, hire or loan, subscription, license or free distribution, or, (b) the members of an association or society, the membership of which is open to any qualifying member of the public...” (South Africa. 1997, *Legal Deposit Act, 1997*: 336).
- There is no general consensus regarding the meaning of “national information” but it is generally understood to include the information generated within a country.

Bushkin and Yurow (1997: 1753-1755) emphasise that national information policies need to address a broad range of legal, economic, political, and management issues that “... apply either specifically to the information itself or, in some cases, to the information technology used to collect, store, or disseminate that information”. They identify eight categories that should be addressed by such a policy:

- Availability of information;
- Access to information;
- Information privacy;
- Management of information;
- Creation of information;
- Market structures for handling information;
- Pricing of information;
- International considerations (Bushkin and Yurow, 1997: 1753-1755).

These issues are influenced by globalisation and information technology developments. The impact of globalisation and development of information technology and the changes brought about in the current Information Age can be divided into different categories. For the purposes of this research the following four main categories were used:

- (i) the influence on information, its content, availability and value;
- (ii) problems citizens may have in accessing information using information technology and the implications thereof;

- (iii) the impact of information flow on the national economies of countries and the control thereof for government policy
- (iv) the implications of current trends and the apparent need to develop an information society.

World developments have influenced the flow of information worldwide and are influencing attitudes regarding the availability and application of information. These trends are challenging the role of governments regarding information and the country's social and economic development.

2.8.3 National Information Policy Instruments

The “instruments” (as an element of a national information policy) are the institutions *regulating the policy*. National information policy is generally centralised at the national (or federal) level. The parties involved in the development of national information policies are generally not representative of the public, but of a minority who have political and economic power. This type of policy is generally developed according to the elite theory, which means that the policy is not the result of a group struggle, or an interest group, or a partnership between interest groups and sections of the government but, instead, of a minority who have political and economic power (Theodoulou and Cahn, 1995: 5). National information policies are generally more complex in nature than other policies and so are the procedures involved in the processes of information policy formulation.

2.8.4 National Information Policy Outcomes

The outcome of this type of policy on a society can be observed in a country such as Singapore, with regard to the industrial growth linked to the policy to establish research parks in the country (Appold, 2003: 1), aimed at stimulating innovation in a structured environment. South Africa has also set up a similar type of project, aimed at stimulating research and development in Gauteng with its Blue IQ projects. These projects consist of “...11 mega projects in economic-infrastructure development, in the areas of technology, tourism, transport and high-value-added manufacturing” (South Africa Yearbook, 2005/06, 2005: 20). The outcome of a project such as the Blue IQ cannot be predicted and it will take some time to establish how successful it has been in the various areas of development.

A policy presents the formulation of the intent of the body responsible for its formulation. On a governmental level, therefore, a national policy is the formulation of the intent of a government with regard to the issue(s) concerned. Similarly then, a national information policy formulates the intent of a government with regard to information-related issues. A policy can be formulated only once a problem has been identified. The mere fact that something exists does not in itself call for the formulation of a policy, as an existing phenomenon or object is not and cannot be a problem within itself. However, issues that cannot be addressed by the individual call for government action, which could be manifested in the form of a policy. The core elements of concern to the formulation of a policy are the values, interests and beliefs that form the framework of the issue (Parsons, 1995: 55).

Within the context of a national policy concerning information-related issues, one needs to accept that the proliferation of information and the extensive ongoing developments in information technology are not problems within themselves. Information may proliferate and information technology may develop and evolve within the framework of any given society, while neither of the two is a problem within itself. Duran (1991: 153) quotes Mason, stating that information policies "... form a framework that impacts the economic, political, and social choices available to individuals and a society itself". The various information-related issues are reviewed later in this study, listed in Table 4.3 (chapter 4).

2.8.5 National Information Policy Styles (Policy Implementation)

The styles of national information policies is the fifth element of public policy. Policy styles include the processes through which the policies are developed. These processes vary substantially from country to country mainly because national information policies could be implemented to address a diverse field, as the information component within a country covers diverse areas (Singh and Mishra, 1987: 184-200). The modern information industry can be explained in many ways. One of the simplest is to see the industry as comprising four main categories. These categories are broadly defined as shown in Table 2.2 (based on Schwartz, 1991: 242). This table is used in this study in chapter five to structure the discussion of the information industry in South Africa. The definition of the information industry, as defined

within the parameters of the table, also illustrates the extent to which information exists as a commodity in society.

Table 2.2 The Four Categories of the Information Industry

<p>(i) <i>Information sources accessed through the mass media (radio / television / telephones):</i> Broadcast and communication channels: including radio & television networks, telephone & satellite networks, Post Office & other deliveries.</p>
<p>(ii) <i>Information content (packaged information, mainly in the print & electronic media):</i> Content services and content packages: including libraries, information brokers, electronic database providers, news services, newspapers, magazines and other print media.</p>
<p>(iii) <i>Communication technology (“hardware”, such as television sets, radios, etc.):</i> Communication technology: including radios, television sets, telephones, transmission equipment and mail equipment.</p>
<p>(iv) <i>Information technology (based on physical infrastructure, such as computer based and electronic media):</i> Facilitation services and information technology: including banks, electronic funds transfer, computers, optical media, timeshare, market & business research.</p>

(Source: Schwartz 1991: 242).

The diversity of the elements of the information industry requires different regulations, which are formulated through different processes. The different categories (i), (ii), (iii), (iv) will need to be addressed in separate policy-making processes, with an awareness of the other categories, as the different categories may impact on each other. This explains one of the reasons why the policies that are formulated may require changes or adjustments after implementation.

The information industries in the more developed countries may be more advanced than those in the developing countries. It can be accepted that the more economically advanced countries have highly technologically advanced information industries and in those countries the processes through which national information policies are formulated are likely to be closely linked to the above four categories.

2.9 CONCLUSIONS

This chapter explained that a national policy is used by government to address issues that cannot be addressed by individuals on their own, and also what a national information policy is. The development process or policy cycle of a government policy within the political structure of a government was also explained.

The categories within the information industry were explained and their role in providing access to information. Various external influences relevant to the regulation of information were discussed briefly and the information industry was shown to be extensive in nature. Four categories of the information industry were identified as relevant to (a) the mass media; (b) information content services; (c) communication technology; and, (d), the information infrastructure of the information technology.

Various definitions and approaches to national information policy were given and a number of issues explained as typically addressed by a national information policy and related global and international trends which influence countries to develop such policies. Many countries have developed national information policies and this global trend is also indicated in South Africa with the government's expressed interest in the development of its national information policy.

The political structure in South Africa is currently dominated by the ruling party, the ANC, on national and provincial levels and lacks an effective opposition, a basic requirement for public debate and the development of government policies. This implies that debate around the development of a national information policy will not have the benefit of more viewpoints and alternative suggestions within the political debate of the ANC and any opposition parties within Parliament.

A national information policy is generally developed as an elite-type policy by a small group with political and economic power and, therefore, this policy needs to be formulated by the ANC-led government. This implies that the relevant Minister or Ministers will have to be convinced of the relevance of and nature of a national information policy for South Africa. This has further implications, such as (a) the political debate regarding the development of a

national information policy will have to be motivated outside the formal political structures within civil society and then motivated to the relevant Government Department and Ministry; and, (b) if a policy involves funding, it must be introduced in the National Assembly, as such a policy requires political and economic power.

National information policies are used to address a pervasive field, which can include various information-related issues or matters of public interest, such as social and economic development, issues concerning access to information, the development of an information society, and national information. Background information is, therefore, necessary regarding information and its use and availability in South Africa. Background information is presented on information and its availability in South Africa in chapter five.

National information policies have been developed in a number of countries. An historical overview of the development of national information policy is presented in the following chapter, based on available literature. The historical overview covers the international trends regarding national information policy development.

CHAPTER THREE

HISTORICAL OVERVIEW OF THE DEVELOPMENT OF NATIONAL INFORMATION POLICY

3.1 INTRODUCTION

The previous chapter explained the meaning, purpose and function of government policy. The chapter gave an overview of how a government policy is developed, and the policy process within the political environment of South Africa and explained the meaning of national information policy as a specific type of policy. Chapter two (Par. 2.2) explained that a national or public policy is influenced by past and new developments in the specific country and internationally.

This chapter reviews salient aspects of the history and evolution of national information policy to help gain a better understanding of the current context of this type of policy. Much of the focus of the review centres on factors such as the time, place and historical circumstances of the development of national information policy (as explained in chapter two (Par. 2.4.1.1)).

This chapter uses primary and secondary literature and Internet resources to review issues concerning (a) theoretical and methodological aspects identified in Par 1.4; (b) past and new developments concerning national information policy in general (including: defining its scope, as interdisciplinary research, as process and linked to values, comparative policy studies, and methods used to review the literature) and, (c) information policy issues identified in the literature on national information policy as well as literature relevant to developments in Africa. Information resources on trends and international influences on countries in Africa regarding national information policy development are included in this chapter as relevant background for South Africa within the context of developments on the continent of Africa.

The literature reviewed includes documents identified on available commercial databases, covering published books, governmental publications, reports, conference papers, and journal

articles. In addition, Internet-based publications were identified, as well as some articles published in newspapers on topical information-related issues currently debated as issues of interest or concern in the public domain in South Africa. Newspaper articles are recognized as major sources of information for current policy issues (Patton and Sawicki, 1993: 86). Furthermore, government and non-governmental publications were consulted, more particularly within the context of South Africa.

3.2 INTERNATIONAL TRENDS PRIOR TO 1980

National information policies were implemented long ago before the Information Age. Past policies aimed to address information access and use, information protection, privacy, and intellectual property (copyright). Information-related policies that were implemented include, for example, restrictions imposed by the Catholic Church on the use of literature and research relating to science, politics and music in the early sixteenth century Europe (Browne, 1997a: 261). An example of a more recent information policy that has been in effect for more than 200 years are the First and Fourth Amendments of the Constitution of the U.S.A. (Rosenberg, 1982: 3), whereby privacy is recognised as a natural right and provision is made for the protection of personal information (Duff, 2004: 72).

Another example of a more internationally applicable information-related policy is the 1883 *Paris Convention for the Protection of Industrial Property* signed in Paris, France, on March 20, 1883. This treaty is important because it is one of the first intellectual property treaties and was adopted by the World Intellectual Property Organisation (WIPO). WIPO is a specialised agency of the United Nations. Industrial property comprises inventions, trade marks and industrial designs (WIPO, 1993: 7-8). The *Convention* was revised many times and amended in 1979 (WIPO, 1993: 1), addressing the granting of patents, filing and registration of trade marks, industrial designs, trade names, source or identity of the producer, manufacturer or trader; and, effective protection of unfair competition (WIPO, 1993).

In 1886 the *Berne Convention for the Literary and Artistic Works* was adopted. This *Convention* covers the copyright on literary works, musical, artistic, photographic and audiovisual works (WIPO, 1993: 7-8).

According to Browne (1997a: 261) these earlier policies had implications primarily for national security for defence information or intellectual property for economic benefits, as well as for the movement and use of information. Even though examples exist of national information policy long before the 1970s, such as those listed above, the core literature available on national information policy issues has mainly developed since the 1970s. The literature tends to be linked to developments leading to the globalisation of financial activities and growth in the development of new information technology (Browne, 1997a: 261; Rosenberg, 1982: 3), as well as the development of the information economy, as referred to as background information in chapter one in this thesis.

The literature of the period prior to the 1980s, relevant to national information policy development, reveals that many of the publications on national information, explain national information policy as a policy aiming to govern the "... creation, distribution, and use of information" (Rosenberg, 1982: 3). Gray (1988: 13) explains that, historically two alternative approaches to information policy-making are identifiable: the information policies based on "library" approaches, on the one hand, or, "information" approaches to information policies on the other hand. Efforts towards the development of national information policy with a library approach tended to be centred in national libraries. An example of such a policy is the British Museum Act of 1972.

In 1974, the United Nations Educational, Scientific and Cultural Organisation (UNESCO) published the United Nations National Technical Information System (NATIS) programme to promote the establishment of national information systems. UNESCO has taken the "information" approach to national information policy, to promote the development of national information policy. In this approach, libraries form a component within the information network of the policy (Gray, 1988: 13). UNESCO also worked on the promotion of the development of national information policies in developing countries. International organisations such as UNESCO involved themselves in the area of national information policy issues, especially in the period 1972 onwards (Gray, 1988: 92). There is a growing awareness of the value of information and the need to have access to scientific information seems to be the initial primary motivation for corporate bodies such as UNESCO to involve themselves in this field (UNESCO, 1979: 1). It is noteworthy that, at its inception, UNESCO

was given the function of maintaining, increasing and making available knowledge by protecting the world's inheritance of books, by encouraging the exchange of information materials and by initiating co-operation to give the people of all countries access to the publications produced by any one of them.

This awareness influenced the actions taken by international organisations such as UNESCO, the New World Information and Communication Order (NWICO), and the Intergovernmental Conference for the Establishment of a World Science Information System (UNISIST). One of the concerns of these organisations was the lack of facilities available to facilitate the flow of information in developing countries as this resulted in a shortage of, or limited access to, information resources in these developing countries. A further concern was the imbalance in the flow of information mostly in one direction from the developed northern countries to the developing countries in the South. The initiatives taken by UNESCO, NWICO and UNISIST to address these concerns resulted in programmes such as the *Universal Bibliographic Control* (UBC) Programme, *Universal Availability of Publications* (UAP) Programme and UNISIST (Burger, 1993: 36-37; Line, 1987: 6).

The recommendations or guidelines on national information policy development given in various documents published in the 1980s were motivated for different reasons, as explained below.

3.3 MOTIVATION FOR THE DEVELOPMENT OF NATIONAL INFORMATION POLICY PRIOR TO THE 1980S

Various motivations are given in the documents mentioned above prior to the 1980s, for the development of national information policies. The policy guidelines presented by United Nations' organisations and other national agencies (Gray, 1988: 92, 93), focused on the aim to provide access to national information sources. The emphasis in many of the initial national information policies was on the role of the national library of the country and the provision of access to the information produced nationally.

Later documents address wider international efforts which aim to ensure access to information sources. One such example is the *UNISIST Programme*, launched in 1972 by

UNESCO (UNESCO, 1979). The focus of this Programme was on scientific and technical information, and its aim was to develop scientific information policies and structures, and to assist developing countries in the development of scientific and technical information infrastructures (Gray, 1988: 93).

In 1974 the document: *Information policy objectives: UNISIST proposals* was published by UNESCO (1974). This document provides a checklist of information policy objectives and in it information is identified as a resource to be used for economic and social development. It also recommends the establishment of a governmental or government-chartered agency to guide, stimulate or co-ordinate the development of information resources and services from the perspective of national, regional and international co-operation. This document was followed by the *NATIS (National Information System) Programme* which was launched by UNESCO in 1974. This Programme was aimed at bibliographic documentation, libraries and archives. The Programme proposed a 12-point objective for national action set out for the standardisation of bibliographic documentation to be implemented by the national library and archives in countries. One of these points was the formulation of a national information policy. The two UNESCO programmes (*UNISIST* and *NATIS*) were not suitable for the conditions in the developing worlds and the *NATIS Programme* did not benefit Africa's information environment (Rosenberg 1999: 13) as they provide guidelines and do not specifically address the issues experienced in many developing countries. These issues include aspects such as a lack of information-related skills, for example illiteracy, poverty and a lack of or poor infrastructure development.

The *UNISIST* and *NATIS Programmes* were merged in 1976 and developed into the *General Information Programme (GIP)*. The Intergovernmental Council for the General Information Programme prepared a new guideline on national information policy. The new guideline (*GIP*) expanded its scope to include not only scientific and technological information, but also other fields of information as well, mainly related to the relationship of information technology to national information policy. The explanation given on the contents and scope of a later UNESCO (Wesley-Tanaskovic, 1985) publication, indicate that the guidelines given in these sources tend to be very general on how to develop national information policies which are strategically designed to:

... ensure that the emerging information society contributes to national development everywhere, removing the present global imbalances and inequities (Wesley-Tanaskovic, 1985: 4).

A revised version of the original *UNISIST* proposals appears in the document, entitled *Guidelines on National Information Policy: Scope, formulation and implementation*, prepared by Wesley-Tanaskovic for the *General Information Programme* and UNISIST (1985). The document was only designed "... to provide the general concept for formulating and co-ordination of the national information policies from which the users are free to draw those ideas which they feel best suit their national situation". The idea that member countries of UNESCO should set up national committees is encouraged in this document. The UNESCO / PGI-UNISIST document calls for UNESCO membership countries to co-operate with governments and various communities including information-related specialists in (UNESCO) membership countries. This document presents a step-by-step approach to national information policy formulation and implementation. The steps listed in the *Guidelines on National Information Policy: Scope, Formulation and Implementation*, describe the policy process as follows:

- (i) Determine the overall framework for the project;
- (ii) Define the scope of the needed national information;
- (iii) Formulate a national information policy;
- (iv) Implement the information policy;
- (v) Establish a national information co-ordinating organisation.

The document also lists the scope of the policy in a fairly general manner:

- The need to address the generation of information (e.g. publishing industry;
- legislation, such as patent laws and copyright);
- Address the collection of information (e.g. acquisition of foreign publications);
- Establish a system for the distribution of information (e.g. national bibliographies, abstracting and indexing services, computerised information networks, document delivery systems);
- Compile an organisational framework and the provision of resources (e.g. manpower, physical facilities and funding) (Wesley-Tanaskovic, 1985: 9).

The issues discussed above as listed in the UNESCO / PGI-UNISIST document (Wesley-Tanaskovic, 1985) are all relevant to the development of a national information policy, but can only serve to provide the general concepts and guidelines for national information policy development and implementation. The national situation of each country would need to be established by carrying out a situational analysis before developing a national information policy. Another UNESCO document, entitled, *Implications of modern information technology for national information policy and planning* (1997), continues the trend to expand the national scope of policy and stresses the importance of co-ordinating national systems of information.

Another document was prepared, namely UNESCO's Major Programme VII "*Information systems and access to knowledge*" (1985). This document encourages member countries to increase their national capabilities for providing and exploiting information for development. All the above-mentioned documents provide general guidelines and recommendations for the development of a national information policy and stress the value of information for a country's development.

3.4 INTERNATIONAL TRENDS IN THE 1980s, 1990 AND 2000s

This section reviews international developments in the 1980s, 1990s and 2000s as explained below.

3.4.1 International Trends in the 1980s

With time social change influenced the approach to national information policy. Rosenberg (1982: 19-20) explained that the policies that were initially aimed to cope with information, were shifting to cover more aggressive issues of sovereignty (governance), culture, economics, and national security. Information was beginning to be viewed as a resource for economic and social development, and had gained a political-economic dimension as well (Rowlands, Eisenschitz and Bawden, 2002: 32). A political dimension was also later attributed to the library and information sector in South Africa as the country was moving towards change in government (Nassimbeni, 1996: 359) from the previous apartheid

government to the newly elected government of 1994. With the political dimension, the previously disadvantaged were being consulted in finding ways to address the imbalance in the library and information sector as created under apartheid rule, in order to make library services accessible to all. The call was to change to allow for wider access to libraries for all sectors of the population; for changes in the library management which consisted mostly of whites due to practices under the apartheid rule; and changes needed within the library profession and its professional and para-professional organisations in the country at the time.

The policies relevant to national information issues during the 1980s, tend to recognise the role of libraries and library services to provide information and these feature fairly prominently in the policies reviewed by Hill in 17 developed countries covered in a survey in this regard (Hill, 1989: 27). The growing impact of the application of information technology became another relevant information policy issue. Hill's review of national information policies is significant as a first broad comparative study of national information policies of some of the most developed countries in the world (Hill, 1989: i). It does not provide a definitive comparison of the policies, but is of value as it gives examples of national information policy issues and developments. It also explains specifically that countries belonging to a group, such as the Nordic Council for Information and Research Libraries (Nordinfo), established in 1977 or, the European Union (now known as the EEC countries) tend to be more profoundly influenced by the national information policies regarding information networks (Hill, 1989: 6). Gray (1988: 61) explains that groups such as those mentioned above, gather the national policy foci of the member states to use funds co-operatively for the development of projects that can help information services in the region.

The 1986 document: *Government information: an endangered resource of the electronic age*, reflects on the impact of the increase in value and exponential growth of the information sector in the U.S.A. economy and responses worldwide to this phenomenon (United States of America. State-of-the-art Institute, 1986:187). In this document, reference is made by Day (1986b: 214) to national information programmes in countries such as Japan, Europe, the Republic of Germany, France and in the European community, indicating a growing interest in national information policy issues. Day (1986b: 217) explains in the same document that, at the time, the United States had several information policies from both the legislative and executive branches of government (Day 1986b: 217). In addition to the listing of these

policies, mention is made of the National Commission on Libraries and Information Science (NCLIS). The NCLIS was established to advise the President and Congress on the nation's library and information needs. The document stresses the importance of information and the need for a national information strategy in the U.S.A.. This document indicates a growing awareness that information is of value for strategic global competitiveness. In this regard the observation is made that European countries and the U.S.A. only began to value foreign information content relatively recently because governments recognised that the "... availability of literature at affordable rates is crucial for meeting educational objectives that are a vital part of the developmental process..." (May, 2003: 20).

Within the developing world, the conference proceedings, *The transfer of scholarly, scientific and technical information between North and South America* (Rosenberg and Whitney, 1986) highlights the growing awareness of the importance of information also in the developing countries. The main issues debated at this conference were the availability of locally produced or foreign academic and scientific information in the South American countries. Concern over the dominance of the production of scholarly information in the developed countries and the concern over this dominance over the information produced in the developing countries is a major theme in the publication. This concern is also relevant to a country like South Africa where much of the scientific and other information originates outside the country and leads to an imbalance in the flow of information in the country. This issue is also debated in Africa, as discussed in chapter four. Gray (1988: 114) emphasises the importance of information as a "... necessary resource for economic, social and cultural development and information technology as an increasingly important part of this resource".

Most of the above publications stress the value of information for development and growth. The value of the information tends to be related to aspects concerning individual countries' information content (content produced nationally), information for global competitiveness (especially for research), access to information and education, and the role of the library and information services sector in the development of a national information policy. All these aspects tend to be seen as relevant to the development of an information society.

3.4.2 International Trends in the 1990s

The strong influence of the development of information technology on national information policy is indicated in many relevant documents published in the 1990s. Examples of information policy approaches and issues addressed can be found in the publication: *National Information Policies for the Asia Oceania Region, 1990* (1990). The document discussed information policy-issues in the Asia Oceania Region stressing the importance of information for technological innovation as the most powerful driving force for economic development. Recommendations, in this document, conclude, and stress the need for governments to: take the lead and encourage the exchange of information; provide the necessary infrastructure (such as telecommunication, information technology, education); evaluate the information policies of other nations which are being planned; and, identify all the information policies that relate to information services in their countries with the view of coordinating and integrating them (*National Information Policies for the Asia Oceania Region, 1990* :147).

Hanna (1991: 41), stresses the importance of certain necessary conditions for the adaptation of technology in developing countries. The three conditions she lists are: strong domestic competition, human resources development, and active government policies to promote the diffusion and dissemination of information about the new technologies. She (1991: 42) explains that programmes on quality control, industrial standardisation and prize grants to factories with best quality-control programmes were beneficial in accelerating the development and adoption of information technology in Japan, Korea, Taiwan and Singapore. She also adds that a literate workforce is more trainable than an illiterate one (Hanna, 1991: 45).

Authors such as Horton (1995), and Kahin and Wilson (1997), discuss the impact of information technology, the globalisation of access to information, and the concept of national information policy development. The literature of the period since the 1980s continues to reflect a growing awareness of the importance of information for development and link this to the development of information technology which facilitates the accessibility to information nationally and globally. Another prominent trend observed in the policy domain within the European Commission, is the emphasis on the development of the information society (Duff, 2004: 80). Explanations with regard to the connotation made

linking information society development to information policy, are included in chapter four.

3.4.3 International Trends Since the Year 2000

Braman (2003a: 1) explains that the term, *superhighway* (information infrastructure), was conceptualised for a communication network, in 1974. The term was linked to the notion of policy-related issues by Hatfield in the U.S.A. in 1989, and was used in the early 1990s by Gore, the then Vice President of the U.S.A.. The term has since, according to Braman (2003a: 1), influenced the conceptualisation of the communications environment and stimulated the policy community to re-examine communication-issues on a national and international level. This trend can also be observed in the views expressed by organisations such as the *Global Knowledge Partnership* and the *International Telecommunication Union* (ITU) in their discussions surrounding the global information infrastructure and globalization. Organisations such as these are also boosting the idea of an international or global information policy (Duff, 2004: 80).

Braman (2003d: 12) explains the idea of the development of a global information policy by linking this trend to the shift from the concept of the economics of information to the global flow of information, communication, and culture, into a single developing *global information policy regime*. As explained earlier in this study (chapter one), Braman identifies trends regarding the value of information in the information economy based on its *products* (in the 1960s to 1970s); its *domain* in the 1980s; and its *processes* (in the 1990s). Braman (2003d: 34) argues that the trend towards the development of the emerging global information policy regime is "... beginning to manifest [its policy] in the policy arena, ... ahead of most national governments".

Another global trend is the viewpoint linking the benefit of information technology to economic and social development, especially for developing countries. According to Alzouma (2005: 339) many large agencies are involved in the promotion of ICT in Africa, along with African NGOs. These organisations are advocating the use of ICTs by government offices, private enterprises, schools and the public, based on worldviews that are "technocentrist" based on the propensity to view technology as the solution to development problems in Africa, while ignoring existing social conditions. This viewpoint is not supported by the

reality that the introduction of information technology has not by itself lead to economic and social development anywhere in the world. Balakrishnan (2001: 966) refers to the involvement of large international organisations in the promotion of ICT development globally, as a possible form of industrial imperialism. As a result of the impact of global ICT development developing countries are pressurized to introduce ICT in their countries, if they do not wish to be marginalised further by the digital divide and other influences, as stated below:

...Many international organizations including the World Bank, United Nations (UN) and the International Telecommunications Union (ITU), have fostered multitude of initiatives in the Third World countries that not only help in bridging the benefits of ICT to the Third World, but also create a framework for influencing policy formulations, open up markets, introduce competition and deregulate the ICT market. The changes brought about by ICT are rapid and ubiquitous. The uneven diffusion of this fast-changing technology has also caused the digital divide within the countries and between countries. It is almost certain that the countries which do not adopt and adapt to these changes will be marginalized, widening the digital divide. Third World countries are precariously poised at this juncture and a careful planning on their part would decide if the ICT would bring economic growth for them or push them deeper into isolation... (Balakrishnan, 2001: 966-967).

Cogburn (2003: 135-153) considered the impact of the global emergent regime formation regarding the governance of global information and communication policy. In his paper he uses the international regime theory to obtain a better understanding of the current historical period of transition

... from an international telecommunications regime to a new and complex regime aimed at providing governance for the Global Information Infrastructure and Global Information Society.

In his article, he also looks at the impact of this trend for South Africa, explaining the complexities faced by South Africa in addressing telecommunication developments and infrastructure development. Cogburn (2003: 135-153) acknowledges the challenges for South Africa, as a developing country, regarding e-commerce and related issues. E-commerce developments in South Africa are discussed in the next chapter.

Papazafeiropoulou, Pouloudi and Currie (2001: 4) explain that the challenge for governments regarding electronic commerce is extremely complex as the network and the number of

stakeholders that explicitly or implicitly participate in the process of policy-making is growing fast. This implies that governments need to be sensitive to the needs of different interest groups. Papazafeiropoulou, Pouloudi and Currie (2001: 4) identify five conditions for the policy process for e-commerce, namely: (i) financial support for research and development for research organisations for knowledge building for long-term strategy and success; (ii) awareness for the deployment of e-commerce technology and practices; (iii) subsidy for e-commerce development and infrastructure building; (iv) by setting the example within government in the use of e-commerce for public procurement transactions; (v) setting of regulations for practices for organisations participating in e-commerce. The setting of regulations in the Internet environment for the administration of tariffs for products and services is difficult and another aspect that is also complex involves legal issues which includes intellectual property protection, privacy and security. The legal aspects are mostly addressed by the World Trade Organisation and the Organisation for Economic Co-operation and Development (OECD) (Papazafeiropoulou, Pouloudi and Currie (2001: 5). Intellectual property, copyright and privacy are discussed in the next chapter.

Ya'u (2004: 11) also refers to the new form of imperialism regarding the development of ICT in developing countries in Africa. He argues, like Balakrishnan (2001) (mentioned earlier above), that the involvement of big organisations in ICT development in African countries is influencing the policies of ICT sectors in these developing countries. This is a new form of imperialism, in the sense that new policies for ICT sectors of developing countries have been developed in the interest of multinational organisations. Like Balakrishnan (2001) he explains this argument by stating that the WTO policy initiatives, especially those which come under the ambit of other international agreements, are not made in the interest of the developing countries. Ya'u explains that

... the Agreement on Telecommunications, GATTs and TRIPS, have tended to exacerbate the digital divide. The result is the resurgence of imperialism, this time represented by knowledge dependence. While locating the marginality of Africa in cyberspace within its colonial past ... current international attempts at bridging the digital divide are part of wider efforts to not only secure the virgin markets of developing countries, but also to configure the world in the interest of the new imperial powers. Within this context, therefore, Africa faces the challenge of imperialism anew (Ya'u, 2004: 11).

Rooney (2005: 405-422) expresses concern regarding the influence of technology on policy.

He refers to *knowledge-based policy documents*, and demonstrates the influence of technology on policy formulation. He explains that the dominant discourse on knowledge due to technology, has become “technocratic”, meaning that decisions are made according to the demands of technology and not the needs of society. Braman (2004: 157) also holds this view. Furthermore, May (2003: 1) argues that technology is also influencing the potential to control the distribution of information content. May explains that the new technologies have influenced the control of knowledge and information content and shifted these to the political environment. According to May (2003:1), technology has not only influenced the potential method used for the delivery of information content. It has also created the application of digital rights management (DRM) which makes it possible for the technology to control the ownership of the information content of the document, ignoring the intellectual property right of the actual content of the document (May, 2003: 1, 20).

Ojo (2005: 3) states that there are flaws in the conceptualisation of the introduction of ICT to address the digital divide in countries in Africa as it does not take into account the social dimensions such as access to education and content. He explains that in 2000, 38 of 54 countries in Africa were reported to have less than 250,000 fixed telephone lines, with only Algeria, Egypt, Morocco and South Africa having more than one million fixed lines. He also explains that there are some cities in Africa with no telephones or other forms of ICT. Ojo explains that:

... It is obvious that Africa has poor Internet connectivity and it is at the periphery of ICT development. But the digital divide, as it is currently conceptualized in most discourses on ICT for development, has trivialised the global imbalances in access to ICT. It has limited the global imbalance in the access to ICT, which I [Ojp] contend should be seen within the overall context of socio-economic imbalances, to technical access (that is physical access to computers, Internet connectivity, and telecommunication infrastructure and services) (Ojo, 2005: 2).

Ojo continues his argument and quotes Jenkins who views the current emphasis on ICT development as tentatively patronizing:

...The rhetoric of the digital divide holds open this division between civilized tool-users and un-civilized nonusers. As well meaning as it is as a policy initiative, it can be marginalizing and patronizing in its own terms (Jenkins as cited in Ojo, 2005: 2).

Trends such as those identified above, will increasingly require research concerning

information policy developments linked to basic principles and values concerning the distribution of information and powers within the information economy.

3.5 NATIONAL INFORMATION POLICY IN AFRICAN COUNTRIES

Information policy-making in Africa has been, and is being, influenced in a number of ways. Over and above the internal influences which would influence each country in turn, the external influences include the following four areas:

- (i) Western influences and library development in Africa based on a Western model;
- (ii) International organisations are influencing the development of information and communication technology in African countries and resulting related national policies;
- (iii) Telecentres are being established and influenced by large international companies and initiatives in African countries to promote connectivity;
- (iv) International organisations are involved in the promotion of the development of Internet access in many African countries.

The above four policy-related issues and related influences are discussed in more detail below, illustrating, amongst others, the impact of UNESCO and other organisations on developments concerning access to information and libraries in Africa.

3.5.1 Western Influences and Libraries in Africa

International organisations such as UNESCO influenced the development of libraries in Africa during the period after the end of the Second World War. Rosenberg (1999: 15) explains that the *UNESCO Public Library Manifesto*, published in 1949, became the “... blueprint for public library development” worldwide, and especially for developing countries. This was followed by two conferences in Africa at Ibadan in 1953, and Enugu in 1962, which together laid down the pattern of central library provision for each country, based on legislation, and the setting up of training institutions in accordance with the “... Anglo-American pattern”.

Rosenberg (1999: 15) writes that libraries have played an important role in the communication of information in Africa, especially in countries under governance of colonial

powers. Many African countries gained independence over the years, particularly in the period since the 1960s onwards. These countries received foreign aid and assistance for the development of a framework for libraries in their country. In many countries libraries were established within the framework of universities, teacher training colleges and schools. In Anglophone African countries public libraries were placed under national or provincial control by law. The special libraries developed into documentation centres, and library schools were established, and by 1975 independent African countries had a “flourishing” network of libraries (Rosenberg, 1999: 13). These library networks were established, controlled, and funded by the governments, and run according to Western models of librarianship, funded by foreign aid and local government (Rosenberg, 1999: 13).

The current state of libraries in many parts of Africa tends to reflect a very different picture. The library buildings, facilities and stock in the academic, special, school, and public libraries are maintained inadequately, and are providing an insufficient or no information service to their users. This trend is mainly due to inadequate funding, no government policies to fund and maintain the library services, and, to some extent, inadequate management or staff skills. In many of the countries’ libraries few or no new books or other materials are purchased, due to limited or no funding. Declining resources has been affecting education in general in many countries due to a lack in the provision of learning support materials, both in print and electronic formats (Matula, 2004: 94). The school libraries in many African countries are no longer functional. For example, the World Bank reported in 1990 that the school libraries in Zambia were inactive (Rosenberg, 1999). A survey was also conducted in Namibia in 1990. This survey found that more than 77 per cent of Namibian schools had no libraries or book collections. This was particularly the case in the northern part of the country where 71 per cent of the country’s schools are situated (Rosenberg, 1999: 14). Njanji (2004) reports that many of the schools in rural areas in Zimbabwe do not have any books or facilities and school attendance has fallen to 65 per cent of what it used to be, over the past three years.

Since 1978 libraries in developing countries have been encouraged to use information and communication technology as a means to access information. Rosenberg (1999: 16) indicates that the cost of maintaining the software and hardware of the information and communication technology is too high for many libraries, and the libraries cannot sustain the management of the software and hardware implemented.

A recent investigation conducted on the current status of the development of digital collections in university libraries in Africa (Rosenberg, 2005) indicates that these libraries are in need of funding and staff in need of training. She found that these libraries were heavily dependent on external funding, with a lack of institutional funds. She explains:

... Better institutional funding is the long-term solution. Convincing university authorities also depends on ensuring that library staff have the skills to provide good services and that users have the competencies to make good use of the services provided (Rosenberg, 2005: 21).

Rosenberg found in 1990 that most university libraries in Africa had not attained the automation of library systems, sufficient ICT facilities (computer networks) and adequate connectivity:

... From the survey, library automation began in the 1990s. However the majority of libraries - 40 libraries (65 per cent) - have still to complete the process. Most began with cataloguing, but have neither finished that nor moved onwards to other processes. Thirteen libraries (21 per cent) have not yet started any automation and only 9 (15 per cent) consider that they are fully automated (Rosenberg, 2005: 6).

Only 31 per cent of the libraries were connected to university-wide networks and a significant number were not networked at all (Rosenberg, 2005: 6). In addition, there is a need for the upgrading of skills and retraining of staff, particularly regarding the use of e-resources management, e-services development and teaching skills. In order to address these developmental needs, Rosenberg indicates that there is a need to support the instigation and completion of library automation projects as a matter of priority (Rosenberg, 2005: 21).

In another survey, Chisenga (2004: 34) found that the public libraries in countries in Sub-Saharan Africa serve large user populations and are often well used, in some instances, while less so in others, as shown in the statistics below:

Table 3.1 Survey of public library services in ten countries in Anglophone Africa**Appendix 2: Some statistics on the public library services surveyed**

<i>Public library service</i>	<i>No. of libraries</i>	<i>Professional staff</i>	<i>User population a</i>	<i>Users per week a</i>
Botswana National Library Service	23	47	80,780 ^b	? ^c
Bulawayo Public Library	8	10	16,000 ^b	3,000
City of Johannesburg LIS	82	155	3,200,000 ^d	95,000
Emalahleni Local Municipal Council	7	4	300,000 ^d	10,000
Ermelo Public Library	7	4	30,000	5,500
eThekweni Municipal Libraries	89	156	548,387 ^b	13,125 ^e
Free State Provincial LIS	161 ^f	38 ^g	514,620 ^b	69,230
Ghana Book Trust Children's Library	1	2	2,050 ^b	20 ^c
Ghana Library Board	62	8	52,175 ^b	28,851
Govan Mbeki Municipal Libraries	11	51	32,120	6,300
Kenya National Library Service	34	100	200,000 ^b	40,000
Kano State Library Board	15	19	3,500 ^b	500
Malawi National Library Service	8	10	> 5,000,000 ^d	>1000
Mbombela Municipal Libraries	6	20	25,600	? ^c
Mpumalanga Provincial LIS	146 ^f	11	155,000 ^b	12,850
Nairobi City Library Services	4	9	>1,000,000 ^d	100
National Free Library of Zimbabwe	2	9	>15,000 ^b	>1000
National Library of Uganda	1	9	1,000,000 ^d	250
Nakaseke Telecentre and Library	1	1	>5000 ^d	250
Plateau State Library Board	3	2	2,791 ^b	? ^c
Tanzania Library Services Board	31	76	69,726 ^b	20,408
Zambia Library Service	26	45	2,500,000 ^d	8,000

^a In many African public libraries, users who wish to borrow material register, but this is not necessary for those who wish to use library resources during a visit to the library; the latter usually vastly outnumber the former. Some of the user figures represent registered borrowers and some represent those who just visit the library and use the resources whilst they are there.

^b Approximate number of registered users. For Plateau State Library Board, the number is for the period January–August 2003.

^c Number of visitors per week to the library or libraries is not known.

^d Approximate number of target population, i.e. population of city, town, or area served by the public library service.

^e The figure is for some of the busy branch libraries of the eThekweni Municipal Libraries.

^f Number of libraries affiliated to the Provincial Library Service, including regional libraries and municipal public libraries.

^g The number is made up of 28 professional library staff at the Provincial Library Service and 10 at libraries affiliated to the Library Service that are using ICTs.

(Chisenga, 2004: 34).

Library automation in public libraries surveyed in ten countries in Anglophone Africa provided the following statistics, indicating automation and information technology applications in many of the libraries in these countries:

Table 3.2 Survey of automation of public library services in ten countries in Anglophone Africa

Appendix 6: Library automation

<i>Public Library System</i>	<i>Acquisitions & budgets</i>	<i>Cataloguing</i>	<i>Circulation</i>	<i>Serials control</i>	<i>OPAC</i>	<i>Management information</i>	<i>Inter-library loans</i>	<i>Others</i>
Botswana National Library Service								
– Main Library	Yes	Yes	No	Yes	Yes	No	No	Yes
Bulawayo Public Library	No	No	No	No	No	No	No	Yes
City of Johannesburg LIS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Emalahleni Local Municipal Council Libraries	No	No	No	No	Yes	No	No	No
Ermelo Public Library	No	No	No	No	No	No	No	No
eThekweni Municipal Libraries	Yes	Yes	Yes	No	Yes	No	No	No
Free State Provincial LIS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ghana Book Trust Children's Library	No	Yes	Yes	No	Yes	Yes	Yes	No
Ghana Library Board	No	No	No	No	No	No	No	No
Govan Mbeki Municipal Libraries	No	Yes	No	No	Yes	No	No	No
Kenya National Library Service								
– Main Library	No	Yes	Yes	No	Yes	No	No	No
Kano State Library Board	No	No	No	No	No	No	No	No
Malawi National Library Service	No	No	No	No	No	No	No	Yes
Mbombela Municipal Libraries	No	Yes	No	No	Yes	No	No	No
Mpumalanga Provincial LIS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Nairobi City Library Services	No	No	No	No	No	No	No	Yes
Nakaseke Telecentre and Library	No	Yes	No	No	No	Yes	No	No
National Free Library of Zimbabwe	No	No	No	No	No	No	No	No
National Library of Uganda	No	Yes	No	No	No	Yes	No	No
Plateau State Library Board	No	No	No	No	No	No	No	No
Tanzania Library Service Board								
– Morogoro Library	No	Yes	No	No	No	No	No	Yes
Zambia Library Service	No	Yes	No	No	No	No	No	Yes

(Chisenga, 2004: 37).

The figures indicate that many of the libraries are moving towards automation. Three of these libraries have automated all the above functions. Five of the libraries have not introduced any automation systems yet, while all the others indicated that they had automated at least one of the functions listed. It is noteworthy and significant that the Ghana Library Board's 62 libraries are extremely well used despite not being automated (Table 3.2) as they manage to serve more than 28,000 users per week, which is more than 50 per cent of the approximate 52,175 registered library users.

Access to Internet connectivity is also provided by numerous public libraries in Anglophone countries in Africa (Table 3.3). Information on the countries in the rest of Africa was not found at the time of the study.

Table 3.3 Survey of Internet access in public library services in ten countries in Anglophone Africa

Appendix 9: Distribution of computers accessing the Internet

<i>Public library service</i>	<i>No. of computers used by staff</i>	<i>No. of computers used by library users</i>
Botswana National Library Service	75	0
Bulawayo Public Library	0	27
City of Johannesburg Library and Information Services	155	7
Emalahleni Local Municipal Council Libraries	2	1
Ermelo Public Library	1	0
eThekweni Municipal Libraries	13	46
Free State Provincial Library and Information Service ^a	46	14
Govan Mbeki Municipal Libraries	0	2
Kenya National Library Service ^b	20	20
Kano State Library Board ^b	21	21
Malawi National Library Service	1	0
Mbombela Municipal Libraries ^b	1	1
Mpumalanga Provincial Library and Information Service	18	3
Nairobi City Library Services ^b	1	0
National Free Library of Zimbabwe ^b	5	5
National Library of Uganda	2	4
Nakaseke Telecentre and Library	1	4
Tanzania Library Services Board ^c	5	19
Zambia Library Service ^b	7	7

^a At the FSPLIS, library users have 8 machines for their use and also share 6 other machines with the library staff.

^b Staff and users share the same computers for Internet access.

^c One of the five computers used by staff is located at the TLSB HQ in Dar es Salaam and the remaining four are at Morogoro Regional Library. At Moshi Regional Library, staff and library users share the same computers for Internet access.

(Chisenga, 2004: 40).

3.5.2 Western Influences and Information Technology in Africa

Nassimbeni (1999b: 5) indicates that information policy-making in Africa has been and continues to be influenced in a substantial way by international organisations, corporations with international interests and NGOs (Non-governmental Organisations). Stone remarks that organisations such as UNESCO and the International Development Research Centre (IDRC) have been investing considerably over the past twenty years in assisting countries in formulating “national information policies” (Stone, 1996b: 1). These organisations have also been involved in the development of information technologies and networks in African countries, aiming to influence the development and use of information technology supplied

by these countries, thus creating a financial and technological dependence on these organisations for the future development and maintenance of ICT in the countries. Examples of the international organisations and their initiatives in Africa are listed below (Table 3.4). Although the list is not complete, the list serves to demonstrate the extent of the involvement of these organisations in a process that is influencing information communication and the communication infrastructure in Africa.

Table 3.4 lists the communication centres in Africa and the organisations that are involved in telecommunication development. The organisations include: the *International Telecommunications Union (ITU)*; the *Acacia Initiative Programme under the International Development Research Centre (IDRC)*; the *Leland Initiative (or Global Information Infrastructure Gateway Project)* of the United States Agency for International Development (USAID); the *LearnLink Project* of the United States Agency for International Development (USAID); the *Economic Commission for Africa*; the *Association for Progressive Communications*; *Bellanet*; *Partnership for ICTs in Africa (PICTA)*; *UNESCO*; the *World Bank*; and, the *Canadian International Development Agency (CIDA)*.

Examples of funding from these organisations indicate that considerable amounts of money are being poured into the development of information infrastructure development in Africa. In 1995 it is reported that USAID awarded a grant to the amount of 295 000 USD to the Pan African Development of Information System (PADIS) to establish a Greater Horn of Africa electronic communication network, a project that was expected to begin in 1996 (Information Technology in System-Wide Initiative, 1995: 1-2). PADIS was established in 1982 as a project of the United Nations Economic Commission for Africa on the regional development of bibliographic information resources, networking and databases, and has been involved in information development in Africa (Yumba, 2002: 238-239). In another Special Initiative programme an estimated amount of 11.5 million USD was also allocated by the World Bank and UNESCO (Information Technology in System-Wide Initiative, 1995: 1-2) to cover 20 countries in Africa towards information technology development in Africa. An explanation of the involvement of these organisations in information and communication technology development in countries in Africa is included briefly in this section.

Table 3.4 Communication centres in Africa, listing the country, agency involved and nature of the development

Country	Agency	Activity	Notes
Benin	ITU USAID/LearnLink	MCT CLC	Begins 1999
Botswana	USAID/Leland	Connectivity	
Côte d'Ivoire	USAID/Leland	Connectivity	
Eritrea	USAID/Leland	Connectivity	
Ethiopia	USAID/Leland	Connectivity	
Mozambique	ITU IDRC/ACACIA USAID/Leland	MCT Telecentres Connectivity	Under way
Ghana	USAID/Leland VITA USAID/LearnLink	Connectivity Telecentres CLC	Operating in 3/99
Guinea-Bissau	USAID/Leland	Connectivity	
Guinea-Conakry	USAID/Leland	Connectivity	
Kenya	USAID/Leland	Connectivity	
Mali	ITU	MCT	Begins 1999
Madagascar	USAID/Leland	Connectivity	
Malawi	USAID/Leland	Connectivity	
Namibia	USAID/Leland	Connectivity	
Rwanda	USAID/Leland	Connectivity	
Senegal	ITU IDRC/ACACIA	MTC Connectivity Telecentres	Under discussion
South Africa	Universal Service Agency USAID/Leland IDRC/ACACIA	Telecentres (2000-) Connectivity Telecenters	Franchise model established by telecoms
Tanzania	ITU USAID/Leland	MCT Connectivity	Begins 1999
Uganda	ITU USAID/Leland IDRC/ACACIA	MCT Connectivity ACACIA	Under way
Zimbabwe	USAID/Leland	Connectivity	

(Source: Colle and Roman, 1999: 18-30).

The Acacia Initiative Programme, led by the International Development Research Centre (IDRC), is an international effort to empower Sub-Saharan African communities with the ability to apply information and communication technologies for their own social and economic development. The IDRC was to invest 60 million Canadian Dollar (CSD) over a period of five years in this project. The development of information and communication technologies (ICTs) needs to be sustainable at the community level and, for this reason, attention was given to larger policy development (Colle and Roman, 1999: 9). The initial countries included Mozambique, Senegal, South Africa and Uganda. The main areas of focus for the initial investigation included: policy; human resources; technology and infrastructure; and content development (*Uganda: NICI Policy*, 1997: 2). Despite all the developmental efforts, much still needs to be done to improve interconnectivity in many countries in Africa, as found in 1999. A meeting was organised by the Economic Commission for Africa (ECA) in Addis Ababa, Ethiopia, in June 1999. The ECA secretariat presented a report, *Developing national information and communications infrastructure (NICI) policies, plans and strategies*. This was a report compiled by the Sub-Committee on Information and Communication Technologies. The document recognised the challenges that the African information infrastructure needed for the expansion of public access, especially to rural areas, improving applications of new technologies, and content development (Economic Commission for Africa, 1999: 1).

Bellanet is a consortium that includes the IDRC, UNDP, SIDA, CIDA, DGIS, Rockefeller Foundation and the MacArthur Foundation. It aims to encourage collaboration and the use of information and communication technologies to create an enabling environment for such collaboration (Colle and Roman, 1999: 15).

Partnership for ICTs in Africa (PICTA) is a forum for the collaboration of donor and existing agencies acting within the framework of *Africa's Information Society Initiative* (AISI). The African Internet Forum (including UNDP, USAID, Carnegie Corporation, the World Bank, and others) and the African Networking Initiative (including IDRC, ITU, ECA, UNESCO, and others) were two of the major groups which were merged to form PICTA. Their focus is also on ICT development in Africa (Colle and Roman 1999: 15).

According to Colle and Roman (1999: 16) the World Bank is involved with rural communications activities in more than 15 countries. Their main focus is on policy, revenue and tariff arrangements and infrastructure development for rural telecommunications. Within the policy work, the Bank wishes to ensure access to communications by the poorest, most of whom live in the rural areas. The Bank's donor fund, InfoDev, has supported major distance education facilities in Ethiopia, Kenya, Uganda, Tanzania, Zimbabwe and Ghana. InfoDev is designed to "... provide developing nations' governments with policy advice and 'best practices' information on economic development potential of communications and information systems. In this context the World Bank operates as a knowledge broker for governments." (Colle and Roman, 1999: 16).

James (2001: 8) explains that the International Telecommunication Union (ITU) was established in 1965 on the principle of cooperation between governments and the private sector. As such it has been involved in the determination of policies involving telecommunication policy makers, regulators, network operators, equipment manufacturers, hardware and software developers, regional standards-making organisations and financing institutions. Over the past 20 years with the convergence of the media, the ITU has evolved to become a trillion USD industry worldwide and has three sectors. The three sectors include: Radiocommunication (ITU-R); Telecommunication Standardisation (ITU-T); and, Telecommunication Development (ITU-D). The ITU is also involved in designing programmes to improve telecommunication infrastructure in developing countries (James, 2001: 8).

According to Dick (2002a: 95) it is necessary to view the dominant influence of powerful organisations such as the ITU, the North American Free Trade Agreement (NAFTA) and the World Trade Organisation (WTO) on the development of nations' information infrastructures. He points out that the influence of these organisations can already be seen in the

... decision by more than 60 countries to open their own telecommunications systems to foreign competition. The profits to be made by some firms as the result of this move towards liberalisation outweigh the considerations of the benefits to ordinary people with the promise of personal empowerment (Dick, 2002a: 95).

Table 3.5 Africa, Telecommunication Projections, 1995-2005

	Actual						Estimate		Forecast		
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Main telephone lines (000s)	12'550	13'663	15'043	16'719	18'631	19'799	21'377	22'832	25'180	27'900	31'000
North	5'860	6'476	7'208	8'094	9'158	10'230	11'478	12'333	14'151	16'200	18'600
South Africa	4'002	4'259	4'645	5'075	5'493	4'962	4'924	4'844	4'800	4'800	4'800
Sub-Saharan	2'687	2'929	3'190	3'550	3'980	4'607	4'975	5'655	6'230	6'900	7'600
Per 100 inhabitants	1.8	1.9	2.1	2.3	2.5	2.5	2.7	2.8	3.0	3.2	3.5
North	4.6	5.0	5.5	6.1	6.8	7.4	8.2	8.6	9.6	10.7	12.0
South Africa	10.1	10.6	11.3	12.0	12.8	11.4	11.1	10.7	10.4	10.1	9.9
Sub-Saharan	0.5	0.5	0.6	0.6	0.7	0.8	0.8	0.9	1.0	1.0	1.1
Mobile cellular subscribers (000s)	652	1'166	2'289	4'207	7'586	15'723	25'804	38'020	51'678	61'200	67'000
North		69	175	284	1'007	3'947	8'105	11'788	16'455	19'700	21'700
South Africa	535	953	1'836	3'337	5'188	8'339	10'789	13'814	16'860	18'700	19'800
Sub-Saharan	72	144	278	586	1'390	3'437	6'911	12'418	18'363	22'800	25'500
Per 100 inhabitants	0.1	0.2	0.3	0.6	1.0	2.0	3.2	4.6	6.1	7.1	7.6
North	0.04	0.1	0.1	0.2	0.7	2.9	5.8	8.2	11.2	13.0	13.9
South Africa	1.4	2.4	4.5	7.9	12.0	19.1	24.2	30.4	36.4	39.5	41.0
Sub-Saharan	0.01	0.03	0.1	0.1	0.2	0.6	1.1	2.0	2.8	3.4	3.8
Total telephone subscribers (000s)	13'202	14'829	17'332	20'926	26'216	35'523	47'181	60'852	76'858	89'100	98'000
North	5'905	6'545	7'383	8'378	10'165	14'177	19'583	24'121	30'606	35'900	40'300
South Africa	4'537	5'212	6'481	8'412	10'681	13'301	15'713	18'658	21'660	23'500	24'600
Sub-Saharan	2'759	3'073	3'468	4'136	5'370	8'045	11'885	18'073	24'593	29'700	33'100
Per 100 inhabitants	1.9	2.1	2.4	2.8	3.5	4.5	5.9	7.4	9.1	10.3	11.1
North	4.6	5.0	5.6	6.3	7.5	10.3	14.0	16.8	20.8	23.7	25.9
South Africa	11.5	12.9	15.7	20.0	24.8	30.4	35.3	41.0	46.7	49.7	51.0
Sub-Saharan	0.5	0.6	0.6	0.7	0.9	1.3	1.9	2.9	3.8	4.5	4.9
Internet users (000s)	307	430	867	1'646	2'816	4'586	6'247	10'238	13'857	16'600	18'600
North	23	45	73	156	467	1'060	1'620	3'731	4'890	5'600	6'100
South Africa	280	355	700	1'266	1'820	2'400	2'890	3'100	3'300	3'500	3'700
Sub-Saharan	4	30	94	224	529	1'126	1'737	3'407	5'667	7'500	8'800
Per 100 inhabitants	0.04	0.06	0.12	0.2	0.4	0.6	0.8	1.2	1.6	1.9	2.1
North	0.02	0.03	0.06	0.1	0.3	0.8	1.2	2.6	3.3	3.7	3.9
South Africa	0.71	0.88	1.70	3.0	4.2	5.5	6.5	6.8	7.1	7.4	7.7
Sub-Saharan	0.001	0.01	0.02	0.04	0.09	0.2	0.3	0.5	0.9	1.1	1.3

Provisional. Updated 01.04.2004.

Source: Telecommunication Development Bureau (BDT), International Telecommunication Union (ITU)

(International Telecommunication Union, 2005. *Africa, Telecom projections, 1995-2005*)

The Universal Service Agency (USA) in South Africa aims to foster universal access to telecommunications throughout South Africa (Colle and Roman 1999: 14). The U.S.A. has been extending access to telecommunications in South Africa and aims to improve universal access to ICTs by communities in under-serviced areas in the country (*South Africa Yearbook, 2005/06*: 138). Developments in South Africa are covered in chapter four. Table 3.5 below lists the forecast made for the development of telecommunication for Africa, indicating a decline in subscribers to main telephone lines in South Africa, but major growth in cellular subscriptions. These trends are discussed in chapter five.

3.5.3 Telecentres or Multipurpose Community Centres in Countries in Africa

Telecentres may also be called multipurpose community centres (MPCCs) or community resource centres (Dick, 2002a: 131). Telecentres are established to address the need for connectivity and access to ICT in regions where these facilities have not yet been established. The telecentre movement is relatively recent on the African continent (Maepa and Mphahlele, 2004: 59). Telecentres were originally developed in developed Western countries, based on the idea of linking isolated and other mainly rural communities by providing them with access to telecommunication networks. Telecentres are in theory "... locations where telecommunications technologies are made available for local communities to access information that will lead and contribute to local development" (Snyman and Snyman, 2003: 97, 105). Initially some community telecentres were to be established to provide basic communication services such as "... voice, fax, e-mail, Internet access, etc.; public and quasi-public sector services such as telemedicine, distance education, municipal governance services, etc.; and private sector services like news distribution, telecommuting services, training, information on markets, crops and weather conditions, and more" (Colle and Roman, 1999: 7).

Snyman and Snyman (2003) found that these telecentres were not always successful in achieving the ideal of local development for rural communities. One of the reasons for the limited success of some of the telecentres is the failure to first establish and develop basic human and social skills such as literacy and information literacy skills (Snyman and Snyman, 2003: 105). This argument ties in with the point made that the Internet does not replace

education and training, does not teach literacy, and requires highly developed skills to access and interpret the information found (Cullen, 2001). Both Lor (2002: 107) and Nassimbeni (1996: 369) indicate that South African public librarians could play a valuable role in the telecentres or MPCCs in South Africa. The International Telecommunication Union (ITU) is an international organisation and is one of the main leaders in the area of telecentre development. It was founded on the principle of cooperation between governments and the private sector under the leadership of UNESCO (as mentioned above). It is setting up Multipurpose Community Telecentres (MCTs) in Africa, Asia and Latin American and is involved in projects in Benin, Bhutan, Honduras, India, Mali, Mozambique, Suriname, Tanzania, Uganda, and Vietnam (Colle and Roman, 1999: 5). UNESCO is also involved in the development of communication centres in Mozambique. It is working together with the IDRC and ITU and supplies funding and / or workshops at these centres (Colle and Roman, 1999: 16).

Telecentres or communication centres established in African countries aim to promote connectivity. The Telecentres are technology-based community centres that provide telecommunications and Internet connectivity and access for under-served urban, rural and remote populations. Table 3.4 lists the countries in Africa where telecommunication centres are being developed by various agencies as well as the Internet connectivity in Africa. These initiatives indicate a desire within the developed nations to install telecommunication facilities in the developing countries to ensure connectivity. These initiatives are not necessarily altruistic but are also motivated by political and economic reasons, as the connectivity in developing countries in Africa are developed according to the standards and software of the developers from developed countries. These initiatives create a dependence on the organisations for future development and maintenance of software and hardware as mentioned earlier in this chapter.

Ojo (2005) reports on an evaluative study of a multipurpose telecentre in Uganda. According to Ojo, the Nakaseke Multipurpose Community Telecentre was established in Uganda under the Acacia programme, and became operational in March 1999. The IDRC, ITU and UNESCO budgeted 396,425 USD for this project. Its local partners, and the Ugandan Telecom were committed to contribute an additional 68,000 USD. Ojo found that 70 per cent of the users were males and over 50 per cent were between the age group of 15 to 20. Ojo

(2005: 9) explains the findings: "...It is the educated young male that monopolised the use of the Internet and ICT-based services in the Nakaseke MCT. The profile of users in the Nakaseke MCT is similar to the profile of Internet users or ICT consumers in most parts of Africa (and some Western countries). According to Ojo, in a survey done in 2000 the UN Economic Commission for Africa (ECA) found that:

... the largest number of Africa's 1.5 million Internet users were young (25-35 was the majority age), were predominantly male, were well-educated (e.g., 87 per cent in Zambia and 98 per cent in Ethiopia had university degrees), had above-average income, were English-speaking, and belonged to non-governmental organisations, new media, private companies (especially IT and computer businesses) and universities (Franda, 2002: 18).

Ojo (2005: 10) reports that the ECA report, referred to above, found the Nakaseke findings consistent with the findings at other IDRC sponsored telecentres and privately run cyber cafés, and in countries such as Mali, 77 per cent of the users were men, in Mozambique, 63 per cent were men, and in Senegal, 70 per cent of the users were men. He also reports that the main activity of the users involves the sending and receiving of electronic mail, rather than academic research or e-commerce. Ojo concludes by stressing the need to first address the development of people's capabilities and skills and advises against using the Western model of development programmes linked to technology transfer without consideration of local social and cultural needs.

In South Africa Casprary (2002: 4) found that only 40 per cent of the 70 community centres that were originally established in South Africa remain open. The remaining 30 per cent may have failed due to reasons such as the lack of adequate skilled manpower, language barriers to understanding the content of messages, low telecommunication penetration, or other reasons (Kiplang'at, 2002: 362).

3.5.4 Internet in African Countries

Currently, Internet standards and content reflect the dominance of Internet users and developers from North America and Europe. James (2001: 10) explains that the standards for the Internet are defined by its commercial value "... as a lucrative e-commerce market", influenced by the interests of large corporations and governments from powerful countries.

These standards consider commercial interests rather than the interests of developing society, civil society and business enterprises in the south (James, 2001: 10).

The three Internet standards bodies controlling and managing the Internet are the following:

(a) Internet Engineering Task Force (IETF)

Membership of the IETF working groups is open to anyone who wishes to contribute to the development of technical specifications by e-mail. These working groups are developing the specifications based on consensus reached in an unstructured manner, described as in a "... rough consensus and working code". According to James (2001: 11), the IETF is under increasing pressure as commercial enterprises are finding the process for the development of technical specifications too slow, while governments want to enforce legal obligations on the IETF to allow "... wiretapping facilities and traceability of users into its standards" (James, 2001: 11).

(b) World-Wide Web Consortium (W3C)

Standards for the World-Wide Web are set by the W3C for accessibility, user interface and architecture. Membership of the W3C is restricted to membership of organisations willing to pay annual membership fees and specially invited experts. According to James (2001: 11) the standards have been maintained relatively openly, partly due to the participation of Tim Berners-Lee, an individual who "invented" the World-Wide Web (WWW). Currently the W3C is being pressurised by governments wishing to filter out certain content on the WWW, while commercial bodies are demanding standards that will enable business to collect data on Web users, to make the content of this data available for publishers and commercial use (James, 2001: 11).

(c) Internet Corporation for Assigned Names and Numbers (ICANN)

ICANN was established as a not-for-profit US organisation to manage the administration of Internet domain names. The global domain name system (DNS) is used to identify resources on the Internet. The Internet Domain Name System also coordinates the management of domain names and the creation of the main domains existing of .org, ac., .edu.net, etc. (James, 2001: 11). James stresses that the management of the domain names should be transparent, and that ICANN is in the

position that it could remove domain names, and thus make the content entered under that name, not retrievable (James, 2001: 12). The Domain Name Authority within the Telecommunications Business Unit in the Department of Communications, in South Africa, is responsible for the domain names and authentication of service providers. In South Africa the *Electronic Communications and Transactions Act*, No 25 of 2002 (ECT Act), provided for the establishment of the .ZA Domain Name Authority (.ZA ccTLD) and gave it the responsibility for the administration and management of the .ZA domain name system. ICANN approved the re-delegation of the .ZA ccTLD from the previous administrator (technically the Uninet Project), to the .ZA Domain Name Authority (.ZA Domain Name Authority, 2005: 1). Disputes regarding South Africa's Internet domain names are regulated under the *Electronic Communications and Transactions Act*, 2002 (Act No 25 of 2002) *Alternative dispute resolution regulations*.

In 2001 the continent of Africa's telecommunications infrastructure was the least developed world wide (Kiplang'at, 2002: 356). The continent had less than two per cent of the world's telephone mainlines (Kiplang'at, 2002: 356). Currently the African Network Information Service is responsible for the management and allocation of Internet addresses. The technical initiative for the African Network Information Service was established in South Africa with the assistance of the Department of Communications and the Council for Scientific and Industrial Research (CSIR).

According to Lawlor (2000: 2) there was an average of one Internet user per 5 000 people on the continent of Africa. Globally there is one Internet user per 40 people, and in Europe and North America, one per six people. In 2002 Africa formed 0,62 per cent of world Internet access, with South Africa making up two thirds of that (Lawlor, 2000: 2). According to a report by Goldstuck (2004) 3, 28 million South Africans had access to the Internet at the end of 2003 (*South Africa Yearbook 2005/06*, 2005: 140). The current population of South Africa is in the order of 40 million. The literature reveals that international organisations have been promoting the development of Internet access in Africa. Some of the initiatives as described in the following paragraphs, illustrate the level of involvement of various multinational or other large organisations.

The Leland Initiative is a five-year plan. It aims to “bring the benefits of the global information revolution to people in Africa”. Its main focus is on extending Internet connectivity to 20 or more African nations. The project works on the supply side by creating Internet capacity and on the demand side by promoting an awareness of uses of the Internet.

The initiative assists with the building of the infrastructure and encourages the development of Internet pilot projects and other activities that help increase the awareness and use of the Internet (Colle and Roman, 1999: 11-12; Lawlor, 2000: 2). The Leland Initiative (or The Global Information Infrastructure Gateway Project of the United States Agency for International Development (USAID) operates under the auspices of the Centre for International Development and Conflict Management. It has been involved in research on national information case studies, institutional development cases, and in expanding and refining the Conflict Information Technology Model with emphasis on the Internet (Leland Initiative 1998-1999 Year Two).

The Association for Progressive Communications (APC) is an association of 22 non-profit computer networks around the world. It is working on community networking projects in Latin America, and is also involved in the linking of thousands of NGOs world wide to exchange development-related information. SangoNet in South Africa is an example of an APC initiative. This network provides low cost Internet access, training and other resources to hundreds of development organisations and NGOs in the Southern African region (Colle and Roman, 1999: 14-15).

The Canadian International Development Agency (CIDA) is involved in providing support for Internet connectivity and content creation capacity building in five African countries (Colle and Roman 1999:16). A survey conducted in 1999 on the 54 African countries indicated that 51 countries have Internet access in the capital cities (Paul, 2000). The countries with no local Internet access at the time were Congo (Brazzaville), Eritrea and Somalia.

Africa has a relatively poor telecommunications infrastructure, and there are marked differences between major urban areas. Between 70 per cent to 80 per cent of the population in Africa lives in the rural areas. Paul (2000: 42) states that countries in Africa need to take

advantage of the information revolution. If they fail to do this they would "... become even more marginalised and economically stagnant".

3.6 NATIONAL INFORMATION POLICY INITIATIVES IN AFRICA

Despite the above mentioned influences and developments regarding (i) libraries, (ii) information and communication technology, (iii) telecentres, and (iv) Internet in Africa, and many initiatives towards the development of national information policies in Africa, from the mid-1970s to the end of the 1980s, Rosenberg (1999: 15) found that,

...Fifteen years later, after expert missions, regional and country seminars, workshops, reports and draft plans and policies, not one national information policy is in existence in Africa.

According to Mchombu (1999: 234) Africa has "... not yet accepted information as an essential resource for social and economic development". Mchombu links this statement with his observation that Africa is the most underdeveloped continent in the world and that the majority of its people do not have access to development-oriented information (Mchombu 1999: 234). Oladele comments on the poor quality of the existing infrastructure in Africa (Oladele 2001: 4). He states that "... if the countries had given adequate attention to the development of their infrastructure and institutions within the NIP framework, the information scene of the continent could have been a lot better" (Oladele 2001: 4).

One example of a co-operative initiative taken in recent times includes the ICT programme of NEPAD. The Organisation for African Unity was re-constituted into the African Union with the launch of the New Partnership for Africa's Development (NEPAD) in 2002. NEPAD is the socio-economic programme of the African Union. The AU has developed an ICT programme. The ICT programme for an e-schools project is managed under the NEPAD e-Africa Commission. For this project, six schools from each member country were selected for the demonstration project aiming to implement a programme of connectivity in schools, providing access to Internet and e-mail (*South Africa Yearbook 2005/06*, 2005: 140) .

Another co-operative initiative is the World Summit on Information Society which emphasised the relevance of access to information for all, also in the developing countries.

These initiatives indicate that there is an awareness at governmental level of the need to address telecommunication and the development of the telecommunication infrastructure in Africa. There are, however, at this stage limited initiatives concerned with information content and initiatives aimed at the development of information societies in African countries. Based on the above, one can conclude that despite many efforts towards the improvement of information technology network development, most of the countries in Africa, including South Africa, are still not prepared for the challenges and opportunities of the Information Age. Disadvantages for Africa are linked to illiteracy and limited information literacy skills, and the lack of initiatives concerning information content and the development of an information society. There is also a lack of investment in the requisite infrastructure to support telecommunication networks.

3.7 CONCLUSIONS

In the historical overview in this chapter reference was made to a number of information-related influences, including external influences such as globalisation and the impact of information technology on national information policy development. These influences concern the social, economic, and political development of a country and are national or internal influences. Chapter two explained aspects concerning national information policy and the domain of national information policy and its historical, national, and international contexts. It further explained that a national information policy is a government policy that is developed within the context of a country. As with other government policies, it is developed by a government body with a particular aim and needs to be developed in such a manner that it is effective in order for the goals set for it to be achieved. In this context, a country's national information-related policies reflect how a government values information.

Chapter three reviewed international and historical trends in the development of national information policy, as well as various influences and developments on the continent of Africa. Past developments and influences impact on the development of national information policy. Governments are influenced by global trends and strive to develop the infrastructure for access to global technological connectivity. Governments' attitudes towards information

and its availability, its application, and its potential use are reflected in their information-related government policies. Trends were observed in this chapter, such as the establishment of telecentres or communication centres in Africa, as well as the promotion of access to the Internet.

On national and global levels, information has become valued for economic and political reasons, calling for access to information, a greater need for information literacy skills and linking the value of information to the ideal of moving towards an information society. Information (information content) is made available in the mass media and is vital for the functioning of a country. In the developing countries in Africa, and elsewhere, less attention seems to be directed towards ensuring access to and the availability of indigenous information and the main trend seems to be towards the securing of global online connectivity. This chapter identified a number of information-related issues that can be addressed in a national information policy. Issues such as the above, are discussed in the following chapter. The specific issues discussed in the following chapter include: access to information; government information; literacy levels; computer literacy levels; levels of education and skills; information society development; the North-South Divide (including the digital divide); information content, industrial competitiveness; other, such as e-commerce; telecommunication issues; copyright issues; Industrial property rights; freedom of speech; censorship; information ownership; and, library services and archives. These issues are reviewed in the following chapter, with specific reference to South Africa. The chapter aims to gain an overview of global influences on the information-related issues, international trends, and the current situation concerning these aspects of national information policy development in South Africa.

CHAPTER FOUR

NATIONAL INFORMATION POLICY ISSUES

4.1 INTRODUCTION

The literature review on national information policy, conducted in chapter three, indicated that the history and evolution of national information policy scholarship reflect many changing influences. These influences seem to have delayed attempts towards the scoping of what could be addressed with a national information policy. In this context the literature refers to the scope of issues managed or addressed within the *national information policy regime*. International trends, referred to in chapter three (Par. 3.7), indicated that despite the lack of clarity regarding the scope of national information policy, there is a tendency to approach the national *information policy regime* development based on technocratic values. Such a technocratic approach was also observed, by various authors, with regard to the development of the *global information policy regime*.

This chapter explores the trends regarding developments of issues addressed within the national or global information policy regime, as explained below. In view of the lack of a clearly defined scope for national information policy in the scholarly literature, this chapter uses existing lists of information-related issues to develop an applicable list for this study to structure the research concerning information-related issues as identified in the literature. The issues identified serve to guide the scoping of the research and to define the national information policy regime for this study (explained further in Par. 4.2).

This chapter uses the list of issues identified and reviews salient past and current developments, based on relevant literature to achieve an overview of global trends concerning these issues. The chapter also includes related developments in South Africa, as the focus of this study. The chapter concludes with an overview of the findings in this chapter, also regarding the situation in South Africa concerning the information-related issues, as background to an overview of what could be termed the “information policy regime” as observed internationally. Developments regarding South Africa’s media and information

sector are reviewed in chapter five as further background to the overview of information policy developments in the country. (based on the explanation given in Par. 2.8.5).

4.2 METHODOLOGICAL ASPECTS

Information policy research is complex as reflected in the limited progress to date in scholarship regarding aspects concerning its scope, definition and interdisciplinary research aspects. In view of the challenges raised by the above and linked to the current level of information policy scholarship there was a need to find a normative approach appropriate for this research. Based on the literature review conducted in the previous chapter the following methodological challenges had to be addressed in conducting the research, as mentioned in Par. 1.4:

- the issue of defining the scope of national information policy;
- the issue of national information policy as interdisciplinary research;
- national information policy as process and linked to values;
- comparative librarianship and comparative policy analysis;
- methodology used in the review of the literature regarding motivations for the development of national information policy.

A review of the literature reflected an awareness of researchers and policy-making circles (Duff, 2004: 69) of the importance of information policy in the current Information Age. Yet, a great deal of uncertainty continues to exist concerning any agreement or understanding as to its meaning, purpose and function. An analytical article on information policy scholarship by Browne (1997b: 340), explains that there are few thorough analyses of the literature of information policy in general, and, according to Browne the overviews tend to concentrate on information policy itself. Browne (1997a: 262) explains that "... Overarching frameworks which can be used to integrate policy at a broad conceptual level and in a coherent fashion are notably absent." There are also few thorough analyses of information policy that can be used in a comparison of information policy and information policy studies in general (Browne,1997b: 340).

Browne (1997b: 340) attributes the dearth in thorough analyses to that because of the fact that most of the studies tend to concentrate on the information policies itself, they fail to address normative or descriptive methods. One could also argue that there are few studies dealing with the analysis of information policy, due to the effect of ongoing changing of values linked to information over different periods. Braman (2003d) explained how the values attached to information as an economic resource or commodity, has continuously been shifting in focus from the 1960s onwards, as referred to in chapter one. Other complicating factors in the same period include ongoing changes in developments and application of the information technology and the related developments regarding the flow of information due to the convergence of the media and related international implications. For example, the value attached to the protection of personal information and privacy interests are increasingly being lost due to the influences of technology in the “... widespread use of computers to collect, combine and manipulate personal information” (Gellman, 1998: 211). Issues such as this were referred to in the previous chapter and are reviewed in this chapter.

In an article on the past, present and future of information policy, Duff (2004: 69) explains that information policy has not yet reached a satisfactory level academically or in practice. Furthermore, there is a continued lack of generally accepted defined scope of issues identified for national information policy (Duff, 2004: 74; Browne, 1997b: 340). However, there have been numerous attempts to clarify or define the scope of information policy by enumerating or listing all potentially relevant information-related policy issues. One such list is that of Porat (1977). Porat’s list of issues for national information policy is possibly the first list of this nature drawn up and published.

Dunn (2004: 75) points out that other subsequent researchers, such as Hernon and Relya (1991: 190-191), Burger (1993: 3), and Rowlands (in Duff, 2004: 75), did not consider Porat’s (1977) list published under the title: “Normative list of information policy issues”, suitable as a normative list of policy issues. Dunn (2004: 75) does not accept the list either, and describes the list as “... fuzzy”. The list is included in the far left column in Table 4.1 below.

There are numerous lists of information policy issues, compiled since Porat’s list of 1977. Examples of such lists, compiled by various authors, are given in Table 4.1. Despite

continued efforts to define the scope of national information policy, clarity regarding the scope of national information policy, has not been reached to date.

Rowlands, Eisenschitz and Bawden (2002: 31) found that there is a clear lack of an integrating overview of the information policy regime. Rowlands (as explained in Rowlands, Eisenschitz and Bawden, 2002: 31) addressed the uncertainty concerning the scope and understanding of national information policy more recently and developed a conceptual framework for information policy. In an effort to develop a framework for the understanding of information policy, they explain how Rowlands used the political economy to develop a frame for understanding information policy. This was a “...concept map” of the field of information policy, and used to identify and group information policy sub-domains. Rowlands’ five groups of information policy domains (Rowlands, Eisenschitz and Bawden, 2002: 31) are included briefly in the table below (Table 4.1).

Table 4.1 Timeline of Normative lists of Information Policy Issues since the 1970s

----->	----->	----->	----->	----->	----->
Change in values (to the right →) of policy issues listed below (1 to 10)	Porat (1977) (Economic value of information linked to addressing information products)	UNISIST guidelines (Wesley, 1985:) (Economic value of information linked to addressing information domain)	Bushkin & Yurow (1997) (Economic value of information linked to addressing information handling issues)	Rowlands (2002) (Economic value of information linked to the economics of information and information ownership and control - “Market vs. Government control”)	Braman and other contemporary researchers (The emergence of the “Global information policy regime”) (Chapter 6)
	1. Freedom of information (FOI)	Include all aspects of the Generation of information (publishing etc.)	Availability of information (and non-availability)	Information protectionism (controlling access and disclosure in the public sphere and information markets)	Technocratic values and e-commerce dominate
	2. Privacy	Collection of information (foreign and local)	Access to information (such as FOI Act; Open Access, etc.)	Information markets (Protect investment in the creation of information content and enable market exchange)	
	3. Data protection and security	Distribution of information (contents and networks)	Information privacy (including fair information practice)	Broadcasting and telecommunications (Regulating mass media and communications, balancing commercial and citizen interests)	
	4. Official secrets (or access to government information)	Organisational framework and the provision of resources (e.g. manpower, physical facilities and funding)	Management of information (to ensure accuracy, timeliness and completeness)	Public access to official information (Policies regulating citizens’ access to information held within government (e.g. freedom of information)	
	5. Libraries and archives		Creation of information (Copyright, patent laws, and private and government publications)	Information society and infrastructure (Public policy measures to invest or encourage private investment in the information infrastructure)	
	6. Scientific, technical and medical (STM) documentation		Market structures for handling information		
	7. Economics of government publications		Pricing of information (policies)		
	8. Copyright and intellectual property		International considerations (Transborder flow; broadcast spectrum among nations)		
	9. National information infrastructure				
	10. International information flow				

The information-related issues have been subject to a number of changes in the value attached to them, but the information-related issues listed do not indicate any value attributed to the

issue as it was addressed during the time the author was listing them. Chapter two (Par. 2.4.1.3) explained that governments develop policies according to what it values. Hanekom (1996: 12) states that policy-making can never be neutral and that policy decisions in the public sector depend on values. The relevance of values in the analysis of national policy is explained in policy studies as follows:

...Most contemporary writers on policy analysis also recognize that analysis has a substantial normative component, since through its use we seek information about the consequences of actions and their impact on people. As Dunn has stated: The aims of policy analysis go beyond the production of facts; policy analysts also seek to produce information about values and their attainment through reflective action. We believe that few, if any, policy analysts and planners still cling to a strict objective, value-neutral view of policy development ... national policy analysis can only begin after the relevant values have been identified, and that these values change over time as a result of the policymaking process (Patton and Sawicki, 1993: 32).

With regard to information policy, Braman (2003d) observed a shift in the value attached to information in the information economy over the periods she identified, covering the 1960s onwards (Figure 1.1 in this thesis).

Table 4.1 lists examples of information policy issues identified in documents from the 1970s, 1980s, 1990s, 2002. The policy issues listed are examples found in the literature of the different decades, linked to the information economy of the various decades. During each of the decades the shift in the value attached to information within the information economy from the 1970s onwards, is listed and illustrated in the table.

In order to establish a normative list for this research, the variations in the lists identified in different periods and information sources given in Table 4.1 were considered useful within the context of this study to identify specific issues. Rowlands' list provides a valuable overview of the core issues considered within national information policy, but after careful consideration, the researcher concluded that Porat's list could be used as a basic list against the framework identified for this research as explained in chapter one (also mentioned in the first paragraph to this chapter). Thus, although Porat's list was described as "fuzzy" by researchers such as Duff (2004: 77) and Rowlands' (as cited by Duff, 2004: 77), Porat's list was found to be useful in the policy framework used in this research, mainly because Porat listed specific The issues could be linked to the framework for the analysis concerning the

motivation for national information policy. This is demonstrated in Table 4.2 below, showing how Porat's normative list of information policy issues was linked within the framework for the analysis concerning the motivation for national information policy (chapter one, Par. 1.4.6), listed under (A), (B) and (C) in the Table 4.2 below, as taken from chapter one (Par. 1.4.6, Table 1.3). Porat's list was used to serve as a basic or core list by the researcher to ensure that all topical issues are identified, as reflected in the literature. Additional work was done by the researcher, by searching through more contemporary literature to identify any additional information policy issues (as listed to the right of the table). These are explained towards the end of this chapter, and reviewed with specific reference to South Africa, in the fifth chapter.

Table 4.2 was compiled by listing Porat's (1977) *normative list of information policy issues* in column (A). Although Duff (2004: 75) noted that Rowlands' list is considered to be more issue-specific ("less fuzzy") than that of Porat, Porat's list proved to be more detailed and useful with regard to policy issues identification as dealt with in this study. Rowlands' list is in reality a "concept map" providing for the conceptualisation for the grouping of clusters of information policy sub-domains (Rowlands, Eisenschitz and Bawden, 2002: 33). Porat's list, on the other hand, is more specific in the listing of the issues and was more suitable for application in an applied and practical sense, as found in policy studies. Porat did not specifically list all aspects identified and listed under (A), including issues such as information literacy, the development of an information society, the North/South divide, and electronic commerce, as these issues tended to be identified as relevant issues in the literature after 1977. In column (C) in Table 4.2, the information policy issues found in the literature by the researcher are listed as discussed later on in this chapter (Par. 4.3 and 4.4).

Table 4.2 Policy Issues within the Framework of Motivations for the Development of National Information Policy

<u>(A) Basic list of information policy issues</u>	<u>(B) Basic list of core issues identified, linked to motivations for national information policy development</u>	<u>(C) More detailed list of issues identified, linked to motivations for national information policy development</u>
Porat's normative list of information policy issues	Framework for research regarding motivations for the development of national information policies (Explained in Par 1.4.6 in chapter one)	List of information policy issues found by the researcher in the literature (Table 4.3)
(1) Freedom of information (FOI) (2) Privacy (3) Data protection and security (4) Official secrets (7) Economics of government publications (6) Scientific, technical and medical (STM) documentation	(a) Factors such as time, place and historical circumstances - currently typically including <ul style="list-style-type: none"> • Access to government information and the increase in information related legislation; • Information literacy skills required in the Information Age; • Developing of an information society; • The North / South divide (including the digital divide); • Information and competitiveness (scientific information, and indigenous information); • Electronic commerce (e-commerce). 	(i) Access to information (ii) Government information (iii) Literacy levels (iv) Computer literacy levels (v) Levels of education and skills (vi) Information society development (vii) The North-South Divide (including the digital divide) (viii) Information content, industrial competitiveness (ix) Other, such as E-commerce
(9) National information infrastructure (8) Copyright and intellectual property (5) Libraries and archives	(b) Information policies implemented in many countries - currently typically including <ul style="list-style-type: none"> • The development of information infrastructure • Copyright and intellectual property (addressing issues such as "fair practice", etc.); • Libraries and archives (Including policies such as introducing budget restrictions on libraries are making it difficult to provide and ensure access to information for all); 	(x) Telecommunication issues (xi) Copyright issues (xii) Industrial property rights (xiii) Freedom of speech (xiv) Censorship (xv) Information ownership (xvi) Library services and archives
(10) International information flows	(c) Policies with a specific application, value attached, or intent - currently typically including <ul style="list-style-type: none"> • Information valued for economic competitiveness • Information valued for social, economic and cultural development in the Information Age (including media and communication policy, and international information flows). 	(Values are determined by the government developing the policy)

The above paragraphs explained the lack of clarity regarding the scope of national information policy. Reference was made to existing lists of information-related policy issues that have been identified by various authors. The information-related issues are reviewed in chapter four, with regard to developments internationally, as well as in South Africa, based on the explanation given in chapter two regarding the motivations for the development of government policies (Par. 2.3.1). The salient aspects of the information policy issues identified above (Table 4.2) are reviewed in the current chapter and chapter five.

Table 4.3 Scope of National Information Policy for this Study

<p>(A) Factors such as time, place and historical circumstances - currently typically including</p> <ul style="list-style-type: none"> (i) Access to information (ii) Government information (iii) Literacy levels (iv) Computer literacy levels (v) Levels of education and skills (vi) Information society development (vii) The North-South Divide (including the digital divide) (viii) Information content, industrial competitiveness (ix) Other, such as E-commerce
<p>(B) Information policies implemented in many countries - currently typically including</p> <ul style="list-style-type: none"> (i) Telecommunication issues (ii) Copyright issues (iii) Industrial property rights (iv) Freedom of speech (v) Censorship (vi) Information ownership (vii) Library services and archives
<p>(C) Policies with a specific application, value attached, or intent - currently typically including</p> <ul style="list-style-type: none"> (i) Information valued for economic competitiveness (ii) Information valued for social, economic and cultural development in the Information Age (including media and communication policy, and international information flows).

This chapter reviews the issues influenced linked to time, place and historical circumstances (listed under Table 4.3(A)), as well as the issues influenced by policies implemented in other countries (listed under Table 4.3(B)). Chapter five reviews policies in South Africa with specific application regarding the flow of information in South Africa, the media and current information-related legislation in the country, linked to the value attached to information for

social, economic and cultural development (listed under Table 4.3(C)). Developments on every issue are reviewed briefly in the paragraphs below. The review also includes global issues as well as aspects of concern within the context of South Africa.

4.3 ISSUES LINKED TO FACTORS SUCH AS TIME, PLACE AND HISTORICAL CIRCUMSTANCES

Chapter three gave an overview of past developments regarding national information policy. This section reviews more current developments globally and also in South Africa.

4.3.1 Access to Information

Access to information (Par. 1.5.5) tends to be an information-related issue in national information policies (Par. 2.5.1.1). Governments can facilitate measures to provide for or restrict access to information in the public domain. Access to information can also lead to abuses of information by infringing on the privacy of individuals, limitations to freedom of expression, security of information and issues such as decency. Issues such as these may call for restrictive legislation. These issues are also relevant to the information industry, such as the newspaper press (Malley, 1990: 93). Duff (2004: 76) argues that freedom of information (FOI) issues (Par. 2.5.1.1) form the core of information policy, and includes "... news, facts, statistics, reports, legislation, tax-codes, judicial decisions, resolutions and the like", and that it is, therefore, information understood in simple terms to include "... factual propositions and accurate, meaningful data" (Duff, 2004: 76).

Examples found globally indicate that free access to information is not clearly understood, as explained by Vitello (2000):

... free access to information is still a misunderstood issue, with professionals discussing a "narrow" and a "broad" understanding of censorship (Vitello, 2000: 13).

Free access to information becomes complex when dealing with moral, religious and even political issues. Such issues are often dealt with in a narrow sense, for instance, when the media publish cartoons of politicians or political issues and these cartoons ridicule or express an opposing viewpoint to that of the politician or regarding a governmental or other issue, as discussed in Par. 4.4.5 under the issue of censorship. A relatively recent example of

censorship applied to moral issues, intended to restrict access to information, is the *Communication Decency Act*, promulgated in 1996 in the U.S.A.. This act concerns the electronic environment. The intention of this act is to prohibit online communication aimed at children describing offensive information regarding sexual or excretory activities or organs. This act restricted the information available on the Internet in public libraries in the U.S.A.. However, the Act was considered unconstitutional and challenged by, amongst others, the American Library Association, in the US Supreme Court in 1997. The Supreme Court found the Act to be undermining the freedom of expression guaranteed by the First Amendment of the US Constitution (Vitulo, 2000: 13).

Another example concerning differences on access to information is the *U.S.A. Patriot Act* that came into effect in 2001, in response to the September 11 terrorist attacks in the U.S.A. (Par. 2.6.1.1). The Patriot Act includes a provision that authorises the FBI to demand records without prior approval, and forbids anyone who receives such a demand, from telling anyone about the record demanded (National Security Letters gag Patriot Act debate, 2006: 1). This act has, amongst others, implications for and has an impact on libraries in the U.S.A. as it requires librarians to keep usage statistics on their patrons' information usage. This is forcing librarians to choose between supporting the rights of their patrons to free expression and access the information they wish while the librarians have to monitor and be prepared to provide statistics on the information accessed by their patrons. This was a restrictive practice with financial implications for libraries as they had to use scarce resources to support the keeping of statistics, instead of for public information resources for which libraries are funded (Jaeger, Bertot, McClure and Langa, 2006: 134-135; Librarians speak out for first time after being gagged by Patriot Act, 2006:2).

Access to information is provided by the spoken word, the performing arts, painting, music, dance and writing. The electronic media of the current Information Age enables access to information by a variety of means including: computers; telecommunication technology with telephones; broadcasting of radio and television; networking technologies including the Internet; mobile telephones; cable, satellite and other broadband connectivity.

Public access to electronic information through Internet connectivity is accessible to citizens in public libraries in many countries today. A study conducted indicated that since 2004

public libraries in the U.S.A. provided Internet connectivity for almost all U.S.A. residents and that 66 per cent of U.S.A. citizens use the Internet regularly (Jaeger, Bertot, McClure and Langa, 2006: 130).

Internet connectivity in South Africa is much lower than in the U.S.A. and an estimated 3.28 million South Africans had Internet access in 2003 (*South Africa Yearbook 2005/06*, 2005: 140), which is 8.2 per cent of the country's population of about 40 million. However, access to electronic information via the Internet within the context of a developing country like South Africa, needs to be viewed with caution. It is necessary to take into account aspects such as literacy levels and the languages spoken in the country, when considering the value of Internet access. Ojo (2005: 3) points out that Internet connectivity can only be accessible to a society that is literate, and has "..... the usage skills and knowledge of English or the language in which the Internet messages are encoded". Ojo (2005: 3) also rightfully explains that in very poor areas people are unlikely to use Internet services and quotes Heeks stating "... an individual who can barely afford two meals per day might not have the money to buy or access ICT" (Ojo, 2005:3). Factors such as time, place and historical circumstances have influenced relevant developments such as literacy levels in South Africa, currently influencing access to written and published information and the Internet in South Africa, as explained later in this chapter.

In many countries, such as South Africa, the right to information is a constitutional right. Nassimbeni (1996: 360) explains that the new democratic government of South Africa increased the importance attached to information in the country. In the new constitution of South Africa, the newly elected government indicated that it values information for governance and the building of a new nation.

Further aspects concerning access to and the flow of information in the media in South Africa are included in chapter five. That chapter looks at information regarding the publishing industry and access to information circulated in the public domain.

The *Promotion to Access to Information Act* was mentioned in Par. 2.6.1.1 and is discussed further in the section below.

4.3.2 Access to Government Information

Government communication and information are necessary to facilitate good governance in a country. UNESCO's (2004) "*Policy guidelines for the development and promotion of governmental public domain information*" (2004), explains governmental public domain information as:

... that part of public sector information that is publicly accessible and whose use does not infringe any national security restrictions, nor any legal right, nor any obligation of confidentiality. The decision on which types of public sector information are placed in the public domain is very much dependent on each country's approach to government and information policies, as well as on its information dissemination capacity and practices (particularly concerning the Internet) (UNESCO, 2004: 6).

Woods (2001: 244) explains that, in Europe, public bodies are the largest producers of information. He adds "... this information is recognized as a major and under-exploited asset, which could and should be a fundamental building block of the 'new economy' of the Information Society" (Woods, 2001: 244). He explains that this information includes publications produced from the following activities:

- The core of public sector activities as performed by mandate to produce information, including national statistics services, geographical information, and company registration information.
- Public sector activities not primarily directed towards producing public sector information, but which do produce information as a by-product on a significant scale, such as the education and health systems.
- Activities such as, those performed for scientific research, or the financing of libraries and museums (Woods, 2001: 244-245).

Government information in all three of the above categories are also important in South Africa and are addressed in, amongst others, by legislation in: the *Promotion of Access to Information Act (Act 2 of 2000)*; *Statistics Act (Act 6 of 1999)*; *Reporting by Public Entities Act (Act 93 of 1992)*; *Legal Deposit Act (1997)*; *National Library of South Africa Act (Act 92 of 1998)*; the *White Paper on Science and Technology*, of 1996; and the *National System of*

Innovation, for research and development, set up in 2002 (*South Africa Yearbook 2005/6*, 2005: 64).

The new government of South Africa addresses the issue of access to information and the importance of information for civil society's participation in policy formulation in the country's constitution (Lor, 2002: 102). Section 32 of the Constitution of South Africa states:

... Everyone has the right of access to (a) any information held by the state, and; (b) any information that is held by another person that is required for the exercise or protection of any rights (South Africa, 1996. Section 32).

Lor (2002: 101-103) explains the initiatives taken by the new government of South Africa to promote access to information. One of these initiatives involves changes in the printing and distribution of government information. In the past government information was printed by the Government Printer, which was established in 1888. The Government Printer published much of the official publications, but also contracted out some printing jobs to the private sector. The "self-governing territories" or "homelands" created under the apartheid government had their own printing facilities. However, since 1980, government departments started to print their own documents. At this stage these departments generally complied with the Legal Deposit Act in submitting copies to the National Library as part of the national holdings of the country as the system was already in place. Developments during the 1990s influenced compliance with the *Legal Deposit Legislation* and access to government information and the management of government publications, possibly due to the restructuring of the government departments and changes within the departments under the new government during the 1990s, as explained later on in this section.

According to Lor (2002: 106), and Nassimbeni (1996: 365), the Information Society and Development (ISAD) Conference, held in May 1996, became a landmark event that influenced the government's approach to the information field. The government's new focus emphasised information technology and the use of technology as a solution to help toward growth in the country (Nassimbeni, 1996: 364). With the apparent emphasis placed on technology, Lor (2002: 106) explains that the government did not focus on the value of information concerning aspects such as information content and mediation. With the current system there is no clear framework for the management of government publications (Lor,

2002: 15, 119), and each of the government departments is developing its own filing system under the government information project as explained later on in this section. This process is still in developmental stage and is also linked to the process of incorporating electronic documents with the paper-based publications (based on telephonic communication with government departments and National Archives, November 2006).

In 1996 a Task Group on Government Communications (known as COMTASK) was established to investigate communication with government, as well as the structure of the media and government's relations with the media, and international communications (Lor, 2002: 106). The COMTASK produced a report, the *Communications 2000: a vision for government communications in South Africa*. This report stressed the need for government to improve inter-governmental communications, as well as communications with the citizens (Lor, 2002: 106).

The development of multipurpose community centres (MPCCs) was identified as a pilot project at the ISAD Conference of 1996 (Dick, 2002a: 131). These centres play an important role in providing access to government information (Lor, 2002: 107), other information, telecommunications access, access to electronic libraries, community media and business opportunities. There seems to be some uncertainty regarding the number of MPCCs in the country. Lor (2002: 107) states that the National Information Technology Forum (NTIF) identified and listed 235 organisations in South Africa running MPCCs. Dick (2002: 132) reports, according to research conducted including four case studies regarding the number, location and primary focus of the MPCCs, 200 MPCCs were located, but that there may be as many as 600 MPCCs.. The funding for the MPCCs is provided by a Canadian organisation, the International Development Research Centre (IDRC). The South African government has also set up multi-purpose community centres (MPCCs) to provide information and services to the public. The Universal Service Agency has set up 62 telecentres in South Africa and according to Nicol (2003: 49) there is a great demand for telephone communication but there are limitations in the use of the telecentres in the low income areas. The cost of the telecentres is about R200 000 each, including about four computers, four telephone lines, a printer, a copier and television set. Very few of these centres are economically sustainable and technical, financial and managerial problems are experienced in the running of the centres (Nicol, 2003: 48). In the previous chapter (Par 3.6.3) it was also pointed out that the

telecentres were not always well used, due to a lack of training and the necessary basic skills such as literacy, information literacy and computer literacy (Snyman and Snyman, 2003). Van Audenhove (2003b: 142) also points out that the setting up of the telecentres or MPCCs was not provided for within any legislative framework, and as such, lacks the necessary support to ensure the successful implementation of this initiative.

The government of South Africa launched the Reconstruction and Development Programme (RDP) and the National Information Project (NIP) in 1996. The NIP was to manage information generated by the government in support of the RDP. The RDP was terminated. This was followed by the government information project (GIP), initiated by the Department of Public Service and Administration (DPSA). The GIP was to facilitate effective information management in the government (Lor, 1996: 9). The *Legal Deposit Act* of 1997 stipulated the establishment of Official Publications Depositories (OPDs) which allows for the deposit of official publications at additional designated institutions. Within the legislation at least one OPD needs to be created in each of the nine provinces in South Africa. The first such OPD was established in 2004 as the Constitutional Court Library (De Beer, 2005: 61). De Beer (2005: 61) points out that an important aspect of the *Legal Deposit Act of 1997* is that it also includes the legal deposit of all public institutions' official documents, which could include universities, and that this legislation also includes the creation of nationally-driven digital repositories. Legal Deposit legislation requires the sending of copies of all official publications for safekeeping at OPDs.

In 1998 the Government Communication and Information System (GCIS) was launched to coordinate the communication in ministries and government departments. The GCIS launched the official web site of the South African government, the *SA Government Online* in 1999 (Korsten, 2000: 129). The website is to facilitate access to government information on the Internet (Korsten, 2000: 130).

Par. 2.4.1.2 (chapter two), explained developments from about 1966 onwards with countries passing legislation concerning *Freedom of Information* (FOI), privacy laws and data protection legislation development, indicating a growing awareness of issues concerning information-related legislation, ownership, rights and management. Par. 2.4.1.2 (chapter two) presented a list of many countries that have implemented a *Freedom of Information Act*. In

February 2000 the South African government passed the *Freedom of Information Act* (FOI) (Darch and Underwood, 2005: 79). Lor explains that the intention of the act was to put into effect the constitutional right of access to information. Morrow and Wotshela (2005) explain the nature of the FOI legislation in South Africa as being extremely liberal in comparison with many other countries' FOI legislation and that archives are closely linked to the question of access to information:

...The South African legislative framework on such access is extremely liberal. The Promotion of Access to Information Act of 2000 goes further than similar legislation in most other countries in that it applies to the private as well as the public sector. Private commercial companies, for example, cannot deny access to their records for *bona fide* enquiries under the terms of the Act. The Act sets in place mechanisms to assist in utilising it. For example, the South African Human Rights Commission is given various tasks, such as publicising the Act, providing information as to how it can be used, and assisting people to use it. Even where there are restrictions, as in obtaining material concerning defence and security, there is provision for overriding these restrictions when it is considered to be in the public interest. Clearly, this legislation hinges on questions of access to archival material (Morrow and Wotshela, 2005: 327).

With the FOI Act and the move towards increasing freedom of access to information in many democratic countries, records have been made available for public access. However, in a review article on access to government information, Sleeman (2004: 21) explains that there are indications that governments are grappling with issues concerning the enforcement mechanisms of the FOI Act and that many government departments are limiting access to information. Access to government information has also become more complicated due to the trend for governments towards electronic government (e-government). Despite substantial documentation that e-government sites do not provide the types of services citizens need or expect, the trend towards e-governance is considered to continue, as can be seen in countries such as the United Kingdom, United States, South Africa and Japan (Sleeman, 2004: 22). The technology makes it possible to provide access to records away from the physical location of the original documents, but the digitisation of South African archival material has also had some developments concerning the ownership of copyright which as explained below:

A number of recent schemes to digitise South African archival material, involving United States (US) universities and foundations, have been understood by some as a form of neo-imperial information grab. Amongst the issues that arise are ownership of copyright to digitised material and the physical location of servers. For example, the site of the Mayibuye Archives, an important collection of material dealing particularly with the South African freedom struggle, is now hosted at Michigan State University. Others have dealt rather differently with these issues. The Digital Imaging Project of South Africa (DISA), a South African initiative based at the Killie Campbell Library and funded by the Andrew W Mellon Foundation, set about digitising difficult-to-obtain liberation periodicals from 1960 to 1994, in many cases creating complete virtual runs where none in hard copy actually exist. The intention is to expand this initiative through collaboration with the Aluka Project, which hopes to foster and further expand DISA through links with the resources of large North American foundations (Morrow and Wotshela, 2005: 326).

According to Darch and Underwood (2005: 78), the global trend to develop a Freedom of Information (FOI) Act needs to be managed socially rather than by a constitutional or legal act. Currently the act is managed by a process which involves the analysis of compliance by the government, and the demand for FOI access by the citizenry. Darch and Underwood (2005: 78) explain that in the context of South Africa, compliance with the FOI Act is “disappointingly low”. Pickover and Harris (2001) give three reasons for the difficulties experienced by citizens in accessing information previously inaccessible, under the *FOI Act*. They (2001) point out that some difficulties exist regarding practical aspects of access to information. They explain: (a) there is insufficient public information on what records are kept and citizens cannot claim access to files not known to them; (b) most organisations do not operate efficient record keeping systems, either in paper or electronic format; (c) there is little capacity for the provision of public access to government departments’ information (Pickover and Harris, 2001 in Darch and Underwood, 2005: 78). As shown above, the literature of government information and FOI indicates a “... growing concern about how to ensure permanent public access to government information in an electronic future” (Sleeman, 2004: 21).

Access to government information is made complicated not only by the requirements set out in acts such as the FOI. In South Africa, even though the government is one entity, government information comes from Parliament, Central Government, Provincial Government and Local Government. The government information of the different levels of government (national, provincial and local), is made available by one governmental body, the Government Communication and Information System (GCIS). The GCIS was launched in

May 1998, and deals with issues of the government, such as government messages, communication strategy and corporate image. It also deals with media policy. The GCIS falls under management of the Department of Communications, and:

... is the centre of policy-making and policy review for the postal, telecommunications and broadcasting sectors in the country. This includes policy-making that affects state-owned enterprises (SOEs) such as Telkom SA Ltd., the South African Post Office (SAPO) (Pty) Ltd., Sentech, the South African Broadcasting Corporation (SABC), the National Media Institute of South Africa (NEMISA), as well as the Independent Communications Authority of South Africa (ICASA) (*South Africa Yearbook 2005/06*, 2005: 136).

Despite all the above initiatives, Lor (2002: 15, 119) explains the current system lacks a clear framework leading to a number of difficulties regarding access to government publications and compliance with the *Legal Deposit Act* from the government departments, making it difficult for librarians to obtain copies of the government publications and for the public to access the materials. The *Legal Deposit Act, 1997 (Act 54 of 1997)* regulates the legal deposit in South Africa. The five Legal Deposit Libraries in South Africa include the National Library of South Africa (NLSA), the Library of Parliament in Cape Town, the Natal Society Library in Pietermaritzburg, the Bloemfontein Public Library and the National Film, Video and Sound Archives in Pretoria. The archival collections include mostly official information sources relating to governmental activities, business, institutions, individuals in society in the various formats required for Legal Deposit including books, journals, CD-ROMs, video, microfilm and digital formats (Mostert, 2004: 33). Documents of governmental activities on national as well as provincial levels are required for Legal Deposit. There are nine provincial governments, namely the Legislatures of Gauteng, Mpumalanga, Limpopo Province (formerly the Northern Province), North West, Western Cape, Eastern Cape, Kwa-Zulu Natal, Free State and the Northern Cape.

The *Batho Pele* Gateway e-Government Gateway was launched in 2004 to make information about government services instantly available through government offices, MPCCs, citizen post offices and community development workers and development organisations (*South Africa Yearbook 2005/06*, 2005: 52). The *Batho Pele* initiative falls under the Department of Home Affairs and aims to encourage a positive attitude in the Public Service and improve service delivery. It is not certain how effective this initiative will be in providing a framework

to address the difficulties identified by Lor regarding Legal Deposit of government publications, as the *Legal Deposit Act* is managed by the Department of Arts and Culture, while the GCIS is governed by the Department of Communications, complicating the co-ordination and management of the delivery.

4.3.3 Literacy Levels

The relevance of skills such as literacy and information literacy is reflected in the large number of publications dealing with this topical issue in the current Information Age. The relevance of this issue is noted in a selected literature review of a study by Rader (2002) on information literacy over the period 1973 to 2002. This review indicated that more than 5000 publications related to library user instruction and information literacy, have been published and reviewed in the past thirty years (Rader, 2002: 242).

Literacy is defined in many different ways (as explained in Par. 1.5.6). It also addresses different types of literacy, such as adult literacy, economic literacy, and information literacy (also explained in Par. 2.6.1.2 in chapter two). Literacy lies at the heart of the ability to utilise available information in print (illiterate people can still utilise oral information) and requires a number of skills. Many people are functionally literate, but do not have highest level skills that include reading, writing and communicating skills. Functional literacy implies that the person is able to read and write at a sufficiently high level to participate in their society economically, socially and in civic affairs. Active literacy involves additional skills, including listening, speaking, reading, writing and critical thinking, and can incorporate numeracy, social practices and relationships (Agee, 2003: 346). These skills enable a speaker, writer or reader to recognise and use language appropriate to different social situations. Campbell (as quoted in Behrens, 1994) explains that for an advanced technological society the goal is to achieve an “... active literacy which allows people to use language to enhance their capacity to think, create and question, in order to participate effectively in society ...” (Campbell as quoted in Behrens, 1994).

Adult literacy (defined in Par. 2.5.1.2) requires the necessary skills to be not only literate but also information literate. Most Sub-Saharan African countries have very poor adult literacy rates. Basic literacy training in South Africa requires encouragement and active involvement,

as a large percentage of the population is illiterate (Underwood and Nassimbeni, 1996: 216). Matula (2005: 128) reports Botswana's adult illiteracy rate in 2001 was 21.94 per cent, Namibia 17.35 per cent, and South Africa 14.39 per cent respectively. The exact percentage for adult illiteracy in South Africa is not certain and the percentage given by Underwood for adult illiteracy in South Africa is far higher than that of Matula. Underwood (2002: 2) reports that the illiteracy rate in 2002 in South Africa was 15.1 per cent. He explains that this figure is misleading as the illiteracy rates vary from between 27 per cent in the metropolitan areas, to 50 per cent in the rural areas.

The literacy levels of African adults in South Africa are considerably lower than for the other race groups in the country and in 1994 it was reported that only 8 per cent of all African adults in the 25 to 64 age group have passed matric (South Africa. Ministry of Welfare and Population Development, 1994: 34). In the 2001 census in South Africa it was reported that at least 18 per cent of the population, excluding school children, were in need of basic literacy training (*South Africa Yearbook, 2005/06*, 2005: 222). The government is addressing adult literacy informally through the *ABET Act*. The *ABET Act, 2000* provides a framework for the establishment, governance and funding of ABET centres. The Department of Education also established the South African Literacy Agency (SANLI) to reduce adult illiteracy by mobilising voluntary services in support of a nationwide literacy initiative. Since the establishment of SANLI, "... 320 000 adults have been reached in various non-formal sites, while more than 635 913 have been reached through the public adult learning centres." (*South Africa Yearbook, 2005/06*, 2005: 222). At this rate, about one million adults have been reached by literacy programmes, thus leaving about 6 million adults still in need of basic literacy training.

Matula (2005: 128) explains that countries such as South Africa, Botswana and Namibia often lack post-literacy programmes to guard against relapse into illiteracy. Furthermore, the general gross tertiary enrolment rate is comparatively low. He states that in 2001 Botswana had a general gross tertiary enrolment rate of 4.65 per cent, Namibia 5.94 per cent, South Africa 15.25 per cent, as compared with Canada with 59.99 per cent and Estonia with 57.55 per cent (Matula, 2004: 128).

Economic literacy is another area of concern. Netshitenzhe (2000: 19) argues that there is a need for a big economic literacy campaign in South Africa. Most South Africans are not well informed on economic matters. Much needs to be done regarding retirement planning and regular saving planning, as well as investment planning. The government has established the Financial Services Board (FSB) as an independent statutory body financed by the financial services industry itself, to promote programmes and initiatives to inform and educate users of financial services and products. The *Security Services Act of 2004*, addresses various forms of market abuse in the country (*South Africa Yearbook, 2005/06*, 2005: 286-7).

South Africa has a high unemployment rate (42 per cent in 2005) (Gelb, 2005: 367). Almost a third of the work force is employed in the personal service sector, 17 per cent work in trade, catering and accommodation; 15 per cent work in manufacturing; and 13 per cent work in agriculture. The remaining 24 per cent are employed in finance and business services, transport, mining, electricity, water and other services (South Africa. Ministry of Welfare and Population Development, 1994: 37). The Labour Force Survey, 2005, released by Statistics South Africa in March 2005, reports:

... the number of employed persons rose from 11,4 million in March 2004 to 11,6 million in September 2004, and 11,9 million in March 2005. The industries that registered the largest increase in employment growth over the period September 2004 to March 2005 were agriculture (up by 107 000 jobs) and trade, up by a similar number. The mining sector posted modest gains - up by 21 000 jobs - from 405 000 in September 2004 to 426 000 in March 2006 (*South Africa Yearbook 2005/06*, 2005: 199).

Both literacy and information literacy skills are necessary skills required by individuals in order that they can benefit fully from the Information Age (Tise 2000: 59; Behrens 1994: 312). These skills are also essential in the process of lifelong learning and are beneficial skills equipping individuals to continue to learn and develop their abilities or skills. The ability to learn needs fostering in South Africa, for the country to achieve an improved educated and trained work force. This, in turn, will reduce the high level of unemployment, and promote innovative developments and growth in the job market and economy. Furthermore, developments in the current Information Age have changed the job market making it necessary for people to be literate.

In 1999/2000 only 0,8 per cent of the education budget of R47,8 billion was spent on non-formal education. Most of the 0,8 per cent was spent on young people who failed matric and were attempting the matriculation examination for a second time. The lack of government funding was a hindrance in addressing the problem of adult illiteracy. Illiteracy affects many areas of the society, such as HIV/AIDS awareness, small business development, environmental education, tourism training, parent/child relationships, primary health care, interventions, land resettlement programmes, workplace productivity, human rights, and democracy education (Macfarlane, 2000: 23). These areas are all areas that will flourish or allow better growth once the illiteracy levels of the population are addressed adequately. Underwood (2002: 5) explains that the awareness of the importance of information literacy in South Africa is largely due to a report, titled *The Western Cape Library Cooperative Project*, also known as the *Senn Breivik Report* (Brevik, Pitkin and Tyson, 1992). The report addressed the need for:

.... the facilitation of cooperative academic planning within the tertiary education institutions of the Western Cape of South Africa in order to achieve transformation with limited economic resources. Weaknesses in the access to information and the management of information resources were identified as problems for which a cooperative solution would be viable. Information literacy was identified as key part of the solution. The report also indicated that information literacy is inherent in the service role played by higher education to the regional community, including the granting of access to its resources by the community (Underwood, 2002: 5).

The INFOLIT Project was established as a result of the above report. The aim of this five-year project was to promote information literacy, to launch pilot projects to spread information literacy education in the region, and to investigate information literacy models, programmes and initiatives in other countries that could be adapted to local conditions. According to Underwood (2002: 6) the Project has achieved several of its objectives but much more needs to be done to address information literacy in South Africa. Underwood (2002: 12) indicates that this issue needs to be addressed more effectively and needs to be given recognition at national, provincial and local levels of government, for which it also needs resources.

4.3.4 Computer Literacy Level

Information literacy was defined in 1974 and again in the 1980s within the realm of computer-aided information manipulation. In this context information literacy is defined as a:

...means of raising the level of awareness of individuals and enterprises to the knowledge explosion, and how machine-aided handling systems can help to identify, access, and obtain data, documents and literature needed for problem-solving and decision making (Horton 1983, as quoted by Behrens 1994: 312, 313).

The development of information technology has led to the need to develop the necessary computer-based skills to utilise the technology to access information, generate information and communicate electronically. Computer literacy refers to an understanding of the hardware and software of computers. Correia and Teixeira (2003: 318) explain that computer literacy, media literacy and library literacy are component parts of information literacy in an information society.

The ability to use computers for problem-solving and decision-making may require an understanding of new technologies such as microcomputers, cable television, electronic publishing, fibre optics, satellite communications, video-text, online database searching, high-density CD-ROM storage and robotics. The ability to access, transfer and manipulate stored information at various addresses such as the Internet, online databases, CD-Rom or other sources requires a level of computer literacy (American Library Association. Association of College and Research Libraries, 2000).

In 1997 only 7.5 to 8 per cent of the population were reported to have computer literacy skills in South Africa (National Information Technology Forum, 1997: 10). This is an important skill for the current Information Age. Projects are being developed to address the development of computer skills in the country. For instance, in Gauteng Province, the LINK Centre at the University of the Witwatersrand is working with sites in the community, such as the MPCC centres to offer courses to help people from the community to become skilled in the use of computers as one aspect of information literacy. The University of South Africa is also offering distance education courses developed for its students to gain insight in the phenomenon of information and information literacy (Machet, 2005).

SchoolNet SA, a national organisation, was founded in 1996 to introduce computers in schools in South Africa to develop the level of education by offering expertise and partnerships, as well as the development of use of ICT. In 1999 computyping was approved as a recognised subject in secondary schools for Grade 10 pupils, who wish to take typing as a

subject to be trained on computer technology equipment and software (*South Africa Yearbook, 2005/06*, 2005: 432). Implementation of the introduction of computers and Internet access in schools has been slow (Nicol, 2003: 48) and in 2000 slightly more than 100 schools out of 28,323 had access to the Internet (Nassimbeni and De Jager, 2000: 196).

4.3.5 Levels of Education and Skills

The importance or relevance of education for the development of information societies in the Information Age, needs to be emphasised and understood. Current literature seems to take a technological view emphasising technology, while neglecting education and human skills development, as found in a recent study by Rooney (2005). In a study conducted by Rooney (2005: 409) on information and knowledge-related policy documents compiled from local, state, national and international institutions of industrialised and industrialising countries, he found the emphasis in these documents to be focussed on governance, technology and business. Rooney explains that an analysis of the content of the literature, comprising 1.3 million documents, using Leximancer, a computer assisted text (content) analysis application, indicated a sharp focus on technocratic issues and discourse:

...Service, e-commerce, internet, technology, networks, telecommunications, infrastructure, business, industry, market and products are all highly ranked concepts and also feature in the thesauri. Concepts that appear to be social policy oriented such as access, public and medical occur in the thesauri and concept list, and so they are important but they are not the most prominent. Concepts that might relate to culture, intellection and education also appear outside the main 20 concepts (intellectual, communication, environment, cultural, learning) (Rooney. 2005: 411).

Rooney's findings from the documents analysed, indicate the key concerns of policy-makers in relation to knowledge and information is on business and technology, indicating a technocratic approach, placing far less value on social aspects such as education and skills development. A technocratic approach to information and communication policies is to the detriment of education, as observed by Van Audenhove (2003a: 56) regarding the analysis of the information society. Literacy is, for instance, one of the core skills taught within the formal education system. As explained earlier, information skills are necessary to help individuals to update their knowledge, calling for skills enabling them to know how to learn. Cornella (1998: 197) stresses the necessity of the educational system, libraries, and the local information industry for information-related development. S/he (1998: 199) explains that

education should emphasise the teaching of *learning to learn*, to enable students to update their knowledge quickly.

However, currently, education and human development are in crisis in many African countries and it is reported that more than 40 million children in Africa are not attending school and will never be exposed to formal education (Britz, Lor, Coetzee and Bester, 2006: 36). Education is also not without problems in South Africa, as the majority of the South African population is poorly educated, largely as a result of the apartheid system's skewed levels of education and its legacy (Britz, Lor, Coetzee and Bester, 2006: 36; Nxumalo, 2000: 10). Britz, Lor, Coetzee and Bester (2006) report on some serious educational drawbacks faced by South Africa:

... South Africa, the richest and most advanced country on the continent, has some serious educational drawbacks. This is mainly due to the apartheid system and its legacy. According to the 1996 census 3.2 million of the 24 million adults in South Africa have had no schooling and a further 9,4 million have not completed grade 9. More than 12 million adults (more than half) have not completed a general education (grade 12). During the apartheid era more than 24 per cent of black adults did not have access to education compared with the mere 1.4 per cent of whites (Britz, Lor, Coetzee and Bester, 2006: 36).

In addition to the above imbalances in the education levels in the country, many schools in rural areas do not have access to telecommunication and electricity. Boekhorst and Britz (2004) refer to a report presented to Parliament in 1997, stating:

... In the Eastern Cape only 19% of schools have telephones, Free State 25% and the Northern Province 32%. Compare this with Gauteng (85%) and the Western Cape (88%). Less than half the schools in the country have a power supply. In the Northern Province 79% of schools have no power, in the Eastern Cape 77%, and Kwa-Zulu-Natal 61%. In number terms, the Northern Province has 3 280 schools without power, whereas in the Western Cape the number is 191 (Boekhorst and Britz, 2004: 68).

Much needs to be done to address aspects such as these in education in South Africa to address the uneven blend of developed and underdeveloped areas. This issue is also emphasised by Underwood (2002) who states:

...What is clear is that simple reliance on the schooling or post-secondary education will not be sufficient to introduce the necessary competencies into the community, except in the longer term. The provision of basic and continuing education as a formal

process within many communities is poor or non-existent and it would be optimistic to expect that this will change in the short term. Even then, there will be a need to reinforce and encourage the use of information: without this any skill or competency already acquired will, for many, become atrophied. Added to this is the growing recognition that, for a democracy to function, there needs to be a populace which is able to respond to policy proposals and actions of government... through public participation (Underwood, 2002: 10).

Underwood (2002: 12) concludes that this task needs to be undertaken on national and local government levels, with the involvement of educational institutions, libraries and information services and the necessary resources.

As explained above, apartheid has left many South Africans with limited marketable skills, as explained by Kraak (2006):

...Apartheid left in its wake a highly deficient skills legacy. Skills training in the late apartheid period can be characterised using Finegold's categories as a low-skills equilibrium, predicated on market regulation, a weak institutional environment based on voluntarism, the continuation of a racially defined 'education-labour market' regime, the absence of joined-up state policies and social trust, and the predominance of short-termism and narrow skilling as the defining features informing investments in human capital... Low skills and cheap manual labour have been key defining features of South African capitalism since the discovery of diamonds and gold in the late nineteenth century ... (Kraak, 2006: 10).

In addition to the cheap-labour minerals economy, South Africa has also acquired skills for the development of a manufacturing, telecommunications and high-end services sectors, as well as intermediate skills. It has, as such, a hybrid of differentiated skills.

Kraak (2006: 1) explains that the policy introduced over the past ten years, has shifted from a high-skills approach in 1994 with the Reconstruction and Development Programme (RDP) to the Growth, Employment and Redistribution (GEAR) programme, and has not addressed the development of skills for the manufacturing sector. However, the government has recently embarked on a major programme of policy review and intends to link education and skills training to develop a system that "... would enable learners to acquire, through education, sufficient preparation and the relevant skills that are required in the labour market" (Kraak, 2006: 15-22).

4.3.6 Information Society Development

The development of the concept of the information society has gained popularity in the period since the beginning of the 1990s, with initiatives such as the African Information Society Initiative (AISII, 1996), and the World Summit on the Information Society (UNESCO, 2002). The concept of the information society has to a large extent been based on a technocratic determined requirement of access to information communication technology and its infrastructure (Van Audenhove, 2003a: 48). A number of countries address the issue of the development of an information society in their national information policies (Par. 2.6.1.3). The European Union, the United Kingdom, Thailand and Senegal are some of the countries that include this issue within their national information policies.

The ideal of the information society appears to be a networked society in which everyone has Internet access to enable the sharing of data, sharing of information for economic activity, and access to knowledge for production processes and decision-making (OECD, *Working party on the Information Economy*, Executive Summary, 1999). Ricci (2000) reports on the analysis of survey data collected between 1995 and 1999 by the European Commission for the measurement of the information society in the countries within Europe. Ricci reports that the information society in Europe was not all involved in the use of the Internet. The survey revealed a social trend with the development of (a) a minority society being heavy users of information technologies, (b) a counter group which are consciously not using television, cellular telephones, PCs or other information technology, and (c) a larger third group of moderate or low users of technologies, still disoriented by the media and new technologies. It is very likely that the three groups found in the survey, would typically be found in other countries, but that the ratio of the groups would differ in size, depending on the telecommunication infrastructure, literacy levels, education and the nature of the economy in the country. A country where the service sector is the main economic sector, is likely to have a larger group of heavy users of information technologies than the other two groups, while this would differ from a country with an economy which is more dependent industrial and agricultural products for trade.

The World Summit on the Information Society (*UNESCO and the World Summit on the Information Society*, 2002: 3) stressed the reality that the emergence of an information society

was taking place at different rates in different parts of the world. The development of information societies is linked to access to information due to the new literacy of the industrialised countries and the developing countries, as well as within societies themselves. The World Summit on the Information Society (*UNESCO and the World Summit on the Information Society*, 2002: 3) identified three concerns that needed to be addressed for the development of an information society. The concerns are: (a) the need to address the digital divide and disparities of access; (b) the free flow of information, development of content and skills to use information for empowerment and production; and, (c) the ethical challenges linked to cultural diversity and the promotion of pluralism in education, culture, sciences and communication.

According to the DiploFoundation (2003) the measurement of the development of the information society involves a difficult process:

... The development of the Information Society is a highly complex social process involving almost all the known factors with influence on human society. Due to this high complexity, statistical studies of this process are rare and mainly general in nature, but could provide very interesting and useful insights if performed periodically, documented and analysed in the scope of a proper methodology. Introducing this project, DiploFoundation aims to develop a long-term Information Society monitoring process relying on advanced statistical data analysis techniques (DiploFoundation, 2003).

The DiploFoundation and the information on its website states that it hopes to develop cooperation with other institutions in order to enhance the idea of an exact, scientific approach in the study of information society development and related issues. The graph included at the end of this section (Fig. 4.1), taken from the DiploFoundation website, reflects the digital divide. It is a statistical analysis of the development of the information society based on the access to the Internet. This graph was compiled based on the analyses of 57 countries from seven world regions, including North, South and Central America, Europe, North Africa, South-West Asia, and Sub-Saharan Africa.

The literature and discussions regarding the information society are not always clear on what the aim or intention of the information society is (Par. 1.5.4; Par. 2.5.1.3). Duff (2004: 70) considers the literature on Information Society Studies to be interdisciplinary aimed at prescribing conceptions of what he refers to as the “good information society”. Duff (2004:

82) points out that the current literature on Information Society Studies tend to be either descriptive (or empirical) or prescriptive (or normative), depending on the approach of the researcher.

The approach regarding developments towards the information society and the digital divide, as reflected in the interpretation given regarding the graph (Fig. 4.1) tends to be descriptive as it defines the information society as technologically determined. Duff (2004: 82) warns against such an approach, as such an approach would be overlooking other relevant developmental aspects that are not technologically defined, such as information literacy.

The South African government has indicated that it supports the notion of having an information society. Van Audenhove (2003b: 129) explains that “...South Africa is one of the few developing countries that has fully embraced the concept of information society and has formulated and implemented policy initiatives in order to change society accordingly”. The African Information Society Initiative (AISI) was initiated in 1996 with the aim to establish an action framework for the information and communication activities in Africa to improve the quality of life for Africans and the fight against poverty (ECA, 2003: 1). In a report on the *World Summit on the Information Society*, held in Tunis, in 2005, the current president of South Africa, Mr. Mbeki, is quoted:

... the creation of an inclusive information society was in the interests of the majority of humanity because those from the developing countries were confronted by the challenge of exclusion in the global economy...
Our country and continent are determined to do everything possible to achieve their renewal and development, defeating the twin scourges of poverty and underdevelopment (Ntuli, 2005: 1-2).

Digital access to information is but one aspect concerning development towards an information society as stressed by Underwood (2002: 3) with reference to the situation in South Africa and the development of an information society. In his paper, Underwood (2002) refers to the status of issues concerning education, information literacy, access to library resources and connectivity. In this context, Nassimbeni (1996: 359) explains that South Africa’s development towards an information society will, however not be achieved before the country has addressed the information and information literacy needs of the majority of the population.

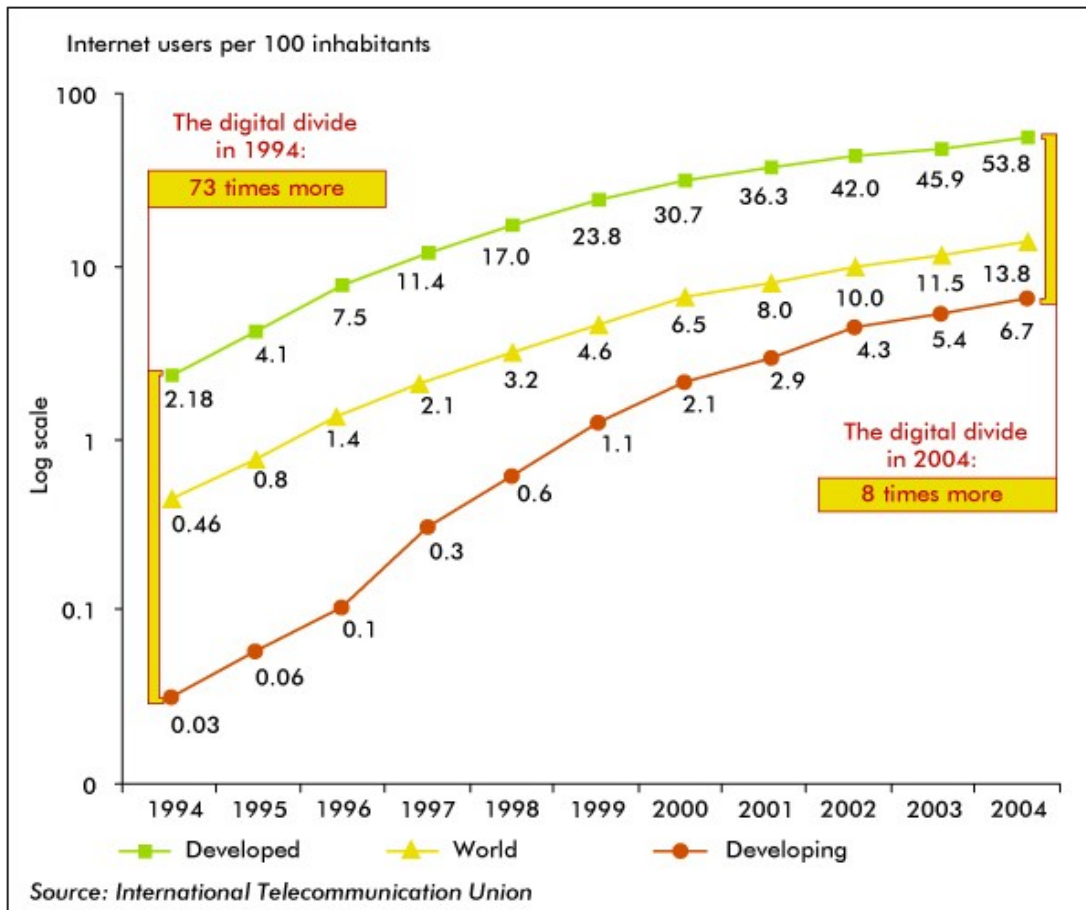
Underwood points out that connectivity is one of the keys to the development of access to information resources, but it may also mask differences in the provision of information in a country. Underwood explains this in reference to Internet connectivity in South Africa and the rest of the continent of Africa:

...The number of Internet hosts in South Africa placed it as thirty-second in the world in July 2001 but within the African continent it ranks as first, with 82.3 % of Africa's hosts.... Access to telecommunications within South Africa is also very uneven, reflecting the gross inequities from the apartheid state. .. The major growth has been in the number of cell phone subscribers rather than the "landline" telephone system. For the meantime, access to the Internet and many other features of the "wired" environment can only be available to the majority of the population through institutional access in schools, colleges and tertiary-level education, business and other ventures, rather than homes (Underwood, 2002: 3).

In 1994, the South African government accepted responsibility to provide for access to basic telecommunication services for all its citizens (Ali, 2003: 114). As part of the initiative to provide access to connectivity to all, the South African government decided in 1996, to establish resource centres in various areas of the country to provide a public library and information service that would be easily accessible to all. These resource centres were established outside the formal sector by non-governmental organisations (NGOs), and were funded by the community and sponsors (Underwood and Nassimbeni, 1996: 216). These Multi-Purpose Community Centres (MPCCs) were developed to serve all four of the Reconstruction and Development Programmes. Snyman and Snyman (2003: 95-96) and Dick (2002a: 131) explain that the MPCCs were established as part of the government's strategy to empower communities to be part of the information society. However, the MPCCs were found to be a less successful initiative in South Africa for a number of reasons. One of the reasons for the low success rate of the MPCCs is that the information provided at the centres was generally of a poor quality. Snyman and Snyman (2003: 105) recommend that the government should obtain the assistance of the members of the professional library and information science community for guidance on how to improve the current services provided by the established MPCCs.

Figure 4.1 indicates that the digital divide is being addressed and over the period from 1994 to 2004, Internet connectivity has improved in developing countries. The gap between developed and developing countries is diminishing as indicated in the figure.

Figure 4.1 Comparison of Access to Internet Connectivity and Use in Developed and Developing Countries.



(Source: International Telecommunication Union, 2004, as taken from the DiploFoundation website).

4.3.7 The North-South Divide (including the Digital Divide)

The term *information dependence* refers to an undue dependence for information originating in the developed countries making developing countries dependent on foreign information resources (Par. 2.6.1.4). The North-South Divide, information dependence, and the impact of information on the economies of countries, are issues that influence many countries, and issues that are rooted in older theories about mass media and development (Nulens, 2003: 68). Nulens (2003) explains how the debate of development communication theories of the past 50

years linked the importance of communication and information in the development process as vehicles that can bridge the development divide and modernise societies. With the development of information technology and the Internet more issues are raised regarding communication and its impact on development. These issues concern the nature of the information content, the issue of information dependence, and the transfer of communication technologies and contents as a new form of imperialism, referred to as cultural and media imperialism (Nulens, 2003: 71-72).

Some countries are more strongly aware of the impact of influences linked to information content and some tend to be more vulnerable because of their geographical position. The countries in South America are particularly aware of the flow of information from the North and tend to bring in legislation to protect their own informatic industries and national cultures. Several of the South American countries encourage reading, book production and the role of libraries in their national information policies (Rosenberg and Whitney, 1986).

The issue of information dependence is not a problem only in developing countries. The countries in the First World are also facing the threat of information dependence on neighbouring or other countries, and are addressing these threats in national information policies or strategies. Canada, for instance, considers the U.S.A. as a threat to Canada's cultural and economic sovereignty and addresses this issue through legislation in its national information policy. Information policy legislation in Canada has been influenced by the country's close proximity to the U.S.A.. The policy aims to reduce Canada's dependence on information storage and processing in the U.S.A. and on the regulation of transborder flows of information (Haddock, 1990: 47).

Other First World countries are also experiencing difficulties with national information and the impact of neighbouring countries on them and on their national information policy-making. The countries in the European Union (EU) are in the process of developing an umbrella policy for the EU countries, while some of these countries have to adjust their own policies to comply with the regional policy that is being developed (I*M Europe Legal Issues, 1999: 1; Malley, 1990: 92).

South Africa forms part of the Sub-Saharan African region. The bulk of South Africa's information is not generated from within the country itself, but originates in the developed countries of the Northern hemisphere, as most research is conducted and published in the Northern countries. This imbalance in information production results in a dependence on information sourced from the developed countries. Nyamnjoh (2004: 342) refers to the imbalance in the production and consumption of the global information content. According to a survey cited by Nyamnjoh, Africa consumes around 12 per cent of the books produced globally, while it is responsible for barely two per cent of the global total produced (Nyamnjoh, 2004: 342).

South Africa lacks capacity to handle its indigenous information and is producing a limited quantity of local information. Research tends to be hampered by a lack of information resources and African academics are being marginalised by the world's research community. These conditions also have a negative influence on the education in countries like South Africa, requiring the importation of generally expensive information resources from developed countries. There is a lack of funds in developing countries and libraries of African institutions of higher learning generally lack money for resources (Britz, Lor, Coetzee and Bester, 2006: 32; Nyamnjoh, 2004: 345). African authors also tend to seek publication of articles in journals published in the North rather than supporting African based journal titles, thus perpetuating a dependence on the countries in the developed world (Britz, Lor, Coetzee and Bester, 2006: 32; Lor, 1996: 1-3).

The stimulation of the production of information is essential for a population's national growth. Innovative thinking, research and expression generate new inventions leading to industrial growth, job creation and economic development. Social development takes place when people express themselves in literature as part of the process which promotes personal growth, cultural understanding, and mental development. Cultural development is realised during human interaction and nation-building during the process of the exchange of ideas within a society. In order to overcome the problem of information dependence on the Northern developed countries, the production of information and research needs to be stimulated locally and the information-handling capacity of indigenous information needs to be addressed.

The print media enables the process of research and public debate (Drexler, 1996: 224-225). Without the print media the process of developing new ideas would be hindered, as there would be no expression, transmission or evaluation of these ideas in public debate. The oral or audible transmission of ideas (via broadcasting, for instance) does not enable the same level of debate and development of ideas, as information transmitted in this manner is too fast and difficult to process. Electronic communication allows for wider distribution of ideas and debate, but does not involve all sectors of the community to the same extent as the print media.

The rich oral tradition of Africa is also an important part of the indigenous knowledge and information of Africa. Much needs to be done to record and preserve the indigenous information that has been passed down over many generations as part of the African heritage and the cultural wealth of the people of South Africa (and also in the rest of the continent). As mentioned earlier, the media in South Africa are discussed in chapter five in this study.

Internet connectivity allows for the communication of global information. However, the bulk of the information accessed on the Internet originates in the developed countries of the North. Public Internet access in developing countries is also far less developed than in the developed world, although the situation is changing, as shown in Fig. 4.1, above.

The issue of the North-South Divide is linked to the digital divide in the sense that telecommunication infrastructure development is needed to provide Internet access. As mentioned earlier, Internet access is not evenly spread in South Africa, despite government efforts to address telecommunication in the country. The South African government addresses the digital divide in a partnership between the Department of Communications and the South African Post Office (SAPO) and provides Public Internet Terminals (PIT). These PITs provide access to government information and also access to e-mail and the Internet. During 2004, 600 PITs were installed throughout the country, bringing the total PITs set up in the country to 700. An additional 575 newly installed PITs were operational by mid-2005 (*South Africa Yearbook, 2005/06*, 2005: 144). Another government project provides for the establishment of Citizens' post offices, for the use of SMMEs for business information, Internet browsing, government services and related services (*South Africa Yearbook, 2005/06*, 2005: 144). The government has also undertaken the National Address Database under the

management of the SAPO. This database is to be a registry which ensures that every household has a physical address for mail delivery (*South Africa Yearbook, 2005/06, 2005: 144-5*) allowing for access to the physical address of all citizens, information that was not available on all citizens in the past.

Grantham and Tsekouras (2004) consider the value of wireless ICTs and mobile technology for the realisation of the information society and the bridging of the digital divide. If the emphasis of the information society and addressing of the digital divide were placed on the networking capabilities of information technologies, one could consider the uses and value of wireless ICTs and mobile telephones for the realisation of the information society and addressing the digital divide in the future. South Africa has experienced huge growth in the cellular industry (*South Africa Yearbook, 2005/06, 2005: 144*) and cellular telephones are widely used across all sectors of the population, many using pre-paid telephone service contracts. Cellular telephones are particularly useful in areas with limited or no landline telecommunication network.

Nulens (2003: 76) points out that the debate concerning information communication for development and the bridging of the digital divide tend to be clouded by the potential perpetuation of the situation that developing countries will "... always have to struggle and fight to come up with the latest developments and techniques of the North". For this reason, the ideal of governments should be to develop information communication for development for the general interest of their societies. Mariscal (2005: 410) explains that it is necessary to take into account more than the information and telecommunication market when addressing telecommunication infrastructural development and the digital divide in a developing country. She explains that the social capital of a society can be used for the design and implementation of telecommunication access. According to Mariscal (2005) telecommunication network development should not be driven by the debate on universal service which was labelled as the digital divide between those who have access to information and those who have not. Development driven by a market economy are policies which promote competition, while Mariscal (2005: 12) considers the initiatives should be driven by the intention to achieve community-based economic growth, with the emphasis on the uses and application of telecommunication access for societies' consumption.

4.3.8 Information Content, Industrial Competitiveness

The exchange of information content stimulates the development of new ideas and the development of new technologies. The development of new ideas, innovation and products tend to benefit the economy of a country (De Beer, 2005: 64) and leads to industrial competitiveness. Industrial competitiveness and innovation are strongly dependent on the availability of relevant information. For this reason, highly industrialised countries such as Japan, the United States of America, the United Kingdom, France and other countries in the European Union address the need for information for research and development and innovation in various ways (Pavitt, 1998: 559).

Pavitt (1998: 560) lists three aspects that should be addressed for the process of technical development to take place which will lead to industrial competitiveness. The three aspects can be summarised as:

- Investment in machinery and equipment aimed to influence the development of national productive potential and the implementation of recent technical advances. The development of a strong research sector in technology, engineering and other sciences will benefit innovation and development nationally and promote international competitiveness. International networking and competition are essential elements for academic institutions in preventing complacency and regression in standards of training, research, and growth in academic disciplines at tertiary levels. This in turn promotes the requirement of setting education standards at primary and secondary levels in preparation for tertiary education.
- Addressing the differences in the level of education of the workforce, which determines the national capacity to operate and improve the productive machinery and equipment. This will raise the current national standards in research competence and encourage the exchange of expertise globally.
- Addressing differences in research and development spending, aimed to catch up on areas where best practices are lagging (Pavitt, 1998: 560). In recent years South Africa has been spending between 0,69 per cent to 1 per cent of its GDP on research and only about a tenth of its scientists and engineers are involved in research and development (SA science research lagging behind, 2003: 3). In 2003/04 South Africa was spending

0,81 per cent of its GDP on research and development (*South Africa Yearbook, 2005/06*: 513). This is relatively little, compared with the developed countries, such as the OECD countries (who spend 2.5 to 3 per cent of their GDP on research and development) (Pavitt, 1998: 560; National Information Technology Forum, 1997: 9) or a country like South Korea, which spends 5% of its national budget on research and development (Kgaphola and Magau, 1999: 345-347). However, the amount spent on research in South Africa is reported to be high for a developing country (*South Africa Yearbook, 2005/06, 2005*: 513).

De Beer (2005: 71) found that there are many overlaps between national information policy and science, technology and innovation policy. The South African government has taken a national system of innovation approach to address the competitiveness of the country, and this systems approach to innovation is evident in the discourse of the post-apartheid government (De Beer, 2005: 75). Reference was made in the *White Paper on Science and Technology* of 1996 and in 2002 a *National Research and Development Strategy* was formulated by the Department of Science and Technology. The national system of innovation is described:

... as a large private sector, a set of state owned enterprises, eight major science councils, thirty-six higher education institutions, all embedded in a functioning legal and regulatory system relatively well supported by state-owned utilities, standards and testing laboratories. In addition, there are a range of other government laboratories and research institutes as well as research sections in museums (Kahn, 2004: 6 as quoted by De Beer, 2005: 76).

Currently the National Research and Development Strategy of the Department of Science focuses on three broad areas, namely innovation enhancement through technology missions; strengthening the science, engineering and technology human resources and transformation; and, creating an effective government science and technology system (*South Africa Yearbook, 2005/06, 2005*: 513). The statutory science councils of South Africa are part of the National System of Innovation, and support technology development in its pre-competitive phase. The councils include the National Research Foundation, Agricultural Research Council, Council for Scientific and Industrial Research, Mintek, the Medical Research Council, Council for Geoscience, and the South African Bureau of Standards (*South Africa Yearbook, 2005/06, 2005*: 518-533). In recent years the South African government has developed various measures to develop the skills of its workforce. The *Skills Development Levies Act, Act 9 of*

1999 (enacted in 2000), *Employment Equity Act*, Act 55 of 1998, the founding of the Sectoral Education and Training Authorities (Setas) and the National Skills Authority of the Department of Labour are all measures by government to develop the skill level of South Africa's workforce.

However, despite all the above measures and legislation, Dumbutshena (2000: 8) reported that only one in five adults in the country possess skills suitable for the country's employment needs, and thus the country is currently not economically competitive. The skills development legislation may help to develop skills in the country, but a more analytical or structured attempt towards the upgrading of the country's national competitiveness may help to gain economic, social and cultural stature internationally.

The publication of research results in peer-reviewed journals has been the accepted means for scientific communication for several centuries. Recent developments brought about during the Information Age have been influencing the publication industry and many science journals are now published electronically, allowing online electronic access to researchers and others. The Association of Learned and Professional Society Publishers (2006: 16) report that there are an estimated 20,000 to 24,000 scholarly journals published globally today. About one-third of the journals are published by learned societies and associations and a further one-sixth by university presses, indicating that more than half of all journals come from non-profit publishers. The Association also notes that non-profit journals charge lower prices than commercial journals, on a price-per-page basis. These journals are also more highly cited. According to the Association, the value of the non-profit journals for research is reflected in the fact that: 84 per cent of the top 50 journals in the ISI citation index are published by non-profit publishers; 77 per cent of the top 100, and 74 per cent of the top 200. In South Africa although 255 South African scientific journals are published, only 23 of these journals are listed on the ISI Citation Index, 14 are indexed in the International Bibliography of the Social Sciences, while the remaining 220 journals are accredited by the South African Department of Education (Academy of Science of South Africa, 2006: xvi) . The Academy found that some of the South African journals are not of good quality, and much needs to be done to address the current publication system of scientific journals in South Africa (Scott, 2006: 1).

A review of research articles published in Nigeria indicates a decline in the output and quality of the publications since the 1970s for various reasons, such as a lack of funding of education and the consequence of military rule in that country (Olukoju, 2002: 1). In South Africa research output has also been in decline since the 1990s, according to its research publication record over the past decade from 1990 to 2000 (Pouris 2003: 425). Since this finding a report on research publication in South Africa was conducted (Academy of Science of South Africa, 2006: vii) with the aim to develop and maintain a "...robust national system of innovation that contributes materially to the sustainable prosperity of all South Africa's people". Based on its findings, the report recommends various measures to develop national research publication output and to promote Open Access initiatives.

The Open Access is explained by the Academy of Science of South Africa (2006: xxii) as an initiative based on the principle that the research literature

... which is not written for profit but for the advancement of science and which is largely funded by public money, is a public good and should be accessible to everyone who has a need for the information...The Open Access literature is composed of free, online copies of peer-reviewed journal articles and conference papers as well as technical reports, theses and working papers; in most cases there are no licensing restrictions on their use by readers and they can therefore be used freely for research, teaching and other purposes... (Academy of Science of South Africa, 2006: xxii).

The Academy of Science of South Africa explains that South African researchers are particularly disadvantaged in terms of global communication due to the high cost of Internet access and poor access at some institutions. A valuable contribution is currently being made by the company, Sabinet Online, to make use of the benefits of Open Access for South African researchers. Sabinet Online has launched a platform for South African electronic publications and has incorporated 192 journals in this service to date. Another service has been enabled by the company NISC-SA which is also providing an online service as online publisher of ten South African journals on its online service of African Journals Online (AJOL), which includes 195 journal titles providing access to over 13 000 articles (Academy of Science of South Africa, 2006: xxiii). The Open Access provides opportunities for a greater level of scholarly debate for South African researchers and academia (De Beer, 2004).

4.3.9 Other Issues - such as E-commerce

Other related issues include electronic commerce, computer crime, and lifelong learning. E-commerce was explained in Par. 2.6.1.6. Electronic commerce allows companies and individuals to cut transaction costs and offer better services. Papazafeiropoulou, Pouloudi and Currie (2001: 1) explain that governments need to meet two requirements in order to implement an efficient e-commerce policy: they need to provide the community with a good technical infrastructure and efficient legislation framework, and need to address the social concerns rising from the use of electronic commerce in order to create a digital literate society, that will be able to fully use the available technology. The users or stakeholders involved in the use of e-commerce include the government, international organisations, the policy-makers within companies, governments of companies, especially small and medium size, and consumers or citizens (Papazafeiropoulou, Pouloudi and Currie, 2001: 4) .

E-commerce in South Africa is still developing and there is still a lack of adequate e-business infrastructures, skills and capabilities as well as a low annual investment in ICTs (Moodley, 2003: 565) although the country has implemented the *Electronic Communications and Transactions Act, 2002*. Moodley (2003: 557) describes the challenges of e-commerce for South Africa's apparel industry in view of globalisation. Moodley found that the benefits of e-business in this industry, in the short- to medium-term, are likely to be more in terms of information management than in procurement and sales. This sector is growing, and according to the independent survey in the World Wide Worx report on online banking in South Africa, the number of online bank accounts in South Africa grew by 28% in 2003, to 1,04 million and was expected to increase by more than 30% in 2004 (*South Africa Yearbook, 2005/06*, 2005: 288).

Cogburn (2003: 143) explains that global e-commerce is being driven in many ways by the leadership of the private sector. According to his explanation, the scope of e-commerce is global, but national regulation continues to provide the legal and regulatory framework for its operation. The main organisations involved in the management of the legislation and regulation of global e-commerce include the World Trade Organisation (WTO), Organisation for Economic and Commercial Development (OECD), GIIC/GBD; the G8, WEF; World Bank Group; European Commission; ITU; and, Bi-Lateral Aid Agencies.

4.4 ISSUES ADDRESSED IN INFORMATION POLICIES IN MANY COUNTRIES

The information-related issues discussed in this section include issues typically addressed in the information policies in many countries.

4.4.1 Telecommunication Infrastructure Issues

The telecommunications industry is probably the largest component of the information economy (Malley, 1990: 92). As such, a country's information and communication technology is a top economic sector in terms of direct investment (Riis, 1997: 435). This is also an important industry in South Africa, and by October 2003, South Africa's ICT industry was the 20th largest in the world, contributing 0,5% to worldwide ICT revenue (*South Africa Yearbook, 2005/06*, 2005: 138).

ICT policy strategies overlap with four policy fields, namely media policy, telecommunications policy, technology policy and industrial policy (Nicol, 2003: 11). Four sectors form part of the information infrastructure in a country (as indicated in Par. 1.5.7.). Three aspects are important for the establishment of a telecommunications infrastructure for the telecommunications industry, namely connectivity, content and competencies. Ali (2003: 114) explains the importance of telecommunication policy and the role of governments in the regulation of telecommunications to ensure open access to affordable communications. Information and communication technology (ICT) policy generally covers three main areas, namely, telecommunications (especially telephone communications), broadcasting (radio and television (TV)), and the Internet.

The telecommunication industry provides the connectivity and access to information networks. ICT and the information infrastructure can form key strategic elements of competitiveness for companies in the Information Age (OECD, Directorate for Science, Technology and Industry, 1999: 2).

In Europe the telecommunications industry has been systematically deregulated and privatised. In 1984 data-protection regulation was passed in Europe to protect individuals

from the dangers posed by the automatic processing of personal data. This matter is addressed in the *Data Protection Act* (1984). Regulatory standards need to be in place to ensure inter-connectivity between different networks (*Library Information Commission Policy Report*, 1999:2). Malley (1990: 92) suggests that a national information policy could benefit the formulation of legislation for the telecommunications industry as the policy could then act as a working model for the regulation of the telecommunication industry.

The telecommunication infrastructure is considered to be of such primary importance in the U.S.A. that the national information policy is placed under the generic title “National Information Infrastructure” (NII). The NII is guided by the Information Infrastructure Task Force, an Information Infrastructure Standards Panel and an Advisory Council.

In 1991 Telkom South Africa Limited came into being as a company with the Government as sole shareholder. The state-controlled telecommunications utility received the monopoly on core telecommunications services in South Africa. Telkom is solely responsible for the provision of the telecommunication structure in South Africa. This monopoly was originally valid until 2007, according to the *Telecommunications Act of 1996*, but this ruling was recalled and the monopoly will end by 1 February 2005. This monopolistic situation impacts on the information economy of South Africa, as Telkom controls the pricing of services contracts for the provision of additional bandwidth to value added network services (Vans) operators “... unless they are contracted with it”. Telkom is also the only service provider for telecommunications services and public data communication networks in the country. Furthermore, the connectivity (nationally and internationally) is vital for the country’s economy. As a critical element, the nation’s infrastructure requires that care should be exercised to ensure international compatibility in the management, affordability, structure, and operating of the national telecommunications sector. Difficulty with the policy on Telkom (with revenues exceeding R22 billion) may be due to the interests among the various Government Departments on related issues, but with different objectives. For instance, the Department of Public Enterprises has the mandate to privatise State assets, but the Department of Communications (DoC) is responsible for Telkom, and the Department of Trade and Industry, has as its goal the encouragement of foreign direct investment. Direct investment needs to be seen as an attractive opportunity for foreign investors, but the reluctance of Telkom to promote fair competition within the telecommunications industry and

the comparatively high service fees charged for telecommunication services by Telkom, are discouraging foreign investment.

The *Telecommunications Act of 1996* laid the foundation for future developments in the South African telecommunications sector to promote affordable telecommunication services, and ensure the promotion of fair competition within the telecommunications industry. The Telecommunications Act also provided for the regulation of telecommunication activities in radio frequency spectrum and established the South African Telecommunications Regulatory Authority (SATRA), now known as the Independent Communications Authority of South Africa (ICASA), as well as the Universal Service Agency (USA). The Department of Communications (DoC) oversees policy-making and policy review for the posts, telecommunications and broadcasting sectors in South Africa. It also includes policy-making for the state-owned enterprises such as Telkom SA Limited, South African Post Office (Pty) Ltd., Sentech, the South African Broadcasting Corporation (SABC), and regulators such as ICASA (Ali, 2003: 117). Some of the initiatives currently driven by the DoC are:

- (a) the development of Telemedicine to enable clinics situated in rural areas to obtain specialised medical diagnoses from specialists working at urban medical centres;
- (b) Tele-education to contribute towards addressing illiteracy by using telecommunications technology to provide distance education to distant communities;
- (c) Teleshopping to improve the quality of life of communities by enabling online shopping;
- (d) Televoting to enable communities in distant areas to cast their ballots using telecommunications;
- (e) Telebanking to enable banking to be conducted through information communication technologies;
- (f) Public information terminals (PITs) to provide access to communities all over South Africa on information about government (such as government acts, contact details and new policies) and electronic commerce (based on Ali, 2003: 118).

On May 2002 Telkom's period of exclusivity ended with the *Telecommunications Amendment Bill, 2002*, as the company opened the door to competition and during the coming five-year period Telkom had to comply with certain initiatives, including service and fixed-

line rollout targets. On 30 September 2004 the South African government owned 38,3 per cent of Telkom's issued share capital, Thitana Communications 15,1 per cent, and the public 46,6 per cent. In 2005 the Thitana Company sold its entire stake to the South African business community (*South Africa Yearbook, 2005/06, 2005: 141*).

Internet access, provided by ICT, is much more expensive in African countries than in the developed world (Roycroft, 2003: 65). The cost of Internet access in South Africa is also reported to be very high. Currently South Africa's Internet access services, provided by Telkom, is reported to be 600 per cent more expensive than that of Morocco. Telkom's fastest ADSL 1024 service is also reported to be much slower than the international average of six MB/s (Stones, 2006). Independent research house, Genesis Analytics indicates that a reduction of around 70 per cent in the Internet access cost would be necessary in order to prevent South Africa from slipping further behind in the ranking of the world connectivity ratings. In the past decade South Africa has "... slipped down the ranks of the world's most connected countries from 10th to 37th" (Stones, 2006).

Clear policies will need to develop the telecommunications sector in South Africa in the years to come to overcome controversies in this important part of South Africa's information economy.

4.4.2 Copyright Issues

Copyright is the second branch of intellectual property (IP) (IP is explained later in this chapter). The Berne Convention (1886) laid down the concepts of international respect for copyright and automatic copyright without any need to register, and the limit of 50 years after the death of the author. The Berne Convention revision of 1928, added the concept of moral rights, such as the right to be acknowledged as author of a work. The digital media were included in Berne in 1996 within the framework of the Berne Convention. In the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement, which formed part of the GATT agreements of 1994, intellectual property was extended from individual works to intellectual creation, making software copyrightable (*ICT policy: a beginner's handbook, 2003: 86*). The Berne Convention is the most widely accepted copyright legislation used

internationally and should serve the public and access to information. However, the copyright legislation serves the interest of the developed countries. Story (2002: 4) explains that:

... Copyright should primarily serve the instrumentalist function of satisfying social goals and values: the creation, spread and sharing of knowledge and information, and public use and access. In the current era, and particularly with regard to LDCs [less developed countries], the presumptions of copyright are ripe for wholesale reconsideration. The biases and interests of developed countries are monopolising the international copyright agenda; the interests of LDCs have been ignored and, in any event, copyright, a Western concept, is not a prerequisite for the production of works in LDCs.

Copyright is granted in order to allow the author of a creation to benefit from the work created and to protect it from exploitation (IRP-Helpdesk: IP issues: IP Guide. 2000). Unlike intellectual property, copyright only covers the use of intangible creations, and does not protect ideas, but only the expression of an idea.

... A copyright is a privilege granted by law to its holder to restrict the copying and use of an original, creative expression, such as a literary work, movie, musical work or sound recording, painting, computer program, or industrial design. The rights enforceable under copyright protection cover the use only of intangible creations ... (Copyright. Wikipedia, [200?]).

The issue of copyright has been receiving more attention since the development of the information highway (Par. 2.6.2.2). Hean Tat Key (1998) explains that it is easy to download digital versions of creative work such as books, paintings and music. World wide there are more than 2,2 million computers connected to the Internet, resulting in violations of copyright and loss of royalties to authors and publishers (Hean Tat Key, 1998: 105). Schönwetter (2005: 94) explains:

...The Internet and the possibility to digitize brought two main threats to copyright law, one that affects copyright holders and one that affects content users. The copyright holders fear that the sale or licensing of their products will decrease significantly, which threatens their financial investment in the development of these works. Users, however, fear that digital technologies might lead to a total technical protection of copyrighted works with considerably reduced access to society's intellectual and cultural heritage... Although digital technology was introduced more than half a century ago, it only started to affect the businesses of traditional content providers, such as the print, film and music industry, when powerful computers became affordable for private users and after the World-Wide Web was introduced in

the early 1990s. Subsequent innovations regarding data storage and data compression ... accelerated this development...

Copyright is granted in order to allow the author of a creation to benefit financially and/or through acknowledgement of authorship from the work created and to protect it from exploitation. Historically, copyright protected artistic works, such as music, literature, painting and audio-visual productions. Currently, software, multimedia works and databases are included under copyright law. One of the problems of copyright concerning modern cultural productions on the World-Wide Web is that often the owner or creator cannot be traced and are thus considered to be “orphan works”. According to Boyle (2006: 1) the majority of cultural productions of the twentieth century consist of orphan works. Such works tend to be housed in libraries where their use is restricted under copyright law because of the difficulty of clearing copyright for the use of these productions. This practice tends to limit and restrict access to the wider usage of this material in digital format on the Internet.

Muralidharan (2006) explains that the United States has been moving towards stronger copyright laws and harsher penalties over the past three decades. Copyright was first established in the United States with the *Copyright Act* of 1790. This Act set the time for the copyright of authors for a period of 28 years. In 1976 the period was increased in the U.S.A. to the lifetime of the author plus 50 years. In 1988 the U.S.A. adopted the Berne Convention. In 1997 the U.S.A. enacted the *No Electronic Theft Act* (NETA), and made non-commercial copyright infringement a criminal offence. In 1998 the U.S.A. extended the copyright term to the lifetime of the author plus 70 years. The U.S.A. also enacted the *Digital Millennium Copyright Act* (DMCA) in 1998, making it a crime to make or distribute technologies that can bypass copyright law. The DMCA restricts the rights of individual users of digital information. The restrictive effect of the DMCA can be illustrated by the litigation of Napster in 2000 to 2001 which ruled the use of sharing of samples of free music by private individuals as illegal (Story, 2002: 38).

In South Africa, the *Copyright Act, 1978* identifies certain categories of works protected under the Act, provided they meet with certain conditions. The categories of works are: literary works, musical works, sound recordings, cinematographic films, sound and television broadcasts, programme-carrying signals, published editions, and computer programmes. The

Copyright Amendment Act of 1992 recognised computer programmes as a unique category of works. In South Africa copyright is ensured in terms of the *Trade Marks Act*, 1993, and the *Patents Act* of 1978. The *Copyright Amendment Act* of 1983 includes copyright of drawings of a technical nature.

It is necessary for authors and publishers to receive acknowledgement, and compensation for work produced. Protection for published documents and art works, is legally enforced by means of the *Copyright Act*. South Africa's copyright legislation forms part of the international system that prohibits optical media piracy, importing and transshipping pirate products, producing illegal optical media discs and counterfeit software, and other related issues. Copyright infringement is when a person uses the copyright-protected work of someone else (a book, article, song, or music, etc.) without permission.

However, Schönwetter (2005) explains that the development of the digital age has made it easier to access information and this is challenging existing copyright laws:

... lawmakers need to overcome a number of obstacles. *Inter alia*, the international dimension of the Internet must be taken into account: the infrastructure of the Internet is international, it is not confined by any national boundaries - it simply expands... (Schönwetter, 2005: 105).

The implications of digitising and the Internet also vary across different kinds of content industries, such as the music industry, printed material and the development of eBooks. Within many of these industries, copyright infringement occurs on a large scale (Schönwetter, 2005: 97) and it is difficult at this stage to anticipate how copyright issues will be dealt with in the future with regard to the principle of fair use or fair dealing. Schönwetter (2005: 97-98) explains the fair use doctrine as an important tool to balance the interests of the right holders and the interests of the public, but that the development of the Internet has added new dimensions to the use of the copyright material for public access. For this reason, the scope of the fair use doctrine needs to be evaluated within the context of the Internet.

4.4.3 Industrial property rights

The area of human creativity, referred to by the generic term “industrial property”, is the first branch of intellectual property (IRP-Helpdesk: IP issues: IP Guide, 2000). Intellectual property refers to the legal protection of technical inventions, trade marks, industrial models or designs and copyrighted works. The different types of intellectual property include copyright, patent right, trade marks, trade secrets, personality rights, industrial design rights, integrated circuit layout, and others (Intellectual Property, Wikipedia, [200?]). The *Wikipedia* explains the meaning of concepts such as intellectual property and copyright as follows:

The concept of intellectual property (IP) treats certain intangible things similarly to physical things. In most countries, IP laws grant certain kinds of exclusive rights over these intangibles on the analogy of property rights, some expiring after a set period of time, others lasting indefinitely... The purposes of these laws ... grant the “owner” a monopoly on the use or copying of the protected “property”. This was done historically to ... promote the progress of science and useful arts (Intellectual Property, Wikipedia, [200?]).

According to May (2003: 1) intellectual property rights have been subject to the TRIPS agreement which is overseen by the World Trade Organisation (WTO). The TRIPS agreement requires WTO members’ domestic intellectual property law to support the protections and laws set out in TRIPS’ 73 articles (May, 2003: 1). Industrial property rights are applied to ensure exclusive use in commerce and industry. Legal instruments need to be in place to protect industrial property. The industrial property could include patents, utility models, products or manufacturing processes. Trade marks protect marketing assets such as brand names and names of companies or firms (Industrial Property Regulations, 2000).

The Copy/South Research Group consisted of a group of 22 invited attendees, with more than 15 from countries of the South. They gathered at a workshop in 2005, in Kent, England to review the effect of copyright-related issues on the daily lives (and future lives) of the nations living in the developing countries of the South. In their review, the Copy/South Research Group (2006: 11) questions the merit of the existing and generally accepted restrictions set by Intellectual Property Regulations, stating:

... Much of the dominant discourse around intellectual property (IP) – whether legal or sociological – starts from some largely unexamined assumptions. These are first that both the concept and the system are ‘good things’ socially and juridically, second that there is no alternative, and third that the system has worked well and continues to work well in pretty much the same way regardless of the specifics of time and place – in other words, through history and all over the world. There is, however, also a venerable and well-developed tradition of critical thinking about intellectual property – especially copyright and patents – which argues that as a system for rewarding creators it is inefficient. As an economic mechanism, it amounts to a restraint on free trade, and over time it has increasingly placed more and more control over recorded human knowledge in fewer and fewer corporate hands. This is the dissident intellectual tradition from which the Copy/South project has emerged, and it is one that is increasingly gathering support across the political spectrum...

Nicol (2003: 86) explains that the stricter measures applied to intellectual property (IP) are affecting the public’s access to information and knowledge in the public domain and to copyrighted works. Many of the arguments concerning intellectual property and copyright legislation are rights dominated by the developed countries setting world trends. The international IP and copyright treaties are managed by the World Trade Organisation (WTO). The WTO member countries are in agreement with the WTO Agreement on Trade-Related Aspects of intellectual property Rights (TRIPS). The member countries can use WTO mechanisms to enforce IP protection in accordance with the treaties. The World Intellectual Property Organisation (WIPO) drives the enforcement of IP property law worldwide. The laws that regulate patents are national laws, but the agreements such as TRIPS ensure that these laws are extended internationally. The TRIPS treaty obliges member countries to protect the exclusive rights of patent holders for a period of 20 years from the date when the application for the registration of the patent was made (*ICT Policy: a beginner’s handbook*, 2003: 86-87).

Intellectual property in South Africa is governed by common law, international law, and by various Acts. This includes the *Patent Act*, which is governed by the *Patents Act 57 of 1978 (as amended)*; the *Trade Marks Act 194 of 1993*; the *Designs Act 195 of 1993*; the *Copyright Act 98 of 1978* (amended several times); the *Plant Breeders’ Rights Act 15 of 1976*; and the act governing franchise in South Africa (Dick, 2002a: 144-146). The acts, policies and practices in South Africa need to be in place to protect copyright, and business and industry are lobbying to reform copyright and intellectual property laws (Fraser 2000: 8; Du Toit 1999: 35).

Currently, various developing countries, or countries from the South, are resisting the signing of the TRIPS agreement, while others are calling for the rewriting of TRIPS. The reason for the resistance is that the current TRIPS agreement works in favour of the developed countries of the North (Copy / South Research Group, 2006: 157) as much of the information generated in the world comes from the developed countries. This imbalance in the production of information requires developing countries to pay more for access to information than the developed countries.

4.4.4 Freedom of Speech

Nicol (2003: 97) explains that international agreements on human rights guarantee the fundamental right of an individual to live, work and participate in a society as part of the democratic process. The issue of freedom of speech is considered to be a human right and is a constitutional right in many countries. Canada, the United States of America, Namibia and Ghana are countries where this issue is addressed in their national (information) policies.

According to Muralidharan (2006), stronger copyright legislation impacts negatively on free speech as it tends to make speech a potential target for litigation. Copyright protection has increased considerably with the development of new information technology, as explained earlier in this chapter. The example often used in the history of copyright is that of the American cartoonist, Dan O'Neil who was sued by Walt Disney in 1971 for copyright infringement in response to the unDisneylike cartoon of O'Neil. In 1988 the Berne Convention was accepted by many countries as an international treaty that explicitly recognizes the right of an author to "...object to any distortion.." of his work (Muralidharan, 2006: 1). Muralidharan (2006: 2) continues his argument regarding the expansion of copyright law and its effect on limiting free speech. He points out that the effect of these restrictions will impact on the development of culture as the over-protection of rights over created works could limit dialogue and the sharing of ideas due to the fear of the restrictive laws of copyright.

According to the Bill of Rights, as contained in the Constitution of South Africa, Act 108 of 1996, everyone has the right to freedom of expression, which includes: (a) freedom of the

press and other media; (b) freedom to receive or impart information or ideas; (c) freedom of artistic creativity; and, (d) academic freedom and freedom of scientific research. In 2005, South African press freedom ranked 26th in the world on the *Press Freedom Index* compiled by the Reporters Without Barriers (*South Africa Yearbook, 2005/6, 2005: 145*).

4.4.5 Censorship

Censorship is applied by either blocking information or by legal restrictions on content, or by requiring the licensing of service providers (Nicol, 2003: 99). Censorship is particularly important with regard to the information that is made available on the Internet. Nicol explains that the use of electronic networks may be censored, technologically or manually, by those who design, install or operated the system, and that any technological system is open to abuse by hackers or even by presidents. Nicol (2003: 101) refers, for instance, to the blocking of access to the Al Jazeera TV network web site during the Gulf War, by Presidential Order of George W. Bush. The right to have access to information and the issue of censorship are topical issues in countries such as the United States of America, where the use of blocking or filtering is used to block access to Internet sites because of their sexual or violent content. A new form of censorship on the Internet occurs with the manipulation of search engines to block the inclusion of certain web sites (Nicol, 2003 101).

China and most Islamic countries use filters to eliminate access to information considered “undesirable” in those countries. Political pressure forces governments in Western countries to use some form of censorship and tend not to allow the publishing of any material that could be potentially offensive or unacceptable for political or religious reasons. This does not apply to the U.S.A. which defends the right to free speech even if it is offensive to religious or other groups. Denmark permitted the publication of a series of 12 cartoons in 2005 about the prophet Mohammad. The cartoons were unacceptable to the members of the Islamic faith because according to the Islam it is blasphemous to make images of the prophet. The public outcry from the international Islamic community demanded the dismissal of the journalist responsible for publishing the cartoons, despite the legal right to freedom of expression in that country. This incident is an example of political pressure restricting the right to free speech. However, despite this pressure the religiously offensive cartoons were published on the Internet and were internationally available despite the outcry of the members of the Islamic

faith. The effectiveness of pressure groups such as the members of the Islamic faith could not prevent the availability of the cartoons on the Internet, thus indicating that Internet access enables access to information despite efforts to restrict or censor certain content. The same applies to the video of Saddam Hussein's execution. It was possible to take a video with a cell phone and to distribute this video and make it available on the Internet.

4.4.6 Information Ownership

Everyday knowledge as well as works previously protected under the rights of the owner but where the protection has expired are examples of information not owned by individuals, but by society. This information is freely available in the public domain. Other information may be owned and can be protected for use under copyright protection and intellectual property rights, as explained earlier in this chapter.

New ideas about copyright and intellectual property rights have been developing over the last decade within the context of developments linked to the Information Age and knowledge economy. The concept of sharing knowledge with limited restrictions has been gaining support in many countries, as explained below:

... New ideas about intellectual property have emerged in recent years that appreciate the importance of creators' rights, while at the same time recognising the value to be gained from sharing knowledge and information. The concept of 'open' knowledge aims to create an environment where people share information in order to build on one another's work, but creators get certain rights because of their original contribution... (Nicol, 2003: 90).

The approach to encourage open access to information in the public domain may call for a re-orientation of innovation and information policy (Pollock, 2006: 4). In this regard, Pollock (2006: 4) explains our current thinking regarding access to information and the reason why the current approach to information ownership and access to information and its benefits in the public domain need to be rethought:

...Our intellectual paradigm represents a form of monomania in which monopoly rights, in the form of intellectual property, displace all else from our thinking on this subject. It binds us to a narrow, and erroneous, viewpoint in which innovation is central but access is peripheral. The system it has engendered is now so distorted that its social and commercial costs in several key areas have become large. It is therefore

high time to restore balance, in particular by taking proper account of the public domain and open approaches to knowledge production. It is only by doing so that we will be able to take full advantage of the possibilities offered by this digital age (Pollock, 2006: 4).

Ho and Bailey (2005: 1) explain the current thinking behind the open access movement in making scholarly articles freely available in digital with minimal restrictions on their use (namely, proper attribution of authorship). The Budapest Open Access Initiative proposes two strategies to achieve open access of scholarly publications. They are:

... (a) self-archiving (making electronic preprints and postprints available on author home pages or depositing them in digital archives and repositories), and (b) open access journals. Metadata about electronic versions of articles can be retrieved by use of Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH) so that it can be used to search systems or for other purposes (Ho and Bailey, 2005: 1).

Pollock (2006: 12) explains the value of the Internet and the World-Wide Web (WWW) to the world and by implication to the public domain. He reminds the reader that the Internet was developed for non-commercial purposes, funded by the Department of Defence in the United States of America. The developer, Tim Berners-Lee and the IT staff at the European Particle Physics Laboratory (CERN) received no direct benefit from developing the technology driving the Internet. The fact that the Internet was developed without any proprietary regulations, has made it possible for it to grow without restrictions regarding access regulations. Current benefits of the Internet and WWW include e-mail connectivity across borders and access to information posted on websites. This information includes weather and geographical data, research data, as well as cultural and business information resources. Not all information is freely accessible and access may be limited to specific people, such as members of professional associations, or subscribers to commercial databases or other commercial services sold for commercial gain.

Much research has been done in recent years to assess the benefits of open access versus restrictions regarding access to information and in some instances open access or limited restrictions on access to information tend to be of benefit to both the creator of the information and the user of the information (Pollock, 2006).

4.4.7 Library Services and Archives

Libraries, museums and archives play a significant role in the collection, preservation, and provision of access to information in many countries. The national information policies in many countries include legislation on their national and/or public library services, museums and archives. This legislation generally concerns the role of the national library in the management of the record (national bibliography) of the country's national publishers' output. One of their functions may be to maintain a record of the holdings of the various libraries, archives and museums within the country for the purposes of interlibrary loan.

Vitello (2000: 1) reports that in the period since 1990 onwards, library policy and legislation have become a complicated business due to technological convergence, globalisation and international participation in telecommunication, audiovisual material and media industries. These developments have had consequences in the non-commercial sector, including libraries, museums and archives. Vitello (2000: 24) explains that the main legal restriction encountered by libraries in their task of circulating documents stems from laws and provisions on copyright. The current debate on copyright tends to be dominated by the issue of copyright for digital works. There seems to be support for two different practices, also mentioned earlier in this chapter. According to Vitello (2000) current trends regarding restricting or providing access are developing:

...On the one hand, there are artist associations and organisations of cultural industries (publishing, audio-visual, music industries) interested in restricting as much as possible the free use of protected content. On the other, there are organisations of telecommunications, software producers, and users' associations, including libraries, rallying under an exception regime. The reason for such an unusual alliance is that telecom industries and information providers are keen on offering value-added services by providing free access to useful content... (Vitello, 2000: 25).

Schönwetter (2005: 105) explains that despite the uncertainties and tensions created regarding copyright issues of digital information sources, the role of libraries has expanded to ensure freedom of access to information, to collect as well as preserve digital knowledge and to establish e-reserves. Furthermore, libraries can use the technology to digitise traditional materials to make preservation easier and extend library collections. An additional advantage of the new digital format is that it enables libraries to supply access to information sources not only regionally, but also worldwide. This development has widened the conflict between

copyright holders and various aspects of copyright restrictions in South Africa regarding library use, amongst others, are still not quite clear. Schönwetter explains that as a country with a highly unequal income distribution, South Africa remains a developing country in a number of areas, especially in the educational sector. Furthermore, book prices are high and the book market is small as many people cannot afford to buy books, the country has a high illiteracy rate and does not have a reading culture. Factors such as these, contribute to stress the importance of the role of libraries for education and reading in the country and the relevance of copyright laws that serve the public interest and human rights such as freedom of information, access to information and the media (Schönwetter, 2005: 114-115).

Mid-2003, South Africa had more than 11 373 libraries, with 77 higher education libraries, 9 416 school libraries, 79 government departmental libraries, one national library with two branches and 1 800 public libraries provided by provincial and local government. The National Library of South Africa (NLSA) was formed through the *NLSA Act, 1998* (Act 92 of 1998). In terms of the *Legal Deposit Act, 1997* (Act 54 of 1997) the NLSA is one of five legal deposit libraries and receives two copies of each book, periodical, newspaper, map, manuscript material or other publication that is published in South Africa in any format, print or electronic (*South Africa Yearbook 2005/06*, 2005: 130). The South African Library for the Blind (Blindlib) was established in Grahamstown to provide free of charge information to blind and print-handicapped readers in South Africa.

Most of South Africa's national museums are cultural institutions managed by their own councils. In terms of the *Cultural Institutions Act, 1998* (Act 119 of 1998), the declared museum institutions in Gauteng Province and Cape Town have been grouped together as flagship institutions. There are approximately 300 museums in South Africa, out of the total of about 1,000 established in countries in Africa. These museums include museums of geology, history, the biological sciences, the arts, mining, agriculture, forestry and other disciplines (*South Africa Yearbook 2005/06*, 2005: 126).

South Africa's National Archives functions in terms of the National Archives and Records Service of South Africa Act, 1996 (Act 43 of 1996). The National Archives in Pretoria includes the National Film, Video and Sound Archives (NAFVSA) (*South Africa Yearbook 2005/06*, 2005: 128). Morrow and Wotshela (2005: 313) describe the National Archives of

South Africa (NASA) as one of the most efficient official archives in Africa. NASA is experiencing problems with the collection of all provincial and local government publications for Legal Deposit (as explained earlier) and is struggling to cope due to insufficient skilled personnel. Under the previous government (prior to 1994) all government records were totally embargoed for 20 years, but currently individuals may have access to current documents if they submit a good reason for such a request. Government records form a vital part of the archival records and reflect the interaction of the government with its citizens, the internal workings of the government and its interaction with other countries (Morrow and Wotshela, 2005: 316-7). Morrow and Wotshela (2005) explain the developments of the national archives and changes in its scope under the current democratically elected government of 1996:

...NASA is a key institution, repository of official documentation, and, increasingly, of documents from non-official sources, including visual and oral material. Its role has been extended from that of its predecessor, the State Archives Service, of simply storing records of state, and it now has the remit of gathering material from previously marginalised sections of the population, and of proactively publicising and making available records to citizens. NASA was established in 1997 in terms of the National Archives Act of South Africa. Places under the Department of Arts, Culture, Science and Technology (DACST) - its public records mandate covers all governmental bodies at central level, including statutory bodies. NASA also has professional control over the records of the South African Defence Force (SADF), previously autonomous in this sphere, even though this institution retains its custodial responsibility (Morrow and Wotshela, 2005: 317).

The archives form an intrinsic part of the debate over freedom of information and the tension between secrecy and openness. This was also referred to earlier in this chapter with regard to access to information. Libraries, on the other hand, play an important role regarding access to information of official and non-official publications, while museums collections provide access to information generally valued for cultural, historical and educational interests.

The situation regarding the library services in South Africa is addressed further in chapter five in the context of the information sector in the country.

4.5 CONCLUSIONS

This chapter reviewed the information-related issues identified in the literature as relevant within the scope of information policy. The issues were reviewed within the context of application in the developed world and in South Africa as a developing country. South Africa was found to have various information-related policies in place. An overview of these policies is included in chapter six, after reviewing developments concerning the flow of information and information industry in South Africa, covered in the next chapter (chapter five).

Many of the information-related issues in chapter four, were found to be inter-related. Although the literature indicated that the ideal of free access to information as a human right is fundamental to national information policy, the review of the sixteen information-related policy issues presented in this chapter reveal numerous political, social, economic, cultural or even practical realities or tensions on a global as well as national scale.

Contrary to the ideal set for the provision of access to information in the OAI legislation access, this access could be denied for political reasons on a national or global level, or on a commercial level based on industrial competitiveness, or cultural level based on cultural values or traditions. Citizens wishing to have access to government information, may experience limitations due to political restrictions, or practical reasons due to incomplete archival collections, or other factors, linked to copyright restrictions, staff shortages regarding the rendering of services, or costs in supplying the information. In the context of South Africa, access to information is provided more freely than under the previous government, but some limitations regarding certain practicalities linked to legal deposit exist, as shown in next chapter.

Past developments influence the reality of the ideal set for the right to have access to information. For instance, in the context of South Africa, the legacy of apartheid has created a very unequal society with regard to education and literacy and access to information in terms of access to electronic information, libraries and book shops, especially in the rural areas of the country. The rural areas are also disadvantaged with limited telecommunication connectivity and Internet access, poorer communities and schools with limited water, electricity and sanitation facilities. These realities influence citizens' access to information

resources and the uses thereof. For instance, the establishment of MCCPs have also not been successful in all areas to help alleviate the shortcomings of telecommunication networks and communities' access to information.

Legislation regarding information ownership, open access to information, copyright protection and IP are debated in both the developed and developing world. Much of the current debate is on the right to have access to information versus restricting this access for personal benefit or financial gain. While South Africa is currently bound to the TRIPS agreement of the WTO, other developing countries are resisting this agreement as it favours the economic interests of developed countries. In view of the changes brought about by the Internet and WWW, there are indications that copyright and IP restrictions might need to be reviewed to fit in with current trends in the interest of society and the public domain.

Within the context of the review conducted on all the information-related issues in this chapter, the relevance of libraries and archives for open access to information is clear. No other institutions besides these two were identified in this chapter for aspects concerning OAI legislation. Libraries and archives perform a key role in providing access to information of value for political, social, economic, cultural, historical and educational reasons.

Significant challenges are faced by libraries and archives in the digital age regarding copyright restrictions and IP legislation. These challenges are considerable and are perhaps currently not adequately addressed, despite the reality that libraries and archives are custodians of information resources and provide access to information on both national and international levels.

The next chapter reviews the information sector in South Africa, including the media and the flow of information in the country and aims to establish how information is valued in that country.

CHAPTER FIVE

GOVERNMENT INFORMATION POLICY IN SOUTH AFRICA

5.1 INTRODUCTION

The previous chapter reviewed developments within the scope of national information policy regarding relevant issues, such as access to information, access to government information, the digital divide, telecommunication issues, education, and research and development for industrial competitiveness.

This chapter takes a closer look at developments regarding information communication in the public domain in South Africa as a means to establish the flow of information and the value attached to information for development. The review focuses on influences on the communication of information in the public domain, the flow of information, developments within the information industry and its regulation, based on available literature and reports. The review of the information industry in South Africa reflects on the value attached to information for political, economic, social and cultural development in the country in the period since the first democratically elected government of 1994 came into power in 1996. The review aims to establish how information is valued in South Africa for development, by looking at policy-related trends and trends in the circulation of information linked to aspects such as growth, content and use. *A salient list of South Africa's information-related laws is included under "South Africa" in the bibliography at the end of the study.*

This chapter includes a brief discussion of economic, social, cultural, political and organisational influences on the information industry in South Africa, a summary of past national information information-related policy developments, as well as developments during the period since 1996. This is followed by a review of developments in the information industry in South Africa, mainly since 1996 onwards. Ensuring access to information lies at the heart of information policy. This chapter reviews access to information in the public domain in South Africa by looking at the information industry and the flow of information in this country.

5.2 INFLUENCES ON THE INFORMATION INDUSTRY

The new government of 1994 identified various obstacles that were holding back the improvement of the quality of life of the people of South Africa. These “obstacles” were addressed as policy issues within the *Bill of Rights* contained in the new Constitution (Act 108 of 1996) of the country. The government also identified the relationship between the population and development as central to the aim of attaining human welfare and development (South Africa. Ministry of Welfare and Population Development, 1994: 15).

The South African Constitution requires the bills (draft legislation) to be introduced in the Houses of Parliament by the ministers, deputy ministers, or other members of Parliament. These bills develop along three channels

- (a) Formal and institutional channels of access: the mass media;
- (b) Political parties;
- (c) Legislatures, bureaucracies and the Cabinet (See Par 2.5.1).

Once a bill has been passed by both Houses of Parliament (the National Assembly and the National Councils of Provinces) it can be submitted to the president for agreement and publication in the *Government Gazette*. In some cases, the president may refer a bill back to Parliament for “further consideration” (Cloete, 1996: 61). These bills are public bills. Once a bill (draft legislation) has been passed by the Legislature the governmental institutions must submit an estimate of what it would cost the administrative institutions to put the legislation into practice (Cloete, 1996: 29; *South Africa Yearbook 2000/01*, 2000: 67). This is an important part of legislation as it plays an intrinsic role in ensuring the necessary resources for effective implementation and the intended outcome of the legislation.

The main areas where legislation and policies are relevant linked to the management of information are for:

- Economic development based on access to and the availability of information to the public for research and management decision-making and the skills to use the information;
- Social development linked to access to information and its availability for the development of skills and education;
- Public policy development linked to the protection, or failure to protect information;
- The environment and use of information to ensure sustainable development.

Government policy regarding the information industry and relevant information-related developments over the period 1994 onwards, need to be understood within the context of economic, social, political and cultural influences in the country during this period. Table 5.1 provides a framework of the four categories of influences that tend to influence developments within the information industry. The discussion of the information industry in this chapter uses the framework as a guideline to identify the salient influences within the context of South Africa.

Table 5.1 Influences on the Information Industry

(i)	Economic conditions (and technological changes and physical variables such as limited resources)
	This includes macro-economic issues: "... defining and analysing the information sector, measuring the size and growth of the information sector, international comparisons, infra-structural investment, knowledge centres as determinants of economic growth, investment in human capital".
(ii)	Social and cultural forces
	The following social issues are included: "... the requirement to provide information to consumers, reliability, objectivity and quality of information, extent of unmet needs, ways of meeting the needs, levels of literacy and numeracy, educational requirements, alternatives to print, role of information and advice services, division between the information rich and information poor".
(iii)	Political and statutory variables (and international forces)
	This variable includes legislative and regulatory issues, such as "... copyright, data protection, privacy, freedom of information, information as a tradable commodity, legal liability for information, international trade in information services, trans-border data flows, self-regulation by industry, standardisation".
iv)	Organisational issues
	This includes the: "... use of information as a management resource, relationship between information and productivity, need for new approaches to management, new skill requirements for managers, division of labour and the emergence of new information specialists".

(Source: Menou, 1991: 58)

Economic conditions, social and cultural forces, political variables and organisational issues in a country influence the communication of information and its flow, and will influence aspects such as the:

- Availability of information;
- Access to information;
- Information privacy;
- Management of information;
- Creation of information;
- Market structures for handling information;
- Pricing of information;
- International considerations (Bushkin and Yurow, 1997: 1753-1755).

Current developments regarding economic conditions, social and cultural forces, political variables and organisational issues in the country that are influencing the information sector and the communication of information in South Africa, are explained briefly below.

5.2.1 Economic Conditions

The transition of 1994 to the post-apartheid government policy introduced three major changes, from “... apartheid to a post-colonial order, from authoritarianism to democracy and from a domestically-orientated economy to a globally-integrated one” (Daniel , 2005: 172). In a review of the achievements of the past ten years and the challenges met by the first democratically elected government of South Africa, Hemson and O’Donavan (2005: 11) refer to the targets set by the *Reconstruction and Development Programme* (RDP) of 1994. The RDP’s targets were to address micro-economic factors, such as the ways in which past developments affected individuals and communities and included targets and standards for future development. Barnett (1999a) explains the important roles ascribed to the media, and its link to economic policy and the RDP policy:

... Radio and television have been ascribed multiple and often contradictory roles in the process of democratic transition and consolidation in South Africa. First, conceptualised as a medium of political communication, the mass media are given a pivotal role in the democratic information policy enshrined in the ANC’s blueprint for post-apartheid transformation, the *Reconstruction and Development Programme* (RDP). The RDP presents a vision of participatory democracy and decision-making that presupposes widespread access to the basic means of communication. Second, broadcasting has been identified as a central element of industrial policies directed at

boosting economic growth and development by fostering foreign investment and international competitiveness. Third, the electronic media have been presented as a medium of national reconciliation and unification. Radio and television are seen as the important stages for symbolic representations of the “rainbow” concept of “One Nation, Many Cultures” (Barnett, 1999a: 274-275).

In the period since 1994, the RDP policy was adjusted by sectoral White Papers and budgetary shifts, including a shift in economic policy from a “... relatively expansionist policy aiming at redistribution to the *Growth, Employment and Redistribution Strategy* (GEAR) in 1996 (Hemson and O’Donovan, 2005: 12). GEAR aimed to address macro-economic factors and had the following goals: to build a competitive, fast-growing economy, the redistribution of income, sound health, education and other services and secure homes and work places. The strategy was linked to expenditures, savings and investments, and the restructuring of state assets. Another economic policy, Black Economic Empowerment (BEE), was introduced to deracialise the largely white corporate and industrial-owning class (Daniel, 2005: 169). Black empowerment was to be achieved by the unbundling of enterprises, or privatisation of ownership of government-owned enterprises. The policy to restructure government assets led to the sale of the South African Broadcasting Corporation’s (SABC) commercial radio stations in 1996. The sale broke the 60-year monopoly of the government in this field and was overseen by the Independent Broadcasting Association (IBA). The IBA stipulated the rules for the sale regarding cross-media ownership, diversity in radio broadcasting, and diversity of both ownership and programming. This allowed the “... entry of black owned and controlled groups into broadcasting, in partnership with existing white owned companies already involved in this sector” (Barnett, 1999b: 658). The IBA has since been replaced by the Independent Communications Authority of South Africa (ICASA) (Fombad, 2002: 659).

The most advanced economic changes concerning both unbundling and privatisation for Black empowerment in South Africa in the period since 1994, took place in the media industry. Barnett (1999b: 656) explains that ownership of the South African press was restructured via the entry of both international capital and domestic Black empowerment groups. Anglo-American unbundled the Argus newspaper group in 1994 to the Irish Independent Group; Johnnic has given NAIL control over Times Media Limited, thus adding newspapers such as *The Sunday Times* (with the largest circulation in the country), *Business Day*, *The Financial Mail* and *The Sowetan*. Barnett (1999b: 656) adds that the Afrikaans press

and publishing groups have also unbundled and taken up new partnerships with black businesses. For instance, in 1997, Nasionale Pers sold a controlling stake in the largest black-readership paper, City Press, to a black empowerment consortium, while Perskor and Nasionale Pers went into partnerships with black empowerment investment companies Kagiso Trust Investments and Thebe Investments respectively in order to re-establish a secure position in the publishing sector (Barnett, 1999b: 656).

Another strategy, the *Socio-economic Development Strategy* (SED), was introduced in 2000 to address issues at local government level and is based on the principle of "...developmental local government". According to SED, local governments are expected to maximise social development and economic growth, integrate development initiatives, encourage participation, and build social capital (Hagg, 2000: 11). The four components according to this approach are the following: the provision of infrastructure, civil engagement, multi-sectoral service delivery, and job creation (Hagg 2000: 11). Hemson and O'Donovan (2005) conclude their review of the achievement and progress made towards meeting the targets set out by government, and more specifically with reference to the goals put forth by president Mbeki in his "State of the Nation" address of 2004, stating:

... while government can proclaim its success in achieving targets such as 'placing two million children on social grants', there is silence on the more difficult issues of nutrition, refuse removal, sanitation and telecommunications that were cornerstones of the RDP. Several of the earlier objectives appear to have fallen by the wayside and are no longer mentioned, like increasing access to affordable communications, even though that goal remains vital to closing the digital gap between rich and poor and modernising the economy (Hemson and O'Donovan, 2005: 39).

Another aspect referred to in the review by Hemson and O'Donovan (2005: 36-7) concerns the availability of access to government information which is often not readily available or verifiable (also mentioned in the previous chapter). This information must be available to achieve the goal of public accountability. Hemson and O'Donovan (2005: 39) add that it is also important to address budgetary allocations in infrastructure delivery, if targets are to be met. Commenting on the aim to address progress towards a more deracialised labour market, Daniel (2005: 170) explains that this requires access to better education as "... the education system is a direct feeder of the labour market and does to a large extent determine employability, employment status and earnings". Daniel (2005: 173) also refers to the state of research in South Africa and links this to the lack of sufficient highly trained people in the

country, caused by aspects such as a brain drain of scientists since the 1980s onwards and deficiencies in the education sector. Daniel points out that South Africa has 2.2 researchers per 1 000 employees, while South Korea has 6.8, Australia 7.3, Russia 7.4, and Japan 9.9. Research and Development (R&D) spending in South Africa is currently 0.81 per cent of its gross domestic product, while in the countries mentioned above R&D spending ranges from 1.28 per cent to 2.64 per cent.

Zegeye and Harris (2002: 242) explain that contemporary South African society is undergoing a major transition from a repressive social order and that the country is still characterised by poverty and inequalities. Inequalities due to poverty and inequitable past development are contributing to a continuation of the marginalisation of large parts of the country's population who do not have access to community-based information and information technology. Mjwacu is quoted by Zegeye and Harris (2002: 256), regarding the negative impact of existing inequalities on the development of societies lacking in access to basic information resources. The needs of these societies should be addressed by developing basic infrastructure such as access to electricity, before looking at the development of advanced telecommunications. In this regard, Fombad (2002: 650) explains that the information technologies are only affordable to the elites while the majority of people in Africa rely on free public service media (PSM) such as radio broadcasting.

In a study conducted by Britz, Boon and De Lange (1993: 61-67) an attempt was made to quantify and evaluate the interaction between the information sector and the rest of the South African economy. Their study found that the information sector is playing a significant role in the South African economy, but the value of information and its accessibility for economic development remain unrecognised in South Africa. The situation has not changed as shown in Par. 5.3 further on in this chapter.

5.2.2 Social and Cultural Forces

Before 1994, film, radio and television, literature, and print media were subject to state control and censorship. The period since 1994 introduced a more free society. The new government changed the administration of cultural practices. Previously cultural practices were segregated, but the new government encourages more cultural interaction in South

Africa, especially of the black cultures in the country. This is particularly encouraged on public days of celebration, such as National Heritage Day and Freedom Day. Cultural interaction takes place in the now integrated schools and tertiary institutions. Although the new government is less restrictive in terms of censorship, it does control South African television by taking measures such as the cancellation of the Mbeki documentary that was scheduled for broadcasting during 2006. It also restricts the publication of newspaper articles in some instances, for instance with the publication of the account on the SABC's blacklisting of political commentators (Quintal, 2006b: 3).

An additional cultural influence is the impact of global communication on the local culture. Bornman (2003) explains that the increasing processes of globalisation create challenges for the South African media regarding local struggles of the identity of South Africans:

... South Africa and the South African media and communications sector cannot escape either the effects of globalization or the struggles of identity associated with these effects. In the years to come the identity needs of South Africans will have to be seriously considered if the South African institutions associated with the media and communication are serious about developing people-centred policies that address the needs of the people in addition to those of the government of the day (Bornman, 2003: 245).

Modern technology is making it easier to cater for some of the diverse cultural needs of multicultural societies. In South Africa DSTV and community radio channels for other cultural communities including the Portuguese, Indian, German and French in the country. Identity is closely linked to cultural values and Servaes and Lie (2003) explain the cultural value of radio and television and the interpretation of programmes as something that is interpreted by audiences through the recognition of their collective cultural identity in the media discourse:

...Cultural products, more than any others, reflect the cultural values of their producers and the social reality in which they were produced. Viewing a television programme or listening to the radio, therefore, cannot be seen as a simple act of consumption... (Servaes and Lie, 2003: 14).

Under the previous government the majority of indigenous languages were not given equal opportunities for growth, despite of the fact that approximately 70 per cent of all South Africans have an indigenous African language as their mother tongue and only 25 per cent have English or Afrikaans as their mother tongue (Zegeye and Harris, 2002: 252). The number of official languages in South Africa changed under the new government from the previous two, to eleven, calling for increased language proficiencies and practical opportunities for more language and cultural diversity. Community radio stations support cultural and educational information exchange and use indigenous languages. In 2005 the SABC's national radio network comprised public broadcast service stations, commercial radio stations, and an external radio service in four languages that reached an average daily adult audience of 19 million. Television broadcasting stations broadcast in eleven national languages and reach a daily adult audience of about 18 million people (*South Africa Yearbook, 2005/06*, 2005: 147-148).

Access to information continues to be a problem especially amongst disadvantaged communities with little or no formal education due to illiteracy, low levels of interest in reading, economic constraints and limited or no access to community centres or public libraries (Smetherham, 2003), or the mass media in general. Nulens (2003: 74) refers to the situation created by poverty and economic inequality and the resulting disadvantage regarding access to information as the "information underclass". Although the disadvantages experienced by the poor and their lack of access to information could be technologically determined due to economic factors caused by poverty, past social disadvantages also contribute to the present information divide. Poor literacy levels and differences in the levels of education continue to influence the flow and availability of information in the country. These are not new problems, but society has become more aware of these issues with the new political dispensation.

The ANC-led government is committed to the recognition of cultural diversity and to the ideal of depoliticizing ethnicity, but the inherited patterns of economic inequality of the past, tends to be linked to patterns of cultural difference in South Africa. The tendency to link economic inequality to ethnic or cultural differences due to the inequalities created under the apartheid government, is continuing to limit the use of the mass media as instruments of nation-building

(Barnett, 1999a: 276), thus holding back the country's growth towards an integrated and free society.

Evans (2000) found a lack of recognition of information for development in South Africa and states:

... The roles of educators, publishers, materials developers, curriculum developers, and learners or readers, and in general the articulation between the State, the private sector and civil society - institutionalised in so many other countries - remain unrecognised in South Africa... (Evans, 2000: 210).

Evans (2000) explains that policy frameworks taking cognisance of the above-mentioned issue concerning schoolbooks, reading matter, and teaching and reference material are necessary in order to achieve two noticeable achievements:

... Firstly, governance [information for development] will improve. An enriched recognition by the State of the social actors in materials development will transform the arbitrary environment of schoolbook provision in provinces, where autocratic and unsound decision-making constantly takes place...Secondly, improved delivery mechanisms will allow for better diffusion than takes place at present, particularly through the provincial public tender process...(Evans, 2000: 210-211).

In addition to the policy frameworks needed, Evans (2000) stresses the importance of adequate funding:

Regardless of arguments in favour of any figure and how it is spent, it is clear that, only once annual expenditure on educational materials increases at least threefold to provide for minimum levels of books in classrooms and libraries in South Africa, can meaningful debates about the effects of knowledge advancement take place ...(Evans, 2000: 213).

Evans (2000: 211) emphasises the need for a policy commitment to media in education and remarks that while online delivery of materials will become increasingly important to distance education and learning in higher education, there is a need for "...a renewed emphasis on books as affordable, portable and high-intensity educational tools", also from government.

5.2.3 Political and Statutory Variables

Under the previous government censorship and the denial of free political participation adversely affected society at large (Merrett, 1999: 55-56) as it restricted national political debate by disallowing the majority of the population political representation, creating a divided society. In the 1990s the newly elected government formulated many policies on matters concerning constitutional matters, health, economics, agriculture and the media. Under the new government, legislation protects society's right to be informed, indicating that it considers access to information important. The legal foundation of freedom of expression and information in the new South Africa is provided by the Constitution, the *Bill of Rights*, the Truth and Reconciliation Commission, news archives and *Film and Publications Act*, and the *Promotion of Access to Information Act, 2000* (Act No 2 of 2000). Camerer (2005: 2) states that the *Promotion of Access to Information Act* (PAIA) covers the right of access to both public and private information and is a very powerful tool in the fight against corruption. However, a recent survey by the Open Democracy Advice Center, a group specialising in monitoring the implementation of the PAIA, found:

...poor responsiveness to requests for information by most government departments: 61 per cent of public bodies polled did not respond to requests filed under the act, and necessary information policies and processes required by the act have not been implemented. In the event of non-response, application must be made to the High Court or Magistrate's Court, which is both time-consuming and beyond the financial means of most citizens (Camerer, 2005: 2).

The development of policies such as the above, aimed to ensure the right of access to information and freedom of expression, but have not stimulated an increase in democratic participation in the media in the public domain with limited discussion and reflection on public issues in the media. Jacobs (2002: 281) explains that there is a lack of understanding regarding the role of the media in forming and reflecting public opinion within the post-1994 democracy. According to Jacobs (2002: 287), the focus of the political debate of the transition to democratic governance, was on political-legal changes, leaving out the economic and structural inequalities. Likewise, the focus of the role of the media in post-1994 South Africa has been on political-legal questions, such as the change in ownership of the media and questions such as freedom of speech. Jacobs (2002: 299) argues that the media should define the parameters of major policy debates and the scope of citizen participation. In this sense, the

people should use the media for situations where they are engaged in “... local struggles around issues such as privatisation of ... electricity and water provision”.

An analysis of the media in the new democracy of South Africa by Kuper and Kuper (2001: 355) affirms the view of Jacobs (in the previous paragraph) on existing uncertainties regarding the role of the media in South Africa. Kuper and Kuper (2001) argue that the media need to understand their role in strengthening the new government's rule:

... In a fragile democracy emerging from authoritarianism, there tend to be serious disputes over whether media should emphasize their critical role as watchdogs, on the one hand, or their constructive role in development and strengthening the new government's ability to rule effectively, on the other (Kuper and Kuper, 2001: 355).

Kuper and Kuper conclude their analysis of the media, indicating that the media should be more critical than they are currently in their reporting. In this regard they argue that the media can contribute to the consolidation of the democracy in South Africa. Camerer (2005) indicates that the media is vibrant, but with some political tensions:

There is a healthy and vibrant media, both in print and broadcast... The media report vigorously on corruption (mainly in the public sector). In particular, two weekly publications [such as Mail & Guardian, a newspaper that has been censored by the government a number of times recently]... There is some sensitivity on the side of government, particularly within the African National Congress (ANC), around media reporting on corruption... accusations of racism abound, with the media accused of being “white-owned”, although this is no longer the case. No journalists investigating corruption have been killed in South Africa, although independent journalists report a degree of self-censorship in writing about certain cases involving high-ranking politicians... (Camerer, 2005: 2).

The political debate in South Africa will continue and develop in different ways, free from the political suppression under apartheid rule, but with new challenges, both nationally and internationally. Developments within the different media are reviewed later on in this chapter, covering developments within sectors such as newspapers, book publishing, libraries and radio and television.

5.2.4 Information Communication Infrastructure

In May 1995, the then South African Deputy President, Mr Thabo Mbeki, expressed his concern for the information infrastructure and information content in a paper delivered at the Information Society and Development Conference. He pointed out that there are:

... huge gaps in the information infrastructure and content that must be addressed. There are five main social sectors that need to be brought together for policy formulation, planning and implementation. They are the public sector, private sector, organised labour, civil society and academia. South Africa should move towards a consensus vision of the information society (Mbeki, 1995: 5). .

The objectives that were set by the national policy regarding the reform of the information communication infrastructure in South Africa were aimed at providing more affordable access to communications services and accelerated development to meet the needs of a modern economy. However the reform process has stagnated with the process of fixed-line installations, as Telkom continues with its monopolistic status three years after it legislatively expired. The bidding for a second licence holder has been taken over by the Department of Communications from ICASA (Independent Communications Authority of South Africa). The Department of Communications is also responsible for the allocation of radio licences (as regulated by the *Broadcasting Act, 1999*, Act 4 of 1999; *Independent Communications Authority Act*, Act 13 of 2000; *Public Finance Management Act 1999* (Act 1 of 1999)).

South Africa's infrastructure reform process was started by introducing national strategies within its telecommunications sector. The reform model used included three components aimed at privatization, competition and independent regulation. Gillwald (2005) explains the performance of the restructuring of the telecommunications infrastructure after a period of ten years as follows:

In evaluating the performance of the South African telecommunications sector over the past 10 years, and in looking at the policy framework set up for regulation of the sector, it is important to recall the political and economic situation prior to the first democratic elections of 1994. The scale and complexity of the problems that had to be addressed as a consequence of over 40 years of systematic underdevelopment of the majority of the population along racial lines were immense. In 1994, teledensity (the number of telephone connections per 100 people) was below 10, and only 45% of households were connected to an electricity supply. All infrastructures and services were racially skewed to serve predominantly white households. Teledensity in

primarily black rural areas of South Africa was at around 1%, in line with other parts of Africa, while white-dominated urban areas had teledensity figures comparable with industrialised economies. Telecom reform has taken place under conditions of dramatic social transformation in South Africa. While seeking to redress racial inequities, reform has at the same time been aimed at integrating South Africa's economy more effectively into the global economy. This need to balance economic goals with political and social objectives has inevitably resulted in the adoption of approaches that have not always led to the best outcomes—at least, not in the short- to medium-term—and reflect the consequences of compromises that have characterised South Africa's peaceful transition to democracy (Gillwald, 2005: 472).

However, although Telkom expanded its market from 1997 to 2003, it may have fewer residential subscribers on the fixed network in South Africa now than there were in 1996 when the reform process began. Gillwald (2005: 475) explains that Telkom's 5-year licence in 1997 required it to roll out 1.7 million new fixed-line connections in under-served areas by the middle of 2002. It met the target, but due to the estimated number of lines disconnected since 1997, largely due to "... non-payment, the net effect is that 75% of the licence's obligation for network extension has not been fulfilled" (Gillwald, 2005: 475). Developments regarding the reform process are shown in Figure 5.1 below. This figure shows the changes in teledensity from 1997 to 2004, in fixed, mobile and total teledensity over this period, with mobile subscribers growing by 95 per cent.

Figure 5.1 Relation between fixed-line telephone charges, contracts and mobile growth

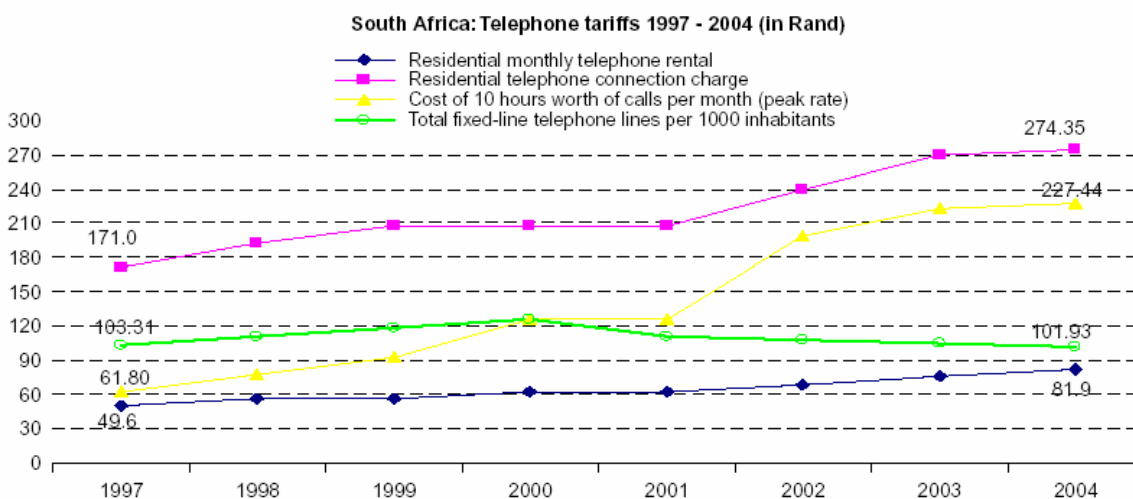


Fig. 1. Relation between fixed-line telephone charges, churn and mobile growth.

(Source: Gillwald, 2005: 477).

Gillwald (2005) explains the reason for the decline in growth in the number of fixed line subscribers, could be due to the failure of the regulator to ensure a change in the outcome of the efforts of Telkom. Others argue that Telkom should have taken measures to ensure that they retained the subscribers to their services, and that it was the regulator's responsibility to ensure the setting of affordable Telkom service subscription tariffs. He stresses the need to promote growth in the country's fixed-line network in overcoming the country's digital divide, stating:

Thus, it is crucial to understand the reasons for the declining number of fixed-line subscribers and to determine, from a policy and regulatory point of view, what can be done to ameliorate this decline. Clearly, the strategy of promoting the delivery of affordable and universal service through granting an exclusivity period to the fixed-line incumbent in exchange for it doubling the network, together with a dedicated fund (USF) and agency (USA) to subsidise services to the poor, has failed. The decline in Telkom's fixed-line network has severe implications for the development of widespread affordable access to a full information infrastructure, and this level of access is essential in overcoming the country's digital divide (Gillwald, 2005: 478).

The economic, social, cultural, political and organisational influences reviewed above have contributed to developments within the information industry in South Africa regarding information content, its commercial development and channels of distribution. These aspects are reviewed later in this chapter.

The following section reviews the impact of past efforts and current trends regarding information-related policy developments in South Africa.

5.3 PAST INITIATIVES AND CURRENT TRENDS

Past initiatives and current policy-related trends in relation to information policy tend to address issues such as access to information for all, access to government information and community centres, information-related policies linked to education, developing an information society and e-access to information, national virtual (digital) library and e-access, and library consortia development.

5.3.1 Information Services to all

The concept of providing information services to all, and more particularly to the historically disadvantaged communities, is accepted to be of primary importance on national level in South Africa (Nassimbeni, 1999: 34). Combrinck and Davey (2000) expressed criticism regarding the government's strategy in respect to access to information and the ideal of growth for Africa, leading to an "African Renaissance", as advocated by Thabo Mbeki, in the light of policies such as the government's taxation of books, and existing policies regarding sponsorships for writing in South Africa:

... If one reflects that the empowerment rhetoric is directly contradicted by the reality of government taxation [of books] and by tiny government sponsorships for writing or for language development... (Combrinck and Davey, 2000: 227).

Books are sold subject to Value Added Taxation (VAT) of 14 per cent in South Africa. This practice is widely criticised as it makes books more costly, affecting the affordability of books by the poor in a country. On the other hand the Government says that books in South Africa are primarily imported and sold to the privileged section of the market.

Language policy and development were skewed under the previous government. Under the new constitution, the indigenous nine African languages were given official status and are now included within the group of eleven national languages. More recently, the government established language research and development centres for each official indigenous language. It has also dedicated some R2 million to a pilot project aimed at developing literature in indigenous languages (*South Africa Yearbook 2005/2006*, 2005: 123). This is a very small amount. Also there is little point in developing literature if there is no reading public to buy the books, due to, amongst other reasons, the poor literacy rates in the country (Par. 4.3.3). Also most people buying books in the indigenous languages do not have the discretionary incomes to spend on such things. The government is also giving institutional support to the Media Development and Diversity Agency (MDDA) which was established under the MDDA Act of 2000 (Act 14 of 2002) (*South Africa Yearbook, 2005/06*, 2005: 353). This Act provides for the establishment of an independent statutory body, jointly funded by government, the media industry and donors. The MDDA is to create an environment for media diversity and development by providing support for media projects and research into media development and diversity issues (*South Africa Yearbook, 2005/06*, 2005:159). In 2003, the Cabinet

approved the National Language Policy Framework (NLPF). It allocated a once-off amount of R11,9 million in 2004/05 for the implementation the NLPF, and in 2004/05 the Department of Arts and Culture spent R9 million to establish nine centres, hosted mainly at tertiary education institutions, to develop South Africa's indigenous languages (*South Africa Yearbook, 2005/06, 2005: 3*). The Pan South African Language Board (PanSALB) was created under Section 6 of the Constitution to promote multilingualism in South Africa. The PanSALB Amendment Act, 1999 (Act 10 of 1999) provided for the establishment of national lexicography units (NLUs) for all official languages. These NLUs will compile monolingual explanatory and other dictionaries for the different linguistic communities. The PanSALB received R62,2 million in 2005/06 (*South Africa Yearbook, 2005/06, 2005: 4*). The Government has also set in place the *Imbizo* Campaign for direct interaction between government and the public. This interaction is to take place through the arts and communication under two government departments, namely the Department of Arts and Culture, to "... ensure social cohesion and nation-building" and the Department of Communications, to "... bridge the digital divide and provide universal access to Information and Communications Technology" (*South Africa Yearbook, 2005/06, 2005: 108, 136, 353*).

Various bodies have been established with particular briefs relating to information issues, but no national policy has been developed. Nassimbeni (1999a: 34) observes that despite the many documents, reports and statements made regarding information policy, information society, or the provision of access to information to all, there is a decline in the provision of library services throughout the country. As pointed out later on, since the beginning of the 1990s, there has been no growth in the number of information service points; neither has there been an increase in the number of books in circulation. National, provincial and local funding for libraries have been reduced considerably since the late 1980s (Quail, 2003: 25; Thumbadoo, 2004: 38), making it difficult to develop new centres to serve the previously disadvantaged communities in many areas in the country. Various bodies are involved in providing access to information and its availability within the country. Local government is responsible for the community libraries, but the financial position of local government has deteriorated. Hansen and van der Merwe explain that the existing national, provincial and local legislation does not "adequately identify roles and responsibilities according to their sphere of government". The result of this legislation is that library and information services

are not provided to all communities due to financial and other constraints (Hansen and Van der Merwe, 1999: 14).

More recently, a draft document for a national book policy (PICC, 2005: 12) is being developed as a legal instrument to provide “...a comprehensive framework to guide activities in the book and publishing industry” (*South Africa Yearbook 2005/2006*, 2005: 123). This document indicates that better access to information can be achieved by: “... greater distribution and resource equity within the public library sector”; and by interventions such as “... a new funding strategy that can be developed and implemented in the public library sector to ensure equitable distribution and resourcing”. According to this draft document, the responsibility for these interventions should be that of the Department of Arts and Culture, Treasury, National Library, LIASA, NCLIS, Department of Education and Blindlib (PICC, 2005: 12). The main intervention indicated in this draft policy for the library sector is to address the funding of local libraries in the country. It does not refer the current shortage in trained librarians in the country. Planning for the establishment of new libraries and more school libraries should include the need to ensure that there will be trained librarians to manage the library collections and services. Other objectives for the national book policy in this document include, amongst others, to improve the status of the book publishing sector, to encourage writing with South African content, to address the reading needs of the public, and to ensure affordable access to books for all sectors of the population, including people with print disabilities.

The Finance Minister, Mr Trevor Manuel indicated in 2006 that more funding will be made available for public libraries:

... South Africa has set itself the monumental task of developing the country’s 11 official languages, but this task would not succeed without many writers, publishers and readers... He noted that over the three-year medium term expenditure framework period, a total of R565-million had been added in the form of conditional grants to provincial governments for the further funding of community libraries... (Quintal, 2006a: 3).

According to Thumbadoo (2004: 38) one library for every 25 000 people is the stated objective of the Government. The findings of a survey conducted on public library access in South Africa are reviewed in Par 5.5.3.3 (Fig. 5.6). The findings of the survey, indicated the

mean average of just less than 40 000 people per library. The distribution of access to public libraries is very uneven, as shown in Fig. 5.6. Within the greater metropolitan area of the capital city of South Africa, the City of Tshwane, the objective has been set to provide one library for every 60 000 people, which is considerably less than the access to 25 000 library users indicated for South Africa in general. Additional funding and planning could help to address the provision of access to library services which will allow one library for every 25 000 South Africans. It will also be necessary to address the facilities and resources provided by the libraries to meet the needs of 25 000 users. Another important aspect is the need to provide qualified staff to help library users find the required information. There is a shortage of qualified librarians and many libraries are staffed by unqualified people who are not able to mediate and help library users.

5.3.2 Access to Government Information and Community Centres

In 1995 the then Deputy President of South Africa, Thabo Mbeki, appointed a task team called COMTASK to investigate government communication. COMTASK was to transform the existing communications system into a new open and democratic government communications system responsive to the information needs of all citizens. In 1997 the former South African Communication Service (SACS) was transformed into the Government Communication and Information System (GCIS), which was launched in 1998.

The aim of the GCIS is to deal with governmental messages, communication strategy, and corporate image. The GCIS maintains a website, Government Online (www.gov.za) which includes an information portal for general information about government, and a services portal which is a source of information about all the services rendered by national government (*South Africa Yearbook, 2005/06, 2005: 353*).

COMTASK also started to restructure the various arms of the old SACS to set up a service agency, improve media liaison and research and delve into the neglected area of media policy (Strydom, 1998: 9). In 1999 the South African government approved the establishment of a Multi-purpose Community Centre (MPCC) in each of the 55 District Councils of the country. These centres were to be one-stop government centres which could provide the public with

government services and information (*South Africa Yearbook 2000/01*, 2000: 77). Benjamin explains a MPCC as

... a place where community-defined needs are linked with development resources... The aim is to create a place to support community development, and not just an isolated computing centre. In most cases there is one venue and there are networked computers to serve as a backbone for many of the services offered. MCCPs are an important part of creating universal access to the Information Society in South Africa (Benjamin, 1996: 141-154).

Benjamin (1996: 144) reports in 1996 that there were about 40 MPCCs in South Africa, established from various initiatives. Most of these centres were established in township areas and not in the rural areas as these areas have different needs (Benjamin, 1996: 145). More recently, in 2005, the number of MPCCs in the country is given as 66 (ten more than approved for in 1999). A strategy has been formulated to establish up to one MPCC in each of the country's municipalities by 2014 (*South Africa Yearbook, 2005/06*, 2005: 353). The MPCCs are used as community information resource centres, learning centres, community resource centres, integrated services centres (including health care facilities), government information points, and points where Small, Medium and Micro Enterprises are supported. The cost for the setting up of a MPCC is estimated at R200,000 each (*ICT policy: a beginner's handbook*, 2003: 48), bringing the cost for the establishing of 66 telecentres to R13-million. The cost of maintenance and running the centres was not found in the literature. However, the sustainability of the MPCCs would depend on the availability of continued funding for the maintenance of the centres, funding for the salaries of staff members, the availability of trained staff to manage these centres efficiently and who can assist clients and provide relevant information to meet their requirements. Research revealed some shortcomings regarding the MPCCs, indicating that they are not nationally coordinated and their sustainability is questioned (Snyman and Snyman, 2003; Benjamin, 1996:147). The economically sustainable MPCCs run computer training courses. No information was found at the time of this research on the number of MPCCs that are economically sustainable in raising an income from computer training courses or income from payment for Internet access or the use of other community-centre facilities. The MPCCs also experience technical, financial and managerial problems (*ICT policy: a beginner's handbook*, 2003: 48). Forty per cent of the MPCCs included a library service, but the MPCCs did not have any symbiotic relationship

with the South African public libraries and South African public librarians had not become involved in the MPCC movement “... a significant way” (Lor, 2002: 107).

5.3.3 Information Policy Linked to Education

Until 1992 library and information policy in South Africa focussed on the role of libraries in general on education (South Africa. 1996. *Draft report of the Interministerial Report on the Library and Information Services (LIS) Function (National Level)*: 4). This focus existed for this sector since 1928 as confirmed in 1992 in the National Education Policy Investigation (*National Education Policy Investigation*. 1992). More recently, the Print Industries Cluster Council (PICC) made available a second draft document of a national book policy (PICC, 2005). This document links libraries and education, and in the draft indicates that the funding of school libraries should be part of the education budget of the Department of Education (PICC, 2005: 12).

Currently, less than 10 per cent of secondary schools in South African have school libraries (*South Africa Yearbook, 2005/06*, 2005: 129) indicating a serious shortfall in the access to information and reading material provided to school-going children in the country. This shortfall will have to be addressed urgently, as it will help to increase the love of reading nationally (Quintal, 2006a: 3). Research has shown the relation of reading to language improvement and comprehension (Olën and Machet, 1997). School libraries should also be staffed by trained teacher librarians who will be able to select suitable reading matter in the indigenous languages and assist learners with information necessary for outcomes based education as introduced in 1995.

5.3.4 Information Society

The government has expressed its support for the concept of developing an information society in South Africa. Van Audenhove (2003b) points out that the theme of the information society has been part of the political discourse of the South African government since 1994:

...After the elections, the new government started to reformulate overall policy frameworks, some of which touched upon the issue of ICTs. By 1995, the theme of the information society started to surface regularly in political discourse and policy documents. ICTs and access to ICTs started to have prominence both in policy

formulation and implementation. Although there was much talk about a Green Paper/White Paper process on the information society during 1996 and the beginning of 1997, such a policy process never materialised. To date, there is no document defining the government's view of the information society, no policy document outlining an integrated strategy to arrive there and no government department officially responsible for the coordination of policy initiatives (Van Audenhove, 2003b: 129).

The meaning of the term "information society" is explained by Benjamin (1996) according to the South African position paper for the ISAD conference as an ideal for the country that should include all members of the population:

The [Information Community] ...seeks to shift the emphasis of the advantages offered by the information revolution towards a fuller balance between individuals and social groups, communities and societies... to ensure that the information revolution benefits society as a whole (Benjamin, 1996: 142).

This interpretation does not include any reference to requirements for developing the skills of society to manage the information that becomes accessible to users in the current Information Age, despite the reality that an information society can only be possible with the necessary levels of information literacy. These requirements for an information society are essential, as explained by Burchinal (as quoted by Behrens, 1990: 355), explaining that in addition to conventional literacy a new kind of national literacy is needed, namely information literacy. Information literacy requires the skills to locate, find and use information effectively and efficiently for problem-solving and decision-making within the workplace and for personal activities.

These skills are also relevant to the concept of life-long learning. Behrens (1990: 357) explains that information skills should be part of the educational system. In this regard, Evans (2000) concludes that Government should be aware of the need for these skills to be taught and then implement a strategy to teach these skills:

...A multiple and coordinated approach to fostering different literacies, which would include a commitment to books as affordable and strategic teaching and learning tools, does not pose unreasonable challenges. It is largely a matter of political will (Evans, 2000: 213).

According to Evans (2000: 213) this approach will require government resources, policy making bodies to strengthen the book chain to encourage reading and literacy among civil society, as well as the private sector “through its willingness to create and maintain its markets”. In addition, literacy training and information literacy training programmes will have to be established to ensure the development of an information society in South Africa.

Much of the rhetoric regarding the development of an information society tends to be linked to economic growth and information technology, and multi-national institutional (global) participation (Ntuli, 2005: 1). During the World Summit on the Information Society (WSIS), held in Tunis in November 2005, President Mbeki said

...the creation of an inclusive information society was in the interests of the majority of humanity because those from the developing countries were confronted by the challenge of exclusion in the global economy (Ntuli, 2005: 1).

Rooney (2005: 406-407) points out the rhetoric of the WSIS has become inclined to focus on commercial or economic outcomes based on technocratic values, failing to consider the social-relational context of knowing among societies; the cultural context of knowledge; the fact that knowledge has its own situational logic; and process of acting on our knowledge. Thus, the links between knowledge, society and culture need to be considered in relation to the technocratic discourse regarding access to ICT and resulting access to the global economy. According to Rooney (2005: 415) key concerns of policymakers in relation to knowledge, reinforce the view that they “...privilege a business and technology agenda” to achieve their goals. This technological determinism fails to link knowledge and skills to development. Rooney (2005: 415-420) also points out that the rhetoric of the information or knowledge society is based on political power, and warns that the WSIS members need to avoid the failures of technocracy when addressing developing policies for a knowledge-based economy or knowledge (information) society.

Karlsson (2005) points out that the character of contemporary policy-making tends to be pragmatic, technocratic and expert-driven, due to factors such as:

... increased economic and political integration, the formidable explosion of information available compared to a generation ago, and the ongoing transition from ‘government’ to ‘governance’ (especially in Europe) have all contributed to a state of

interdependence in which every new political decision tends to carry numerous unintended consequences... Contemporary politics is mostly pragmatic, technocratic, and expert-driven ... Karlsson (2005: 1095-6).

This approach is not based on political long-term visions, mainly due to the fading belief in technological visions during the latter half of the 20th century (Karlsson, 2005: 1098).

However, governments do set specific targets and timeframes for specific developments that are not technocratically determined. For instance, based on Rooney's four considerations above, policies regarding the development of an information society in South Africa need to consider:

(a) the social-relational context of low literacy and lack of a reading culture in South Africa; (b) the cultural context of knowledge and difficulties among the previously disadvantaged regarding access to information; (c) the fact that knowledge has its own situational logic within the context of past skewed developments; and (d) process of acting on our knowledge and the need to address past inequalities in this regard (Rooney, 2005: 408).

In this regard, it would be possible to address developments towards an information society in South Africa, given the political will of the government, to aim for a 100 per cent literacy rate and a reading society in the coming years, based on the availability of the necessary management and training skills and funding.

5.3.5 Digital library and e-access

E-access to information is one of the developments created by information technology in the current Information Age. The virtual national library is one of the initiatives of e-access in South Africa. The ideal of creating a National virtual library@ is also linked to the concept of developing an information society in South Africa. The concept of creating a National virtual library@ was developed into a draft proposal by a committee convened by the then Minister of the Department of Communications. The goals of the concept of a national virtual library are as follows:

...The national virtual library is a bold initiative to give the citizens of South Africa electronic access to the collective library resources of the country, and to enable them to access the global world of information. The goals of the national virtual library are to provide citizens anywhere with access to electronic and print resources anywhere. By using the latest technology and Telkom's new public broadband backbone, the national virtual library will be able to level the information playing-fields by providing

equality of access to all sectors of South African society - ranging from higher education and the corporates to the user in the townships and rural areas (Nassimbeni, 1999: 34).

Allardyce (2003) explains that the national virtual library is an initiative of the government and will form part of the *Info.Com*, which is the South African Cabinet Information Society Strategy. This is to be a collaborative effort in conjunction with Telkom SA. As part of the Info.Com concept, the Department of Communications embarked on a project in 2000 to establish Internet centres in informal settlements throughout the country. These DOT ZA centres are to make information and communications technology, and more specifically, access to the Internet, accessible to everyone in South Africa. These centres were to provide access to Internet connectivity and computer literacy programmes (*South Africa Yearbook 2000/01*, 2000: 203). No further reference was found in the literature on these DOT ZA centres to confirm developments concerning e-access provided by these centres at the time of conducting this research.

Digital or e-access to information is enabled by the developments of information and telecommunication (ICT). This development has improved communication and the development of research collaboration processes. During the nineties, with the development of the Internet, research communication by means of e-mail discussion lists, creating databases, sharing models and computer programmes, resulted in the development of e-publishing, e-print archives, and free online peer-reviewed journal publications. The concept of “open access” publishing was developed, creating challenges for the long-term preservation and access to the digital archives (European Commission, 2006: 17). These developments have implications also for libraries:

...In view of the libraries’ difficulties and of the opportunities provided by information technologies, and acknowledging the significant part of public funds involved in the scientific publishing process, awareness of and concerns about scholarly communication issues have been rising in the research community and research-related organisations... (European Commission, 2006: 17).

The implications for libraries are two-fold:

... Besides digitising and providing online access to digital archives in order to meet current research needs, publishers and information providers also face questions of the

long-term preservation of electronic journals for the future generations... (European Commission, 2006: 78).

These concerns are also relevant to South Africa's libraries and the country's research needs. Open Access Archives are established by institutions to provide digital access to information in the public domain. Despite this development, the implications regarding access to information and future retrieval indicate that e-print archives aim to provide open access to research articles in both developing and developed countries. However, they represent a fragmented and incomplete reproduction of journal issues with deposit of articles made on a voluntary basis, leading to no systematic archiving and thus no guarantee of exhaustiveness (European Commission, 2006: 76). The fragmented archiving of publications in the public domain makes it difficult and time-consuming to locate and to ensure access in the future.

Chan and Costa (2005) explain the need for institutional repositories for the archiving and open access (OA) to research publications in a country and current developments regarding the setting up of long term institutional repositories for electronic access to South Africa's research publications:

In South Africa, the South African Site Licensing Initiative (SASLI) of the Coalition of South African Libraries Consortia held a workshop recently in order to engage the library, higher education communities, research offices, as well as government funding bodies with implementing the dual strategy of OA as recommended by the Budapest Open Access Initiative. There is as yet no institutional repository set up at any African institution of higher education, although experimentations are going on at a number of universities. SASLI's effort in support of institutional repositories is noteworthy, as it is an indication that library consortia are recognizing that a national site licensing approach to information access is not sustainable in the long term and complementary approaches to information provision need to be supported and developed (Chan and Costa, 2005: 156).

In South Africa Sabinet Online has developed electronic access to e-publications on its platform, SAePublications, providing electronic access to 192 South African journals. NISC-SA is another organisation which is also providing electronic access to information resources in South Africa. NISC-SA is the online publisher of ten South African journals, hosts African Journals Online (AJOL), which is a catalogue and current awareness service of African journals, including 195 journals offering over 13 000 articles. The Academy of Science of South Africa (2006) reports on the change towards e-publishing in South Africa and calls for

a strategy for e-publishing which would allow for global visibility, but also take into account the national interests of the country:

...this rapidly changing scene and strategic management of national publication policy should be aimed at the future, not at the present or the past. The application of national and institutional resources (people, energy, money) should be aligned as far as possible with the agreed strategic objectives. Nationally coordinated efforts are required to provide infrastructural services cost-effectively (e.g. digital curation, shared negotiation for access rights, institutional and national subscriptions) ... there needs to be a strategic decision on the best balance between visibility in global terms and local relevance and capacity building (Academy of Science of South Africa, 2006: xxiv).

The current research system in South Africa is driven by the Department of Education (DoE). The DoE system pays a subsidy to institutions per publication in peer-reviewed journals (Academy of Science of South Africa, 2006: xxiv). A newly-released investigation by the Academy of Science of South Africa (2006) on research publications found that the local system of journal publication is flawed as financial incentives are the primary motive for publishing, rather than to make known important research findings (Academy of Science of South Africa, 2006: 101; Scott, 2006: 1). The global trend towards electronic publishing and the Academy of Science of South Africa's report (2006: xxiv) indicates the need for a "...strategic management of national publication policy", aimed at the future, ensuring long-term access and data curation as part of the national e-holdings in South Africa.

The Academy of Science of South Africa (2006: 100) also found that the current success rate for archiving in institutional repositories in South Africa is low. Digital archiving and preservation implies technical developments and the setting up of strategies, such as migration and emulation, metadata for large amounts of documents to be preserved, the creation of interoperable quality archives to deposit documents in different places and improve preservation conditions (European Commission, 2006: 79). The European Commission (2006: 80-81) explains that the financial costs of long-term digital preservation are not clear; organisational models and new business models need to be developed for digital preservation of collections, technical expertise is needed to preserve high volumes of rapidly changing information; and, legal deposit schemes provide for preservation but not for remote availability and online access. Developments such as these are important and are being addressed, both nationally and internationally.

5.3.6 Library Consortia

Library consortia are formed in order to share information resources and to share the costs of subscription fees to commercial information resources. The collaborating libraries work together by sharing their information resources, and make information resources available for all in a more affordable way.

In South Africa, library consortia have been formed in Gauteng (known as the GAELIC consortium of libraries), and in the Western Cape (known as CALICO). The sharing of information resources are also facilitated by telecommunication networks and databases such as SchoolNet SA, SABINET, WORLDNET GATEWAY service, SAGONET and PADISNET. Further information about library consortia are included later on in this chapter on academic libraries (Par. 5.5.3.4) and special libraries (Par. 5.5.3.5).

In a study conducted on library consortia in the United Kingdom (U.K.), Ball (2003: 301) reports that the procurement of e-resources is more expensive than the subscriptions to the paper-based journals, but the general finding was that the subscriptions work well. The main finding of the study was the lack of a national dimension and strategy in the purchasing of the subscriptions:

...There seems to be little co-ordination between consortia and a national approach to the strategy for e-resources was felt desirable by both consortia and individual authorities. There was a general feeling of waiting for something to happen, of the problems of e-resource procurement being intractable, insoluble, or simply too large to be tackled at the level of the individual authority or even consortium. It was generally felt that a holistic approach covering both hard and e-resources was required (Ball, 2003: 307).

The consortia in South Africa do not co-ordinate their strategy regarding the procurement of paper and e-resources, and lack a national approach in the same way as the consortia in the U.K.. It would be in the national interest to review this practice of the consortia, and to consider the implications on a national level, as recommended for the consortia in the U.K.

The consortia in South Africa have formed very successful partnerships and currently the national network of libraries participating in the interlending system serves 700 libraries in the

Southern African Development Community (SADC) Region. The interlending system is managed by the National Library (Pretoria campus).

The National Library of South Africa (NLSA) is experiencing budgetary constraints and this is causing it to struggle to meet its obligations in its role to collect, preserve and make accessible the country's publications and manage its other collections, as it has to manage with limited staff and the provision of limited services. The National Library budget is putting the library sector in South Africa under huge financial pressure as it plummeted from R22-million in 2000 to R12-million in 2004 (Thumbadoo, 2004: 38). Community libraries are also receiving limited budgets and this is affecting the provision of library services to local communities and also the acquisition of new and relevant reading material for the community libraries. Furthermore, this reduction in the funding of South Africa's library sector is causing serious budgetary constraints that are affecting the publishing sector in the country, as libraries have to curtail their spending on the purchasing of new books. Local book publishers rely on the library sector for support as only four per cent of the South African public purchase books (Thumbadoo, 2004: 38) as mentioned later on in Par. 5.5.2.2.

The state of the country's information industry, size and development are reviewed briefly in the following section, explaining the flow of information made available by the information industry in South Africa.

5.4 INFORMATION INDUSTRY AND ACCESS TO INFORMATION

The information industry was explained in Par. 1.5.8 as the companies involved in the process of the creation, dissemination and use of information. The mass media forms part of the information industry and includes (a) broadcasting and communication channels; (b) content services (including publishers, libraries and archives); (c) communication technologies; and, (d) facilitation services. The information industry provides access to information and this section explains relevant developments in South Africa regarding the flow of this information.

Media regulation in South Africa is the responsibility of the Department of Communications (*South Africa Yearbook, 2005/06, 2005: 145-161*). Currently, several laws protect media freedom in South Africa. According to the Bill of Rights (as contained in South Africa's

Constitution), everyone has the right to freedom of expression, as explained in Par. 5.2.3. This right includes the freedom of the press and other media; freedom to receive or impart information or ideas; freedom of artistic creativity; and academic freedom and freedom of scientific research (*South Africa Yearbook, 2005/06, 2005: 145*). This law makes it possible for the media to allow for public participation in the national political debate conducted within the structures of civil society and the media. Freedom of expression excludes hate speech. Hate speech is not allowed in South Africa, and is addressed by legislation aimed at eliminating hate speech in terms of the equality act adopted in 2000, relating to “public statements of hatred based on race, ethnicity, gender and religion” (Terreblanche and Quintal, 2004: 7).

5.4.1 Four Categories of the Information Industry

Access to information is provided through various mechanisms in society, including the mass media (television and radio), the content media (including newspapers, printed media, library services, communication technology (hardware), and information technology. The government is responsible for the provision of a regulatory authority and the communication infrastructure, while the public and private spheres exist to allow for the communication of information.

The four categories of the information industry include the information content and commercial publishing industry, as well as the communication technology and information infrastructure as shown in Table 5.2.

Table 5.2 Four entities within the information industry

Information industry	
Group 1: Information <i>content</i> and commerce	Group 2: <i>Connector</i> and <i>carrier</i>
(a) the mass media	(c) communication technology
(b) information content services (including publishing and library sectors)	(d) information infrastructure

The four information entities above, the mass media, content services, communication technology and information infrastructure are listed Table 5.3 as the four categories within the modern information industry (based on Schwartz 1991: 242). Although the categories are

necessary for the information industry, different requirements and standards are set for each, as described briefly later on in this chapter, with specific reference to South Africa.

Table 5.3 Information industry: content and infrastructure

<p>(a) <i>Information sources accessed through the mass media (radio / television / telephones):</i> Broadcast and communication (commercial) channels: including radio and television networks, telephone and satellite networks, Post Office and other deliveries.</p>
<p>(b) <i>Information content (packaged information, mainly in the print and electronic media):</i> Content services and content packages: including libraries, information brokers, electronic database providers, news services, newspapers, magazines and other print media.</p>
<p>(c) <i>Communication technology (“hardware”, such as television sets, radios, etc.):</i> Communication technology: including radios, television sets, telephones, transmission equipment and mail equipment.</p>
<p>(d) <i>Information technology (based on physical infrastructure, such as computer based and electronic media):</i> Facilitation services and information technology: including banks, electronic funds transfer, computers, optical media, timeshare, market and business research.</p>

(Source: Schwartz 1991: 242).

The following section reviews developments within the above listed four categories of the information industry in South Africa.

5.5 MASS MEDIA

The mass media include the radio and television networks, newspapers, publishers, and information material made accessible through the library services or other information centres. The media generally aim to meet a number of criteria in delivering information to consumers. Ideally, this information needs to be made available reliably, objectively, and of quality; information which meets the needs of the consumers; presented according to the ways necessary to meet these needs; and in accordance with the levels of education, literacy and numeracy of the consumers; and aim to bridge the divide between the information rich and information poor. The media perform three main social functions: to inform people about their environment, to link different parts of the society, and to transmit social values and norms. It is, therefore, not unusual for governments to use the mass media for nation building (Mytton, 1983: 32). The government of South Africa has also used the media to influence the public, on television, radio (using the SABC as the public broadcaster) and in the press (Marud, 2004: 5; February, 2004: 9).

Berger (2004: 42-45) explains that South Africa does not have enough mass media and the population do not use or consume information extensively. Berger explains that democratisation and economic growth are traditionally correlated to media density as an index and agent of change within a social system. Media participation can, for example be linked to the proportion of total population buying newspapers, owning radios and attending cinemas. The development of media density is linked to media production bound up with successful expansion of consumption of the media. Growth in the media hinges on economic and political factors:

... Expansion of the media as a production sector hinges on many things, not least the state of the wider economic and political terrain - both within the Southern African region and internationally. It is also a function of the organisation of the industry in a given scale, where there is substantial room for variation within wider parameters, and which can have major impact on growth. Worldwide, akin to other economic sectors, such internal influences on growth are linked to the extent of commercialisation and competitiveness, and the consolidation and concentration of enterprises (Berger 2004: 48).

According to Berger (2004: 42-45) changes in the media since 1994, have turned out to be very different from what was expected. Although literacy increased by 20 per cent between 1991 and 1995, this was not reflected in newspaper sales; the levels of civic participation in the media declined after apartheid, while community radio developed successfully. Explanations for the lack of growth in newspaper sales despite the increase in literacy in the country may be due to South Africa's lack of a culture of reading. The strong oral tradition in the country could partially explain the preference to information access on radio. The period 1991 to 1995 was a highly political time in the country, as the country was moving towards a democratically elected government in 1994. Civic participation under the new government was not yet established and the changes in the country included the restructuring of the media.

Louw (1993: Preface) explains that political change and the restructuring of South Africa created the need to address the structure of its media. Prior to the change of government in 1994, the media debates centred on censorship and other government restrictions on the gathering and publishing of information. During the first two years after the democratic election in 1994, the media debate focused on electronic media, and more specifically on the broadcasting sector, and then on the issue of newspaper ownership (Quintal, 2004a: 4). In a

review on the transformation in Southern African media over the period 1994 to 2000, Duncan (2000: 52) explains that the changes in both the media and society have been remarkable. These changes included the restructuring of the media and changes in the society as it moved to a society which became integrated under post-apartheid rule. Much of the prevailing discourse in the media since 1996 centres on human rights issues, constitutional guarantees and the assumption of a free market environment, and a commitment to work towards democratisation, tolerance and transformation (Wasserman, 2006: 77).

Chidester, Hadland and Prosalendis (2003b: 307) remarked that "... since 1994, as many analysts have observed, national policy has been supported by a series of narratives—the Rainbow Nation, the African Renaissance and the New Patriotism..." The political discourse of the "African Renaissance" was introduced by President Mbeki in 1999, which, according to Wasserman (2006: 77) renewed matters covered in the press, on radio and television, linked to race and ethnicity in the country, neglecting issues of class. These political issues affected public participation in the media, due to the tensions linked to the country's previous racially divided apartheid society.

The debate between the media and government developed in a conflict regarding perceptions of the public and national interests. Together with these conflicting conceptualisations, the change in the ownership of the commercial media (mentioned in Par. 5.2.1) and the introduction of multi-national media corporations such as the Irish group in South Africa may influence aspects linked to media freedom, based on profitability expectations (Wasserman, 2006: 81). Wasserman (2006: 83) argues that there is a need for the media in South Africa to clarify its role in surveillance of political and economic power, locally and globally; affirming and renegotiating the cultural identity in South Africa; and, the transformation of society and the redress of inequalities inherited from apartheid.

5.5.1 Broadcasting and Communication Channels

Broadcasting and communication channels include radio and television broadcasting in South Africa. In the period prior to 1994, the media in South Africa was politically coloured under apartheid rule. During this time, the government applied technology to develop and increase the distribution of information. The use of FM signals in the 1960s made it possible to introduce more radio stations, also in the African languages. Expansion of the print media was

commercially-driven with competition within the white market (Berger, 2004: 53). The media did not experience growth as newspaper managers focussed on a white community readership, leading to a decline in sales figures over the period from 1980 onwards. At this time, the South African government launched the broadcast subscription television service, M-Net, which was designed to compensate newspapers for the loss of advertisement revenue after the South African Broadcasting Corporation (SABC) was allowed to introduce television into the market (Berger, 2004: 54).

During the first two years after 1994 the South African media policy debate centred on the re-regulation of the previously state-controlled SABC. The South African Broadcasting Corporation (SABC) was to be transformed from a state-controlled to a public broadcaster (Duncan, 2000:52). The *Broadcasting Act* formulates the path for the SABC to become self-sufficient by commercialising itself but both radio and commercial television are state-run (Zegeye and Harris, 2002: 249) and receives funding from licensing fees and advertising.

Louw (1993: 11) explains that the media policy debate started with the appointment of the *Task Group on Broadcasting in South and Southern Africa* in 1990. The *Independent Communications Authority of South Africa Act No 13 of 2000* merged the IBA and SATRA and the Independent Communications Authority was tasked with the regulation of the communications industry in South Africa. The Independent Communications Authority of South Africa (ICASA) took over the functions of the former IBA and now administers and regulates the broadcasting services frequency bands (Lesame, 2000: 32). ICASA also needs to regulate electronic commerce (e-commerce) and all sectors of radio broadcasting.

With the changes under the new government of 1994, the SABC changed from a state to a public broadcaster, and implemented affirmative action programmes in this sector. Changes in broadcasting also resulted in the creation of many more radio stations. By February 2005, 92 community radio stations had been licensed by the Department of Communications since 1995 (*South Africa Yearbook 2005/2006*, 2005: 148).

Access to and consumption of the mass media, radio and television have grown over this decade (Duncan, 2000: 55). Alexander [200?] explains the growth in radio broadcasting:

During the apartheid era, broadcasting was firmly in the grip of the state-run South African Broadcasting Authority. With democracy came the deregulation and liberalisation of broadcasting, and the number of stations operating outside of the authority's control proliferated. Community radio in South Africa began in 1994, when the country's broadcasting authority began the continuing process of assessing and granting license applications from groups as diverse as rural women's cooperatives, Afrikaner communities and a variety of religious bodies. The country now has over 100 community stations, broadcast in a number of languages. Their scope and reach varies enormously - from the half-a-million Joburgers who make up the audience of Jozi FM to, for example, the mere one thousand people who listen to Ilitha Community Radio in the Eastern Cape town of Maclear (Alexander, [200?]).

The number of community stations given in this quotation differs from the number stated above as Alexander reports the number of community stations added since the report by Duncan.

Development of radio broadcasting and its coverage in South Africa has improved although community radio stations continue to struggle financially (Berger, 2004: 42). In an effort to reduce costs, radio programmes have been reduced in range and diversity (Duncan, 2000: 52). This means, that although more radio stations are serving a diverse listening audience and market, the range in content has been reduced in order to save production costs.

Despite difficulties in the financing of community radio broadcasting it provides an important service, especially in the rural areas:

Community radio, by its nature, struggles to access advertising and other forms of financing. Yet it remains a crucial part of the South African broadcasting landscape, providing diversity for listeners and much-needed skills for the commercial radio sector. There are an estimated 10-million radio sets in South Africa, with listeners many times that number, broadcasting a range of programming from ultra-hip urban music to local news and information in the deep rural areas. You can listen to radio on the airwaves, via satellite and on the internet. All 11 of South Africa's official languages get airtime, as well as German, Hindi, Portuguese and the San languages of !Xu and Khwe, with stations falling into three broad categories: public service broadcasting, commercial, and community radio stations (Alexander, [200?]).

Tomaselli (2000: 92) explains the role of the media as part of the social process of public debate. The media provides the platform for the process of public debate, and Tomaselli

(2000:92) argues that the media needs to encourage public debate. He explains the need to encourage public debate: “Engagement is the name of the game; debate is the public process; and publication is the forum for both mutual engagement and debate”.

The radio sector has risen and its listenership is now reported to be 27,4 million (Bloom, 2004b). The major broadcasting owners include African Media Entertainment, Ingoma Trust, Johnnic Communications, Kagiso Media, Makana Trust, Mineworkers Investment, Mopani Media Nail, Primedia, Sabido Investments, SA Clothing Textile Workers Union Investment Grouping, Siphumele Investment, The Union Housing Trust, Thebe Convergent Technologies, and Zerilda Investment (Katz, 2003).

Television broadcasting in South Africa is provided in all eleven official languages, as well as in sign language, German, Hindi and Portuguese. South Africa was one of the last countries in Africa to have television service, but it has developed to provide access to a wide range of local and international programmes, including drama, comedy, sport and news. Television broadcasting was introduced in 1975 in the major cities in the country, and SABC introduced its nation-wide service on 6 January 1976. Television broadcasting remained a monopoly in the hands of the the SABC until 1986, when MNet was launched. MNet is not allowed to broadcast an independent news programme, but provides access to many other programmes to subscribers. Both SABC and MNet broadcast across Africa (Alexander, [200?]).

Locally, cross-media ownership is governed by certain limitations (under Section 50 of the *Broadcasting Act, 1999* (Act 4 of 1999)). The ‘convergence’ of telecommunications and mass media technologies in South Africa has shaped the telecommunications and mass media markets in South Africa. The *Convergence Bill* (*South Africa Yearbook, 2005/06*, 2005: 136) aims to remove policies that “... hinder the development of cross-sector applications, services and businesses. The legislation is expected to reflect the integration of telecommunications with Information Technology (IT), broadcasting and broadcasting signal distribution...ensure citizens are empowered with better access to knowledge and information.”

Kivikuku (2006) explains the unequal access to mass communication media in South Africa:

...Unlike most of Africa, television is undoubtedly a mass medium in South Africa, but there are still quite large ‘pockets’ in the country without the slightest possibility to

watch television or listen to radio, even on an occasional basis. Despite many fine policies, some 15-20 percent of South Africans have extremely limited access to any means of mass communication, although the urban - predominantly white - middle class enjoys the supply of all modern means of media. There are approximately 3.5 million illiterate adults in South Africa, with the majority based in rural areas, who constitute 54 percent of the population. Community radio stations are scarce in the poorest provinces. Even community radio seems to need some infrastructure and at least minimal purchasing power in the community in order to operate properly... (Kivikuku, 2006: 12).

The Satellite Communications Network of the Department of Communications makes it possible for grassroots communities to access general news and government information services. Initially it linked 30 radio stations to the network, but eventually, the network will link 90 stations (*South Africa Yearbook, 2005/06, 2005: 148*).

5.5.2 Content Services

As explained in Par. 1.5.8, the content services of the information industry include newspaper publishing, magazines, book publishing, educational book publishing and library services. This section reviews the content services in South Africa. These services provide information in readable form and provide access to information to the citizens in the country. The main content services included here are newspapers, the book trade and library services. Archives in South Africa were reviewed in the previous chapter (Par. 4.4.7) and are not covered again in this section.

5.5.2.1 Newspaper Publishing

The media debate launched in 1990 in South Africa was influenced by the political climate of the 1980s during which society in general was highly politicised. During that time, the press was regulated by government censorship under apartheid rule:

...South Africa has always had a courageous and opinionated press. For over 40 years the apartheid state tried to gag the country's newspapers, using legislation, harassment and imprisonment, culminating in the late-1980s States of Emergency. Through all of this, SA's press continued to report on all the news they could (Big Media Publishers (Pty) Ltd., 200?).

Louw (1993: 251) describes the quality of the media workers during the latter years of the apartheid government as “generally of a poor quality”. Censorship and narrow conservative reporting chased many reporters out of the mainstream media. Reporting was narrow and uninformative. This resulted in a spiral of declining standards, with most South African media consumers accepting all reporting as factual, without critical content assessment. Censorship in South Africa in the period between 1960 and 1990 denied meaningful political participation to the mass of the population on the basis of race. Merrett (1999: 55) explains that censorship was used as an expression of power at the time. The Government declared a State of Emergency seven times during this period and used specific measures to suppress the flow of information and influence public opinion not to challenge the actions of the authorities, leading to official secrecy measures, resulting in many Acts of Parliament restricting official information. Thousands of foreign and local publications were banned under the authority of the Publications Control Board during this time. The effect of the extensive use of censorship on the public resulted in the devaluation of openness (Merrett, 1999: 56).

The situation has changed and under the democratic government in 1994, South Africa's newspapers were freed from restrictions with the new Constitution safeguarding freedom of the media, freedom to receive or impart information or ideas, freedom of artistic creativity, academic freedom and freedom of scientific research.

South Africa has 20 daily and 13 weekly newspapers, most in English. Some 14.5-million South Africans buy the urban dailies, while community newspapers have a circulation of 5.5-million. There is also a range of general and specialised news websites ... (Big Media Publishers (Pty) Ltd., ND.).

The bigger newspapers include the *Business Day* which is distributed in the metropolitan areas, and the national newspapers, the *Sunday Times*, *Sunday Independent*, *Sunday Sun*, *City Press*, and *Sowetan Sunday World* (*South Africa Yearbook*, 2005/06, 2005: 150). The *Sowetan* has one of the largest readerships. This is not necessarily reflected in the number of copies sold, as each copy is read by multiple readers. *Daily Sun* is another newspaper, sold in Gauteng, Limpopo, Mpumalanga and North West Province. This newspaper has become the largest daily newspaper in South Africa.

Between 1990 and 1996 newspaper circulation shrank from 19 per cent to 17 per cent. Berger (2004: 59) and Duncan (Duncan, 2000: 55) state that a comparatively small number of newspapers are in circulation in South Africa. Duncan (2000: 55) was of the opinion that newspaper circulation has been influenced by a rising level of unemployment, while Berger (2004: 59) indicates that the steep rises in production costs due to continuing innovation in technology over the years and the rising costs in distribution due to increasing fuel prices are contributing to the cost and limiting sales figures. Duncan (2000) states the following:

South Africa has the second lowest number of titles in the world in relation to population size (Indonesia has the lowest). The circulation of newspapers in relation to population size is the fifth lowest in the world (after Thailand, Pakistan, Indonesia and Mongolia) (Duncan, 2000: 55).

Bloom (2004a: 19) reports that there has been an increase in the number of newspapers in circulation. In 2003, 640 000 more newspapers were sold than in 1998 and approximately four million South Africans were buying newspapers on a regular basis (Bloom, 2004a: 19). Paid-for community newspaper circulation grew from 268 000 in 2003 to 393 000 in the latter half of 2004, while newspaper readership of daily newspapers grew from 2003 to 2004 to 6,357 million readers. Weekly newspapers readership remained relatively stable during this period, with 9,433 million readers. In general, newspaper readership among the 16- to 24-year-olds declined over this period (*South Africa Yearbook, 2005/06*, 2005: 152).

In 1996, Print Media South Africa (PMSA) was formed as an umbrella organisation administering the Newspaper Association of South Africa, Magazine Publishers Association of South Africa, and the Association of Independent Publishers (AIP). The AIP represents more than 200 independent publishers in southern Africa. The PMSA represents more than 617 newspaper and magazine titles in South Africa and is a member of international bodies such as the World Association of Newspapers and Federation of Periodical Press. The South African National Editors' Forum (SANEF) was established in 1996. SANEF includes editors and senior journalists from print, broadcast and online/Internet media, as well as journalism educators from major training institutions in South Africa (*South Africa Yearbook, 2005/06*, 2005: 154).

The print media industry is bound by a set of six *Codes of Practice*, which include:

- (i) Press Ombudsman's Code of Practice;
- (ii) The Advertising Standards Authority Code of Conduct;
- (iii) The preamble to the Memorandum of Undertaking with GCIS regarding the formation of the Media Development and Diversity Agency;
- (iv) The King Committee's Second Report on Corporate Governance;
- (v) The provisions of the Employment Equity legislation;
- (vi) The provisions of the Skills Development legislation.

These six documents "... frame the philosophical and legal framework within which the industry works" (Print Media South Africa, 2002). The purpose of the framework is to achieve transformation in the industry. Legislation aimed at transforming the media industry was enacted in the Bill that established the Media Development and Diversity Agency (MDDA). The government, the media industry and other donors respectively are expected to contribute R20-million per year towards its proposed budget of R300-million (Bill on media transformation to Parliament, 2002) for funding of running costs of the MDDA. The ownership of the print media in South Africa has undergone some changes since the 1990s - for instance, the transfer of the *Sowetan* from the then Argus Group to New Africa Investment Limited, and the promotion of black editorial control in several newspapers that used to be predominantly white (Tsedu, 2001: 8). Since 1994 press ownership has become more centralised. The major newspaper groups are Independent News Media, Naspers, Caxton and Times Media Limited through Johnnic (*South Africa Yearbook 2000/01*, 2001: 213). The biggest English media house is the Independent News Media, which is wholly foreign-owned (Tsedu, 2001: 8). Independent Newspapers owns 75 per cent of all English language paper sales. This includes all copies of newspapers sold in Cape Town and Durban and 75 per cent of those sold in Gauteng. Times Media plays a similar monopolistic role in the Eastern Cape (Merrett, 1999: 63). Caxton / Penrose controls some 94 newspaper titles and Naspers owns a number of strong titles in areas such as the Western and Northern Cape, the Free State, Gauteng and the North West. Many of the 450 community newspapers belong to the community press division of the Print Media Association of South Africa (Duncan, 2000: 55).

5.5.2.1 *Magazines*

There are about 300 consumer magazines and more than 500 trade, technical and professional publications in South Africa (*South Africa Yearbook 2000/01*, 2001: 219). The magazine industry has been in a decline for a number of years, partly due to rising printing and paper costs (*South Africa Yearbook 2005/06*, 2005: 152; *South Africa Yearbook 2000/01*, 2001: 219). Magazine prices have soared, making magazines less affordable. This market should ideally help to encourage a culture of reading in the country. Some popular magazines need to be affordably priced so as to be within the reach of many readers.

Magazine publication has developed into niche publications for specific readership groups, including women's magazines, general interest titles, décor magazines, parenting, youth, male, motoring, lifestyle, sport and special interest. Magazines sold with the largest circulation during the latter half of 2004 were the *Huisgenoot*, *You*, *Sarie*, *TV Plus* and *AA Traveller* (*South Africa Yearbook 2005/06*, 2005: 154). The main publishers of magazines in South Africa are Johnnic Communications, Media24 and Caxton/CTP (*South Africa Yearbook 2005/06*, 2005: 154).

5.5.2.2 *Book publishing*

South Africa has the largest publishing industry in Africa and has the capacity to contribute to educational and cultural growth in Africa (Gray, 2004:3). This contribution is more likely to be in Sub-Saharan Africa, as publishing in this region tends to be Anglophone, while central Africa is more Francophone and North Africa Lusophone. Approximately 700 book publishers are currently reported to be active in Africa (Zell 2002). Van Rooyen (1994:6-7) described the situation with regard to book publishing in South Africa in 1994, stating:

South Africa has a strong and vibrant infrastructure when it comes to the publishing and distribution of books when compared to the rest of Africa. Compared to Europe and North America, however, the number of bookshops and publishers is tiny. This is so because the industry (with the exception of schoolbooks) mainly serves the small minority of affluent and educated people in major metropolitan areas. There can be no doubt that the great challenge facing the South Africa publishing industry is for it to expand its activities to the majority of South Africans who at the moment are not part of the book-buying public (Van Rooyen, 1994: 6-7).

Van Rooyen explains that the quality of publishing is as good as anywhere else in the world and considers the book trade in 1994 to have been on a par with Australia in 1984 and ahead of Canada and New Zealand (Van Rooyen 1994:10). The relatively strong indigenous publishing sector in South Africa, developed in the past under colonial rule and the previous apartheid government, served the interests of the white minority of the population. This has influenced the publishing of more Afrikaans literature as explained by Oliphant (2000: 117), while the publishing of other indigenous languages and South African English literature are still under-developed. Oliphant (2000: 117) describes the development of the South African literary landscape after the rise of the National Party and apartheid rule in 1948, stating that Afrikaans and its literature was supported by the government and the private sector, leading to the situation where Afrikaans publications and literatures outstripped all other languages' literature in the country. Berger (2000: 73) explains that it would be difficult to speak about a "mass media" during the period 1980 to 1990, as the media serviced white readers during this time. Despite the strict application of censorship at the time, opposition to the oppressive apartheid rule in the country was voiced by some, including some black writers and others, as explained below.

Black writing was discouraged during this period. The publications that were written by black South Africans in English or other languages were systematically repressed by the Government. Many of their publications were banned and writers were arrested or left the country in exile (Oliphant, 2000: 117).

In the course of the 1970s an alternative movement developed by writers opposed to apartheid. During this time a generation of writers opposed to apartheid in South Africa emerged. These writers included authors such as André Brink and Breyten Breytenbach, known as the "sestigers". The publications of the alternative movement were published by the independent press, or "alternative press", a social movement which developed its press in South Africa over a period of two decades (Berger, 2000: 73). Under the new, democratic government, the alternative press has ceased to exist due to the lack of funding from foreign anti-apartheid support groups.

Two major groups, CNA-Gallo and Nasionale Pers dominated the book trade in 1994. CNA-Gallo dominated the general retail trade through its control of the CNA and Exclusive Books. It also had a 50 per cent stake in Struik Publishers and a major stake in Heinemann. CNA is currently owned by Edcon. Another book giant, Nasionale Pers, owned seven publishing houses, namely Nasou, Via Afrika, Human and Rousseau, Tafelberg, Jonathan Ball Publishers, Kwela and J.L. van Schaik. It also owned the biggest academic book retail chain, Van Schaik, and the country's largest book club, Leserskring / Leisure Books. In 1994 it purchased HarperCollins S.A., a major importer and distributor of books in the country. There are also a number of independent booksellers such as Juta, Protea and Adams. The publishing company, De Jager-HAUM changed its name to Kagiso, and later bought by Maskew Millar Longman (Oliphant, 2000: 122-123). Perskor and Nasionale Pers have sought out partnerships with black empowerment investment companies Kagiso Trust Investments and Thebe Investments respectively in order to re-establish a secure position in the publishing sector. Duncan (2000: 52) also explains that changes in ownership of the print media have resulted in foreign ownership and black empowerment consortia taking ownership over significant sections of the media.

Most publishers in South Africa belong to the Publishers' Association of South Africa (PASA). 65 publishers were members of this association in 1995 (*Directory of Book Publishing in South Africa*, 2001). A survey, published in 2005 (Galloway, Bothma, du Plessis and Venter) of the publishing industry in South Africa, identified 54 holding companies whose core business includes local book publishing.

Book sales in South Africa have been declining over the past 30 years up to 2000, with fewer books being sold on average in 1994 than in 1984. Issues such as a small reading community, with a book-buying community of around 400, 000 people, few bookshops in the townships and rural areas where most black South Africans still live, and the perception that books are expensive, are affecting book trade in South Africa (Combrinck and Davey, 2000: 227).

Books are considered by many people as a luxury and many consumers cut back on their book buying rather than on other items such as food. The country's English-speaking middle classes traditionally formed the main sector of the book-buying population. However, the decline in living standards of this sector has also caused a decline in book selling. Poverty is

not only affecting book sales, but also reading, basic literacy, the level of education and learning in the country. READ Educational Trust (Ntshingila, 2006: 1) links poverty, the lack of resources and lack of a reading culture, especially in homes without any form of reading material, as reasons for the high levels of illiteracy in the country.

Another major obstacle in the book trade is the limited selling of books to the majority of black South Africans and the skewed book-selling structure in the country. Seeber (2000: 279) explains that access to published works is often difficult, partially due to the inadequate distribution infrastructures, small local markets, under-capitalisation and competition from multinational publishing houses:

In the developing country access to published works is often difficult even for the literate, since educational and public libraries are usually understocked and bookshops - proper bookshops rather than stationery shops or schoolbook depositories - are rarely found outside the more affluent parts of urban centres. Small wonder, then, that for the majority reading is largely a means to a particular end, that of passing examinations, rather than an activity worthwhile and enjoyable in its own right (Seeber, 2000: 279).

The bookshops are not located in the areas where books can be sold close to the homes of many black South Africans and, in addition, the type of books marketed may not be the kind of stock that would sell. Much will have to be done if this important and potentially large market is to be opened up to the local book trade (Van Rooyen 1994: 17).

Galloway (2005: 4) explains that it is difficult to assess whether the publishing industry in South Africa has been growing over the past decade, as a result of the lack of statistical data, due to factors such as many changes in the industry, company mergers and acquisitions, and the demise of the independent publishers (alternative press). According to Letshela and Lor (2002: 2) it is difficult to obtain reliable statistical information about Africa's book publishing output and even more difficult to determine with regard to electronic publishing.

In order to gain some insight into developments in the publishing industry since 2000, PASA commissioned a survey of the book industry in South Africa. The survey was conducted by Galloway, Bothma, du Plessis and Venter (2005: 26), based on information collected by means of a questionnaire. From this core list of 54 companies, 25 completed the

questionnaire, 26 did not complete it and three declined to participate. Data was obtained from the relevant 25 companies that completed questionnaires.

The survey aimed to construct six generic profiles of the South African book publishing industry: turnover, production, author, royalty, employment, and ownership. Several security and quality control measures ensure the confidentiality and integrity of the information transfer process. The analysis, however, rests on "... the assumed accuracy of the data received from the individual participating companies.." (Galloway, Bothma, du Plessis and Venter, 2005). The most important trend observed from the survey, is the marked increase in the turnover, number of authors and title production in the comparison of 2002 and 2003 (Table 5.4). This finding is in contrast with the finding of Combrinck and Davey (2000: 227), mentioned earlier, who found a decline in book sales in the period prior to 2000.

Table 5.4 Number of titles published in 2002 and 2003

Comparison with Snapshot 2002

	2002	2003	Percentage growth
NUMBER OF QUESTIONNAIRES USED	Core list = 64 Questionnaires used = 32 [17 Large+15 Small]	Core list = 54 Questionnaires used = 24 [14 Large +10 Small]	
PRODUCTION PROFILE			
First and revised editions	2,950	5,061	71.6%
Reprints	4,369	4,819	10.3%
Total	7,319	9,880	35%

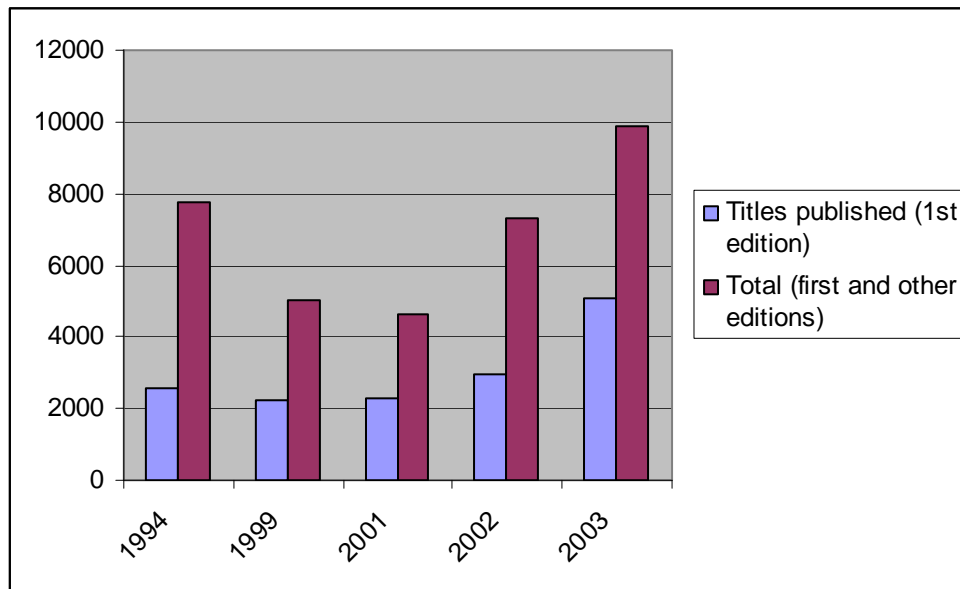
(Source: Galloway, Bothma, du Plessis and Venter, 2005: 26).

The findings of the above survey regarding the number of titles published in 2002 and 2003 were included in the Figure 5.2 below, with the number of titles published in 1994, 1999 and 2001, according to the ISBN numbers allocated to publishers for these years (Table 5.4).

The book publishers can be divided into the educational book-publishing sector and general publishing sector. The comparison of the publications indicate a decline in publishing output over the period, covering educational book publishing, general book publishing and new titles

in general publishing for the period 1994 to 2001, was followed by growth in the sector over the years 2002 to 2003, according to the survey conducted by Galloway, Bothma, du Plessis and Venter (2005) as shown in Figure 5.2, based on the figures from Table 5.5. These categories of publishers, educational and general, will be discussed below for the period 1994 to 2001.

Figure 5.2 Publishing trends for number of titles for 1994 to 2003



(Source: Based on the publishing figures from Galloway, Bothma, du Plessis and Venter (2005) and ISBN statistics supplied by the National Library of South Africa for the years 1994, 1999 and 2001)

Table 5.5 Number of titles (1st edition) and total number of titles for 1994 to 2003

	1994	1999	2001	2002	2003
Titles published (1st edition)	2549	2260	2287	2950	5061
Total (first and other editions)	7745	5010	4622	7319	9880

(Source: Based on the publishing figures from Galloway, Bothma, du Plessis and Venter (2005) and ISBN statistics supplied by the National Library of South Africa for the years 1994, 1999 and 2001).

More recent reliable figures of ISBN numbers were not obtained at the time of this research as a result of the crisis in school textbook publishing and the requirement for publishers to

submit books with ISBN numbers for tenders to the Department of Education. The books that are not accepted by the Department of Education are never published and this has inflated the number of ISBN numbers assigned versus the actual number of books published over the years, especially since 2002 onwards and the need for outcomes based education textbooks to be written for the schools (Kromberg, 2000: 259).

As shown in the paragraphs below, the comparison of the publications indicate a decline in publishing output over the period, covering educational book publishing, general book publishing and new titles in general publishing for the period 1994 to 2001.

5.5.2.1.1 Educational book publishing, 1994 - 2001

Educational publishing forms the strongest market in the publishing industry. In 1996 the educational publishing dispensation consisted of: two paper manufacturers, about ten book printers, about 50 educational publishers, 195 book sellers, and approximately 25 000 schools (McCallum, 1997: 13). However, from the 1990s onwards, the publishing industry has undergone major changes in ownership and government spending on textbooks has reduced drastically, to the detriment of the publishing houses in the country, resulting in many retrenchments. Kromberg (2000: 259) explains that the textbook market has since become a “high-risk trading environment in which only the lucky few” can survive.

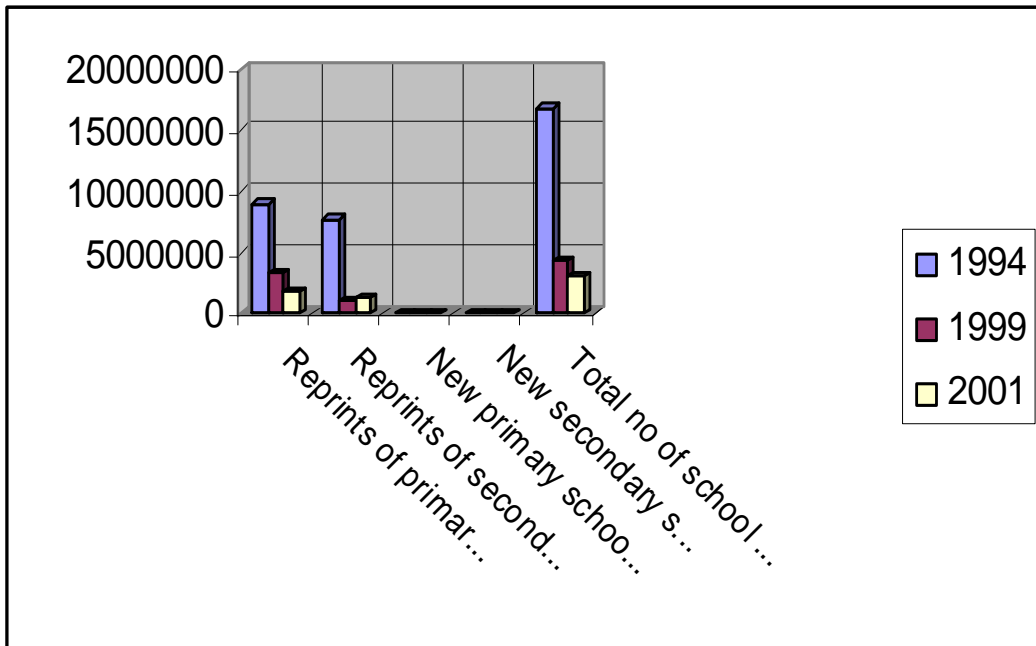
Table 5.6 Educational book publishing: 1994 - 2001

	1994	1999	2001
Reprints - primary school books	9,048,000	3,287,271	1,802,447
Reprints - secondary school books	7,749,728	1,078,045	1,280,630
New primary school books	173	283	153
New secondary school books	99	23	161
Total no of school books	16,797,728	4,365,316	3,083,077

As shown in Fig. 5.3, the growth in the number of educational books published declined over the period with the changes in education under the new government of 1996. Educational publishing was influenced considerably as shown in the fluctuation in the publishing figures for the period 1994 to 2001 due to changes in the educational book-publishing market during

this period as formal education in the country was moved from the former 17 different education departments to one centralised education department (Table 5.6; Figure 5.3).

Figure 5.3 Educational book publishing: 1994 - 2001 based on ISBN numbers registered for publication



Evans (2000: 212) explains that the book industry is not seen as a strategic industry in South Africa and the Government has no formal policy framework for the production and delivery of affordable educational material such as textbooks. Thus, despite the need to address issues such as literacy and education in South Africa, little is being done to address the need to develop learning materials for classroom learning and libraries in South Africa.

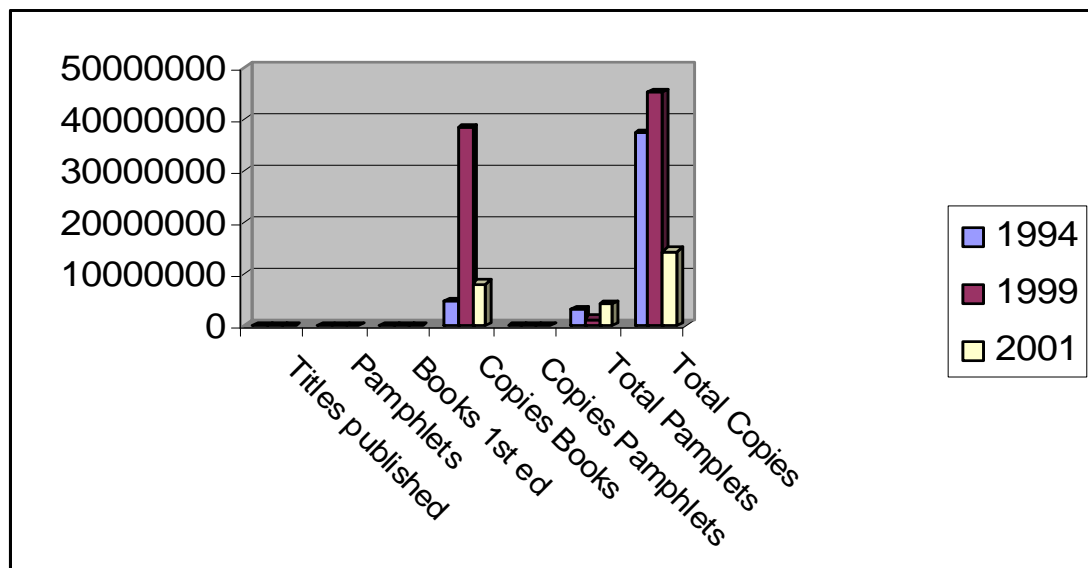
5.5.2.1.2 Book publishing, 1994 - 2001

As explained earlier, book sales in South Africa were declining over the last three decades prior to 2000, with fewer books being sold on average in 1994 than in 1984 (Van Rooyen 1994). Steinberg also observed a decline in the number of books sold by local booksellers by comparing the copies sold in the 1980s and the early 2000s (Steinberg, 2001). Statistical data of the total number of new titles printed were used to establish current trends in the South African publishing industry. The data includes statistics from 1994, 1999 and 2001, covering a period of seven years (Table 5.7; Figure 5.4).

Table 5.7 Publishing statistics: 1994, 1999, 2001

	1994	1999	2001
Titles published (books & pamphlets)	7,754	5,010	4,622
Titles of pamphlets published	2,132	1,708	4,622
Titles of new books (1 st ed) published	2,549	2,260	2,287
Total number of copies of books	4,899,664	38,276,672	8,119,870
Total number of pamphlets published	1,600	1,300	1,158
Total number of copies of pamphlets	3,073,311	1,347,845	4,016,526
Total copies (books & pamphlets)	37,565,109	45,407,851	14,489,921

The transition in the publishing institutions during the 1990s included the development of a democratic environment leading to the disintegration of the alternative publishing sector in South Africa. Many of the alternative publishing houses were bought out by local and multi-national publishers. During this period there is a marked decline in the total number of books published in the years 1994 to 2001 as shown in Figure 5.5.

Figure 5.4 South African Publishing Statistics: 1994, 1999, 2001

Oliphant (2000: 120) explains the important role of the publishing industry. With the new democratic environment Oliphant (2000: 120) points out that the quality of the material produced by writers has a direct impact on their market value and the value offered to readers. It is therefore necessary to invest in the education and training of writers in order to benefit the publishing industry in the country. Another important point made by Oliphant (2000: 124)

is the need for a literate society with “... a hunger for ideas and literary-based aesthetic experiences”. He emphasises the need for co-operation with educational institutions dedicated to dealing with the problem of illiteracy and the weak reading culture in South Africa. The publishing industry is the provider of literacy and reading material for addressing programmes addressing the problem of illiteracy and promotion of reading in the country.

5.5.2.1.3 *New titles published, 1994 - 2001*

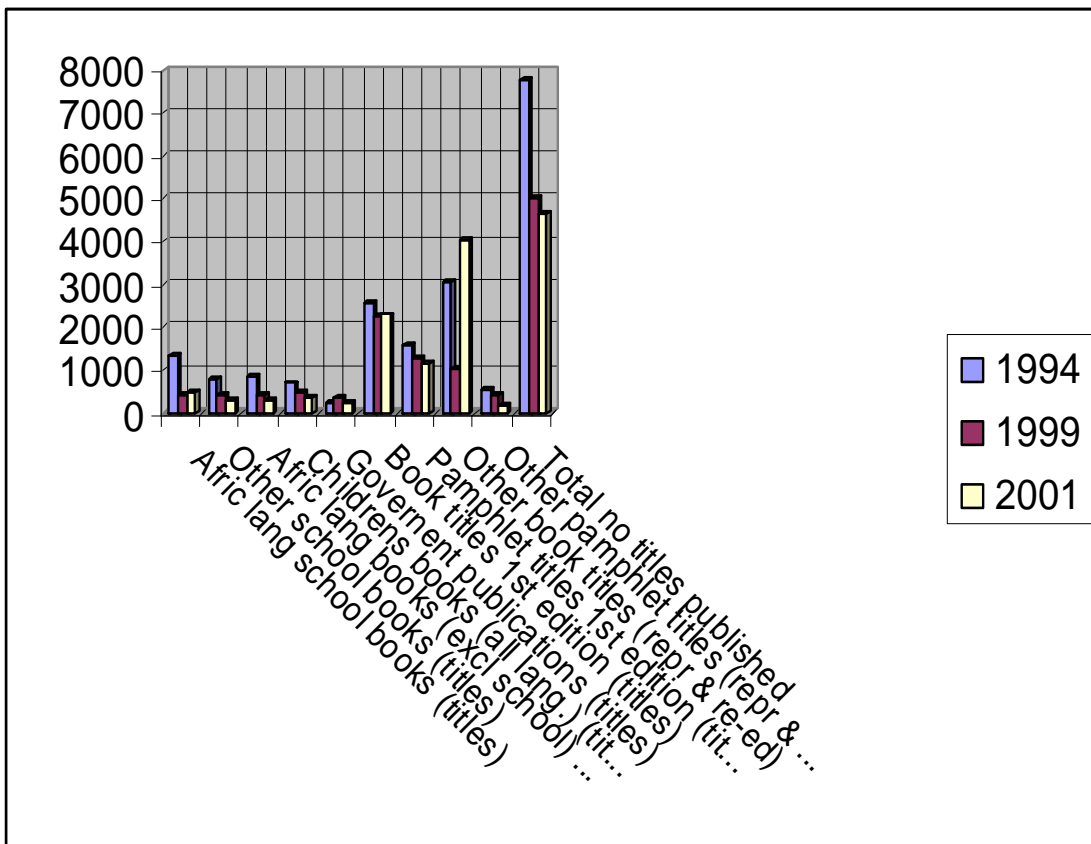
A comparison of the number of new titles of books published over the period 1994, 1999 and 2001 indicates that comparatively few books were published in the nine official African languages of South Africa (Table 5.8; Figure 5.5).

Table 5.8 New titles in indigenous languages published, 1994, 1999, 2001

	1994	1999	2001
Afric lang school books (titles)	1,349	442	462
Other school books (titles)	777	421	299
Afric lang books (excl school) (titles)	830	402	296
Childrens books (all lang.) (titles)	695	502	371
Government publications (titles)	231	368	211
Book titles 1st edition (titles)	2,549	2,260	2,287
Pamphlet titles 1st edition (titles)	1,600	1,300	1,158
Other book titles (repr & re-ed)	3,073	1,042	4,002
Other pamphlet titles (repr & re-ed)	532	408	160
Total no titles published	7,745	5,010	4,622

Fig. 5.5 is a summary of the findings for the period 1994 to 2001, showing a general decline in the number of titles published over the period 1994 to 2001. A more positive trend was found in the survey mentioned earlier for the period 2002 to 2003, which shows growth in the number of titles published (Figure 5.2), indicating growth in the sector at the time.

Figure 5.5 New titles in indigenous languages published, 1994, 1999, 2001 - Summary



Some of the reasons for the limited number of books published in South Africa in the indigenous African languages are due to past policies and resulting influences. Other reasons include the insufficient number of authors, cutbacks in library purchases due to limited budgets, and the lack of a reading and book-purchasing culture (Fredericks and Mvunelo, 2003: 137, 138), and illiteracy (Gordimer, 2004: 2). Much work will have to be done to develop publishing in African languages in South Africa and to promote literacy and reading.

Oliphant (2000: 125) explains that there are many challenges ahead to promote and popularize literature in South Africa. He points out that the poor visibility of South African literature in the popular media is providing marginal coverage of books and literature. Radio, television and other media need to play a role in bringing South African writing and literature to the attention of the public and make them aware of what is available to read.

5.5.3 Library Services

By mid-2003 South Africa's library sector had more than 11,373 libraries (*South Africa Yearbook, 2005/06*, 2005: 129). Different groups or types of library and information agencies are operational in South Africa. It is possible to differentiate between approximately eight different types of library with specific, allocated major functions, serving different groups of users. Past socio-economic developments in the country are reflected in the information service provided by the different library and information agencies in the country.

During the 1990s libraries in South Africa experienced escalating costs and declining resources (Van Helden and Lor, 2002: 1). The sector experienced financial cutbacks, staff reductions and other changes linked to information technology development and global trends. Poor funding affects the community libraries situated in poorer areas in the country in particular as explained in Par. 5.5.3.3.

There are different types of libraries fulfilling different functions within the information services sector, ultimately aimed to make information accessible to the population(s) served. Eight types of LIS agencies are currently identifiable in South Africa. The eight types are listed below, followed by a brief description of the function and role of each type within the information services sector. (Note that public and provincial libraries are discussed under one heading (Par. 5.5.3.3))

5.5.3.1 *National Library*

The most important library is the National Library of South Africa (NLSA), and was formed in 1999 through the NLSA Act (Act 92 of 1998) with the amalgamation of the State Library in Pretoria and the South African Library in Cape Town (*South Africa Yearbook, 2005/06*, 2005: 130). The National Library is the custodian of the publications published in or on South Africa and preserves these documents as part of the country's national heritage, and has developed over a period of more than 150 years (*South Africa Yearbook, 2005/06*, 2005: 130). The NLSA is responsible for building up a complete collection of documents emanating from South Africa, mainly by legal deposit. The NLSA also compiles a national bibliography of

South African publications. Galloway (2005) reports that there is a shortage of cataloguing skills in the country, influencing the services of the NSLA:

... After 2000 the compilation of the NLSA has been seriously hampered by a shortage of cataloguing expertise and problems linked to the implementation of a new database structure (Galloway, 2005: 3).

The NLSA also promotes access to the holdings of other libraries through interlending. The interlending resource sharing has about 700 member libraries in seven SADC countries and is run by the Pretoria Division of the NSLA (Lor, 2000: 11).

The National Library plays the major role in the management of the legal deposit of publications under the *Legal Deposit Act* (1997) under which a specified number of copies of all material (electronic and otherwise) published in South Africa or on South Africa, must to be sent to the NLSA. This material is managed as part of the cultural heritage of the country.

5.5.3.2 *Legal Deposit Libraries*

The five legal deposit libraries in South Africa are the following:

- X NLSA (Pretoria Division) serves as the national bibliographic agency;
- X NLSA (Cape Town Division) serves as the national preservation agency;
- X The Library of Parliament (Cape Town) serves the information needs of parliamentarians, politicians and legislators;
- X The Natal Society Library (Msunduzi Municipal Library) (Pietermaritzburg) serves as the legal deposit library for the KwaZulu-Natal province;
- o Mangaung Library Services serves as the legal deposit library for the Free State province (*South Africa Yearbook, 2005/06: 131*).

Letshela and Lor (2002) explain legal deposit legislation has been updated to include various media, including electronic publications. At the time they indicated that:

... In South Africa legal deposit legislation has been in existence in one form or another since 1842. In 1997 the legislation was thoroughly revised, building on the new Namibian Legislation, and the Legal Deposit Act (no. 54 of 1997) was passed...

Initially regulations were promulgated for printed materials, certain audiovisual material and static electronic documents such as CD-ROMs. These were handled in a similar manner as books.. Other publishers who are aware of the new act voluntarily send in copies. Currently [in 2002] we receive about 22 electronic journals on CD-ROM. As far as books are concerned, in 2001 we received 14 titles on CD-ROM (Letshela and Lor, 2002: 2).

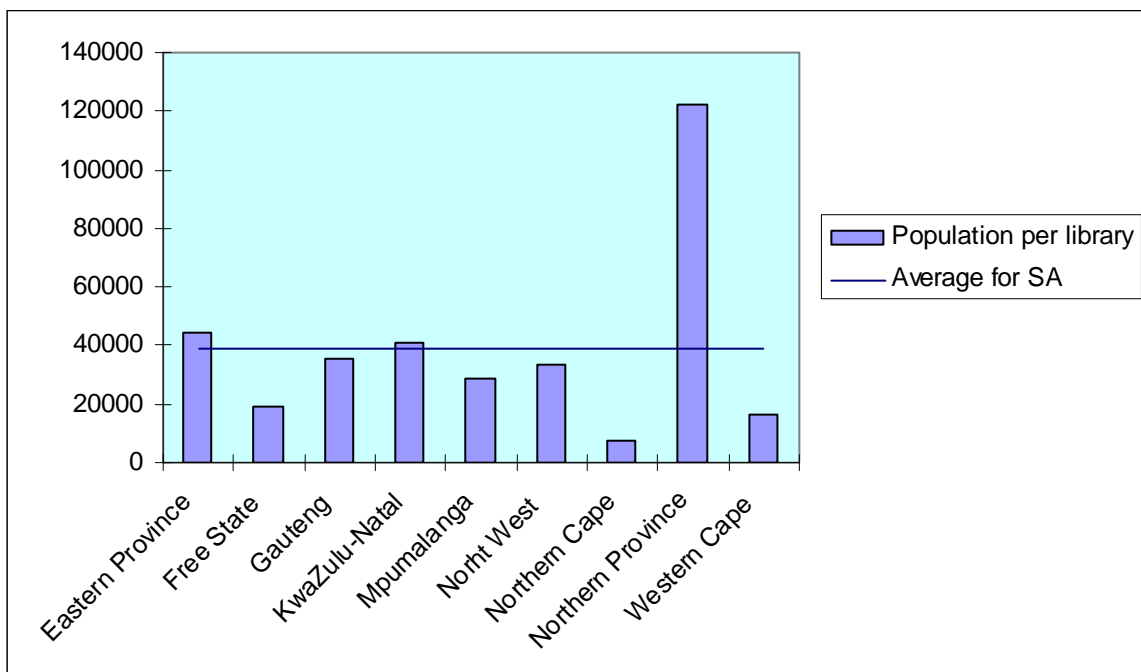
Difficulties are experienced by the legal deposit libraries in the country. Par. 4.3.2 explained the current legal deposit system in South Africa lacks a clear framework leading to a number of difficulties regarding access to government publications and compliance with the *Legal Deposit Act* from the government departments, making it difficult for librarians to obtain copies of the government publications and for the public to access the materials. Sales (2006: 4) points out that Legal Deposit libraries have not been receiving all government publications and spot searches in the National Library catalogue revealed that few departmental publications published after 2003 have been catalogued. This means that it is very difficult to have access to or have any record of what has been published nationally by these departments.

5.5.3.3 *Public/Community Libraries and Provincial Libraries*

The nine provincial library authorities provide, in partnership with local governments, extensive public library services. Public libraries serve a large number of people and increasingly render community and general information services, and provide study material and facilities for school and tertiary students (*South Africa Yearbook, 2005/06: 130*). Currently, approximately 1,800 public libraries in South Africa have to provide services to a total population of about 44,8 million, which translates into one library service for every 25,000 people (*South Africa Yearbook, 2005/06: 130*). Many libraries have been restructured to serve a wider area and more users. For instance, in the Tshwane Metropolitan Area (Pretoria), the capital city in South Africa, the existing public library was amalgamated with the library services in two townships, Mamelodi and Atteridgeville, in 1994. This increased the population served by 110 per cent but no additional funding was provided to operate the additional centres. The Gauteng Provincial Government provides library material only to previously government-affiliated libraries in the townships, and not for the Pretoria Community library (Hansen and Van der Merwe, 1999: 14).

Since 1994 the public libraries have become known as community libraries and information services (comLIS). Currently the average number of people served by one community library in South Africa is 38,690 (Fig. 5.6). This figure was calculated in a report published in 2002. The 2002 report on Public and Community Libraries (Van Helden and Lor) in South Africa, used geographical data to map the individual community libraries and linked this data to the country's population census data of 1996 to determine the size of population served by these libraries (Figure 5.7, based on Table 5.9). The report revealed several shortcomings in the supply and availability of library services to various communities in the country. The survey of the community libraries made it possible to evaluate the provision of library services in relation to the population distribution, population density, mean household income, unemployment and age.

Figure 5.6 Population per library in each province and average for South Africa



(Source: Van Helden and Lor, 2002: 8)

Table 5.9 Number of libraries related to the population of provinces

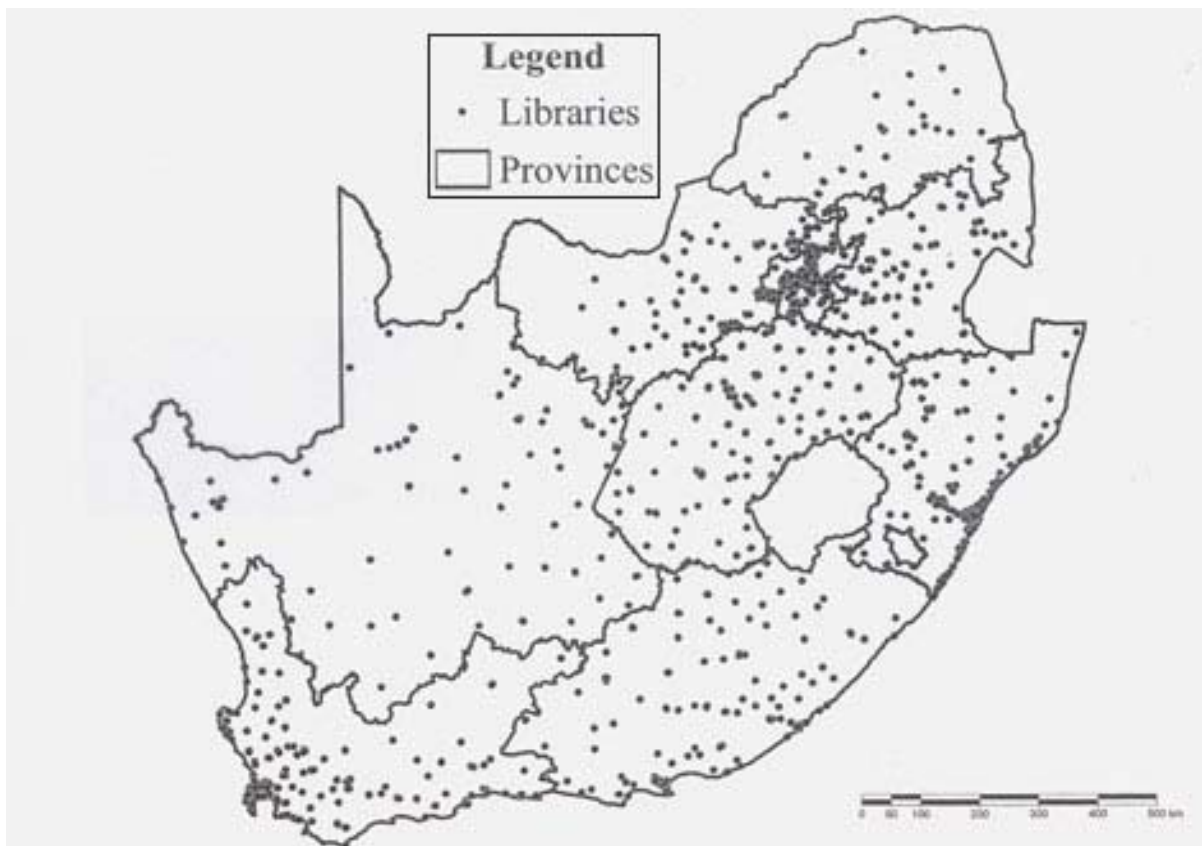
Province	Population	% of Total Population	Number of Libraries	% of Total Number of Libraries
Eastern Province	6296203	16.1	141	11.3
Free State	2634393	6.7	136	10.9
Gauteng	7554455	19.3	214	17.1
KwaZulu-Natal	8404311	21.5	206	16.5
Mpumalanga	2580605	6.6	90	7.2
North West	2828903	7.2	85	6.8
Northern Cape	788534	2	101	8.1
Northern Province (Limpopo)	4027354	10.3	33	2.6
Western Cape	3957822	10.1	243	19.5
Total	39072580	99.8	1249	100

(Source: Van Helden and Lor, 2002: 8)

The survey found, amongst others, some areas, such as the former Transkei and areas in the Northern Province had a relatively high population density, lower mean household income and higher unemployment rate. The report indicated that these are areas where “... in principle, libraries should be situated to support schooling, adult education, literacy work and the general well-being of communities in which many people do not have the resources to acquire reading matter and information...” (Van Helden and Lor, 2002: 9). The survey also identified areas with many children of pre-school and school-going age where libraries in principle should be situated to promote a love of reading, support acquisition of literacy and meet educational and recreational needs at pre-school and school levels. The report identified such areas in the Eastern Cape, Northwest Province, Limpopo Province (formerly the Northern Province) and Kwa-Zulu Natal (Van Helden and Lor, 2002: 9).

Read Educational Trust’s national director, Ms Cynthia Hugo (Ntshingila, 2006: 1) stressed the need for reading material for the promotion of a culture of reading in the country:

With only 27% of South African schools offering library facilities, and over half of our pupils coming from homes without any form of reading material, the distribution of books makes an enormous impact (Ms Cynthia Hugo, as quoted by Ntshingila, 2006: 1).

Figure 5.7 Distribution of community libraries

(Source: Van Helden and Lor, 2002)

In terms of the number of books held, the public libraries hold almost three quarters of the national book stock. These libraries not only serve the public at large, but are also well used by students who make “...heavy demands on public library services” (Witbooi, 1997: 31).

Public libraries are currently positioned between national, regional and local structures resulting in uncertainty concerning the roles of the provincial and local governments. Van Helden and Lor (2002) report on the problems faced by community libraries in South Africa from a governance point of view and the lack of a clear mandate that funding should come from municipalities or the provincial government:

... In terms of the South African Constitution and subsequent legislation, the provision of public/community libraries is a provincial matter. At the time of writing there is some uncertainty concerning the respective roles of provincial and local governments. (Van Helden and Lor, 2002: 1).

These libraries do not receive adequate funding from the government and have to prove that they are of value to the communities served, in order to show that they provide a necessary service to the community and deserve to be funded. Hansen and Van der Merwe (1999: 12) explain the two-fold problem of the current situation of the public libraries regarding who should be funding the community libraries and the high costs of Internet connectivity as a result of the high fees charged by Telkom SA for the rental of its services. Hansen and Van der Merwe explain the two problems and their impact of the under funding on the services provided, overcrowding, and high costs of connectivity:

...at a time when communities are crying out for information and education, local authorities find themselves in the position of not being able to render these basic services, because of a shortage of funds. A serious lack of library facilities and resources results in the overcrowding of existing services and the over-utilisation of material and personnel. The exorbitant costs of linking libraries and information services to the information network and computerising in-house services, as well as the high fees levied by Telkom SA for the rental of datalines, prevent libraries from rendering quick, up-to-date, cost-effective services (Hansen and Van der Merwe, 1999: 12).

The inadequate funding is forcing many of the public and school libraries to offer limited services or even close down (Tise, 2000: 57).

As mentioned earlier in Par. 5.5.3, the past socio-economic developments in the country have influenced the community library services provided in the country. These developments have resulted in the provision of limited or no library services to many poor communities, especially in the rural poor areas, while the more affluent sector of the population in the more developed areas of the country tend to be provided with more and better services. This situation is also linked to the financial support provided by local authorities, which is based on funds obtained from the rates and taxes paid by the citizens, which could be summed up in the following two equations (Nel and Humphreys as quoted by Hagg, 2000: 14):

Rural poor = low taxes = poor local authority = limited funds for library services = limited ability to develop, fund and run a library information service;
 Urban affluent = high taxes = more rates collected by local authority = more funds available to develop, fund and run a library and information service centre.

A third problem faced by community libraries is the shortage in trained librarians in the country. This shortage has resulted in the appointment of untrained staff members lacking in the necessary skills to provide high quality information services to their users. It is often not the lack of trained staff but that local councils see library work as being of a clerical nature and do not see the need for appointing qualified staff. Qualified staff is also more expensive. However, because many community libraries are run by unqualified staff they are unable to provide a professional and satisfactory service to the client. This leads to further cuts in spending on libraries because the library is perceived as not offering a worthwhile service to the community. There are many letters and articles in the newspapers on this issue.

5.5.3.4 *Academic Libraries*

In 1990 there were 88 university, college and technikon libraries in South Africa. These libraries support the study, teaching and research functions of these academic institutions. These institutes have been restructured and re-grouped to reduce the number of academic institutes in the country. Their libraries have been restructured within the new academic institutions.

Thomas and Fourie (2006: 432) explain the changes in the academic libraries in the period 1992 to 1998 leading to the establishment of five formal academic library consortia in South Africa. Each consortium strives to meet with the needs of its region and the needs of the academics, students, and researchers. Each of the library consortia is a committee of the institutional parent body and as such the library consortia have no legal status. The five consortia are the following:

- Cape Library Consortium (CALICO), represents four academic library services in the Western Cape Province, namely University of Cape Town Libraries, University of Stellenbosch Libraries, and the University of the Western Cape Libraries;
- South Eastern Alliance of Library Systems (SEALS), serving four campuses, namely the University of Zululand, Durban University of Technology, Mangosutho Technikon, and the University of KwaZulu-Natal in the Eastern Cape Province and KwaZulu-Natal;

- Eastern Seaboard Association of Libraries (esAL), serving the libraries attached to the following institutions: Walter Sisulu University of Technology and Science, University of Fort Hare, Rhodes University, Nelson Mandela Metropolitan University;
- Gauteng and Environs Library Consortium (GAELIC), incorporating the provinces of Gauteng, North West and Limpopo, serving 9 South African institutional members plus the University of Namibia Library Services. The institutions served includes the North-West University, Tshwane University of Technology, University of Johannesburg, University of Limpopo, University of Pretoria, University of South Africa, University of the Witwatersrand, Johannesburg, University of Venda, Vaal University of Technology, and University of Namibia Library.
- Free State Library and Information Consortium (FRELICO), in Free State Province serving the University of the Free State, Central University of Technology, and SASOL Library (Thomas and Fourie, 2006: 432).

The main achievements of the consortia include the facilitation of the use of common library systems, resource sharing and improving access to electronic resources, as well as the implementation of programmes such as information literacy skills and training (Thomas and Fourie, 2006: 436). These libraries are mostly not open to the public for use.

5.5.3.5 *Special Libraries*

In 1990 there were 456 special libraries of various types. More recent figures regarding the number of special libraries were not available when this study was conducted. Most of these libraries are maintained by the private sector, such as mining houses, financial institutions, law firms and private companies and consulting firms. Special libraries support the research and development tasks of their institutions. Some of these institutions are parastatal organisations, such as the Council for Scientific and Industrial Research (CSIR), Human Sciences Research Council (HSRC), museums and art galleries.

The research council libraries in South Africa formed the South African National Research Institute Consortium (SANRIC) in 2003. SANRIC membership are the libraries of the CSIR, HSRC, South African Bureau of Standards (SABS), Council for Geoscience (CGS), Medical

Research Council (MRC), Council for Mineral Technology (Mintek), the National Research Foundation (FRD), and Agricultural Research Council (ARC). The consortium enables:

... collective bargaining and coordinated inter-institutional efforts in a time of universally diminishing library and information service budgets and therefore support the need to pool resources and maximise these scarce resources. The vision of this consortium is to create a national body that will have the information needs of the scientific researcher as its guiding light (*SANRIC Annual Review January 2003 - June 2004*: 2).

The council libraries offer a highly specialised service and most of the information is usually not available to the public.

5.5.3.6 Government Libraries

In 1990 there were 91 government libraries. More recent statistics regarding the number of government libraries were not found during the time of this study. These libraries support the technical and professional duties of their departments. The number of government libraries has changed as the government departments have changed under the new democratic government of 1994. As explained in Par. 4.3.2, there are now nine provincial governments, each with one or more government libraries, serving the Legislatures of Gauteng, Mpumalanga, Limpopo, North West, Western Cape, Eastern Cape, KwaZulu-Natal, Free State and the Northern Cape. Sales (2006: 5) explains that each government department has its own library section, but its role differs from one department to another. These libraries are not open to the public.

The official government publications are no longer printed by the Government Printer (Par. 4.3.2). The publications that were previously supplied in the *Government Gazette* by subscription, used to include nearly all the publications emanating from government departments (Sales, 2006: 5). The *Government Gazette*, the alphabetical list of White Paper series, and the publication of the Parliamentary Debates (Hansard) have all been discontinued. According to Sales (2006: 5):

...In the last quarter of 2005, the Government Printer ceased distribution of all RPs and PRs. All annual reports and auditor-general reports must now be acquired directly

from the relevant government departments. The Government Printer only handles subscriptions for 6 of the 9 Provincial Gazettes, the South African Gazettes and Bills; the announcements, tablings, and committee reports of Parliament, and the Patent Journal; all other distribution has been decentralized.

Sales (2006: 6) explains that the Government Printer continues to assign RP numbers to departmental publications, and these publications are also assigned ISSN/ISBN numbers but the National Library. However the RP list is not accessible to the public and the *South African National Library* is no longer published, and only available via the National Library online catalogue (Saul, 2005: 6).

These government departments distribute vast numbers of publications to Members of Parliament (MPs) and government officials, and to members of the public at *imbizos* and media functions. However, the limited print runs of these publications mean that copies of the publications are not made available for libraries. Libraries are then unable to supply these to the public when they are requested (Sales, 2006: 7). Thus, despite the requirements set out in the *Promotion of Access to Information Act* to provide for the right to access to information, the “information officers” do not comply with the terms of the Act:

... One might think that the *Promotion of Access to Information Act*, which gives effect to the Constitutional right of access to information, would help libraries in obtaining copies of these publications. However, the “information officers” in terms of the Act are the Directors-General of the national and provincial departments, the municipal managers of local authorities and the chief executive officers of other public bodies, and while these officers are responsible for giving access to particular records in terms of the Act, they are not charged with the distribution of the publications (Sales, 2006: 7-8).

Sales (2006: 9) points out that the lack of completeness of the publications needs to be addressed. He recommends that the Government Communication and Information System (GCIS) (Par. 4.3.2) and the National Library should work together to find a solution to this problem.

5.5.3.7 *School Libraries*

In South Africa it is currently accepted that each school should have its own school library that should be stocked with a “relevant and adequate collection of materials ... staffed by a trained librarian” (*South Africa Yearbook, 2005/06, 2005: 129*). However, not all schools have school libraries. Most schools in townships have no library facilities (Hansen and Van der Merwe 1999: 13) and only ten per cent of secondary schools have school libraries (*South Africa Yearbook, 2005/06, 2005: 129*). Vermeulen (1997: 36) criticises the situation, stating:

South African departments of education seem to have been paying mainly lip service to modern educational principles. School libraries ... are either lacking in schools, under-achieving, or in decline (Vermeulen, 1997: 36).

In the absence of school libraries, public libraries also serve to support schools by providing information to scholars and teachers.

5.6 COMMUNICATION TECHNOLOGY (TELEVISION SETS AND RADIOS)

According to the SAITIS Baseline Studies (2000: 8), South Africa’s telecommunications sector is the largest in Africa. This includes the number of fixed lines, number of cellular subscribers, data services users, financial revenues and investment, technological capability and local equipment design and manufacturing capabilities. The following figures are available from the Center for Public Integrity (2004).

Table 5.10 Information technology in South Africa in 2005

Information/Technology	Facts
<i>Radio:</i>	
Radios (per 1,000 people)	338
<i>Telephone:</i>	
Telephone mainlines (per 1,000 people)	112
Mobile phones (per 1,000 people)	252
<i>Television:</i>	
Television sets (per 1,000 people)	152
Television broadcast stations	Three stations controlled by the South African Broadcasting Corporation and one private station.

(Source: Center for Public Integrity, 2005).

Reference was made to the fourth category (information infrastructure) within the information sector in Par. 5.2.4 and is mentioned briefly in the section below.

5.7 INFORMATION TECHNOLOGY SECTOR

The major groups of players in the information technology sector in South Africa fall into the two following categories:

- (i) Companies listed on the Johannesburg Stock Exchange (JSE), who largely import, market and distribute products delivered from Europe, North America, and the Far East, and provide a variety of services to the South African market; or subsidiaries of multinationals such as IBM that operate in a similar fashion;
- (ii) State-owned enterprises such as Telkom (SAITIS Baseline Studies, 2000: 7).

A breakdown of the information technology companies listed on the JSE indicates that they represent three main sectors in the industry, namely, electronics and electrical goods; information technology; and telecommunications (SAITIS Baseline Studies 2000: 7). As explained earlier (Par. 5.2.4): the decline in growth in the number of fixed line subscribers,

could be due to the failure of the regulator to ensure a change in the outcome of the efforts of Telkom, Telkom has also not taken measures to ensure that they retained the subscribers to their services, and ICASA has failed to ensure the setting of affordable Telkom service subscription tariffs. The delay in growth in the country's fixed-line network is not helping to overcome the country's digital divide.

The State Information Technology Agency (SITA) was formed in 1999 to manage the government's Information Technology (IT) services. Its most important functions are: to procure State IT equipment and software; keeping an inventory of existing IT applications; and accessing and coordinating government's IT infrastructure. SITA came into existence on 29 January 1999, by Act of Parliament. According to the Act, it is to provide IT-related services exclusively to the Public Services (SAITIS Baseline Studies, 2000: 10). Reportedly SITA has since addressed the need for the various governmental departments' ICT systems and networks to be integrated to allow them to communicate on one central Government Common Control Network (GCCN) by building a standards-based interoperable network (Nortel Networks, 2007). The Nortel Networks Passport 7400 Multi-service Switch was selected for the Asynchronous Transfer Mode (ATM) backbone network. According to the company, Nortel Networks (2007), the Nortel Networks Shasta 5000 Broadband Service Node (BSN) chosen for the service layer of the GCCN provides "virtual private networks (VPNs), traffic management and policing, quality of service (QoS), firewall and security services, and network address translation (NAT) from within a single device for inter-VPN connectivity" (Nortel Networks, 2007).

5.8 CONCLUSIONS

This chapter reviewed developments regarding government information policy and the information industry's role in providing access to information in South Africa, especially in the period since 1996 onwards. Access to information is addressed in various national information-related policies regulating of the life cycle of information in the country. Past and current developments influence access to and the flow of information in South Africa, particularly issues relating to literacy, education, poverty and the lack of a culture of reading. Past inequalities are continuing to influence access to information, despite Government rhetoric to provide information services to all, including many references to the development

of an information society. As indicated in the chapter, there is a need to promote local publishing, improve access to information and address the need for information literacy training in the country.

The role of the mass media was explained, namely to inform people about their environment, to link different parts of the society, and to transmit social values and norms. These functions are of particular importance to South Africa, as it is struggling to find a new identity and develop economically and socially.

Not enough media are available in South Africa and the media is consumed by the minority. Part of the reason for this is the country's lack of a reading culture. Furthermore, public participation in the media is still low, despite changes in the media since 1996. There is also a need to address the difficulties among the previously disadvantaged regarding access to information and levels of education as a result of past skewed developments.

The media have shown growth, particularly within radio broadcasting, but much will have to be done to move South Africa forward towards the development of an information society. Media trends in South Africa indicate that the daily news and information accessed by the mass media such as radio, television and also the information content of the newspaper press are growth areas. Information media concerned with the long-term memory of the country, namely the book industry, showed levels of decline in the 1990s but more recent trends are indicative of growth in publishing in the country. Publishing in the nine African languages may also be experiencing growth with current government support. The library sector is still poorly funded limiting book acquisitions and staffing. Community libraries are also not available in some of the poorer areas and areas with high unemployment rates.

Since 1996, Government has drastically reduced funding for the development of textbooks. This was a crucial time for the development of education in the country with the introduction of outcomes based education and new textbooks were urgently needed to help address the poor education provided to a large sector of the population under the previous apartheid government. Information is not valued in South Africa for development and education, with many schools still without school libraries, trained school librarians and difficulties regarding the production and distribution of new textbooks to schools. A renewed emphasis needs to be

placed on the roles of educators, need for access to good quality reading and teaching materials, and libraries as they are as essential in the current socio-economic and cultural development of the country.

The current situation in South Africa regarding national information-related issues indicates shortcomings with regard to issues such as:

- Social development, access to information and its availability, especially to the poorer communities and in the rural areas, linked to education and literacy levels and the lack of a culture of reading;
- Political development that indicates shortcomings regarding the value attached to information for development;
- Shortcomings for economic development due to constraints linked to access to affordable telecommunication costs.

Chapter six reviews national information policy and the influences of globalisation on South Africa's information policy. The influences of globalisation are reviewed in the context of international and historical trends in the development of national information policy.

Chapter seven provides a summary of the findings of the study and concludes the research.

CHAPTER SIX

NATIONAL INFORMATION POLICY AND GLOBALISATION

6.1 INTRODUCTION

The previous chapter reviewed developments regarding access to information in the public domain in South Africa provided by the mass media. The review focused on the flow of and access to information in mass media and in the public domain in post-apartheid South Africa mainly from 1994 onwards. During this period government policy introduced three major changes: it moved the country from apartheid rule to a post-colonial order, from authoritarianism to democracy and from a domestically-orientated economy to a globally-integrated one (Daniel, 2005: 172). The chapter found, amongst others, that information is not valued for development in South Africa.

Chapter one (Par. 1.1) referred to global information-related policy influences (also referred to more specifically in chapter three, Par. 3.4 and Par 3.5) and in South Africa. This chapter provides background to, and an overview of, global information-related policy conceptualisations (as referred to in Par. 3.5), and global economic, social and cultural, political and organisational influences relevant to these policy developments. This background introduces the situational analysis of information policy and the information-related issues relevant to information policy. The aim of this chapter is to present an overview of global influences regarding national information policy development, with special reference to South Africa.

6.2 BACKGROUND TO GLOBAL INFLUENCES

Chapter one (Par. 1(a)) referred to the ongoing global information communication and networking developments. This section explains the background to the understanding of the development and meaning of these global influences linked to information and access to information and information policy developments.

During the period that political, social and cultural changes in South Africa were introduced leading towards post-apartheid South Africa, various global developments democratised the concept of the right of access to information (Sands, 2006). The democratisation of the concept of the right of access to information internationalised this concept as a human right. This right was first addressed by means of an act on a national level, in the United States with the *Freedom of Information Act* in 1966, and then in other countries as mentioned in chapter two, Par. 2.6.1.1.

Events such as the accident at the Chernobyl nuclear power plant in April 1986 created a rising awareness of the public's democratic right to know what was happening on government level as well as internationally. Soon after the Chernobyl accident and the end of the Cold War and the removing of the Berlin Wall, further developments concerning information and international law, influenced governments to pass laws making access to information public (open). Sands (2006: 16) comments on the trend set by international law:

... By providing a minimum set of rules international law underpins globalization. It encourages and eases air transport, trade and telecommunications, the factors necessary for economic globalization to occur. Activities which were previously limited to the local or national levels are internationalized, requiring law-making beyond the single state. Ironically, this in turn contributes to the very conditions which give rise to manifest feelings of disempowerment - citizens feel they have had no role in the development of the new international rules which disempower them...

The concept of globalisation was introduced based on rules for international relations. But the rules of foreign ministries moved into the boardrooms influencing decision-making regarding national as well as international issues. The international relations were established with the emphasis on economic relations based on trade agreements as explained in the next paragraph. During this period information-related technological innovations were introduced such as Internet connectivity, e-mail communication and online access to information of international relevance, such as decisions taken by the Security Council or rulings by the International Court of Justice. This period also introduced the notion of democratisation into international legal consciousness (Sands, 2006: 17-18), providing guidelines as accepted international rules regarding, for example trade agreements, commerce and environmental issues, explained further in the next paragraph.

Sands (2006: 7) points out that before the Second World War there were very few international rules and almost no international organisations. Since 1941 onwards various countries started to build a rules-based system which formed the blueprint for the establishment of new institutions and agreements, such as the United Nations Charter, signed in 1945. The Commission on Human Rights was established at the United Nations and in 1948 the United Nations (UN) adopted the Declaration of Human Rights which determined the protection of human rights by the rule of law. Other international agreements were also accepted, including the General Agreement on Tariffs and Trade (GATT) in 1947. GATT created a global framework of rules to open up trade to all participating countries and combat any existing restrictive practices and barriers to international trade in goods (Sands, 2006:10-17).

The development of international telecommunication, the World-Wide Web and Internet connectivity, in turn, lead to the development of various viewpoints regarding the international regulatory governance systems or regimes. This development is linked to the concept of globalisation, referred to in the literature, in two areas, namely with regard to global market forces, and communication linked to the concept of a “global village”. These developments are influencing the media (Servaes and Lie, 2003: 7) with the development of globalised media audiences, global audiences viewing a wide range of subject matter accessible via the Internet connectivity, and the development and role of multinational corporations, such as the World Trade Organisation.

There are three different perspectives regarding the interpretation of globalisation, as summarised briefly below:

- (a) Globalists see globalisation as an inevitable development, that cannot be resisted by human or political intervention;
- (b) Traditionalists view the significance of globalisation as exaggerated, and that most economic and social activity is regional rather than global;
- (c) Transformationalists regard globalization as a significant shift, but question the inevitability of its impact, arguing that national, local and other agencies also have potential impact (Servaes and Lie, 2003: 8).

I prefer the Transformationalists view and accept the reality of global influences linked to globalisation as an historical process, which also links the global influences on the local or national as part of the historical process, influencing traditionalist and past national

perspectives held. This reality makes it necessary to pay attention to global influences on information policy development.

Cinquegrani (2002: 782) points out that although it is difficult to pin down the process of globalisation, there is a need to interpret the developments of the global changes. In order to make policy choices based on their consequences, there is a need for information, which is not based on technical knowledge but rather information based on human interpretation of the changes (Cinquegrani, 2002: 780). The ongoing technological developments and innovation in the application of information telecommunication globally, have influenced approaches to information policy to become technocratic, as pointed out in previous chapters in this study. According to Cinquegrani (2002: 782) society is living through a phase of transition, experiencing uncertainty midst the many changes linked to global and local changes in the application and uses of information associated with concepts such as the Information Age, information society, information economy and globalisation movement. The uncertainty created by the changes needs to be addressed by studies to clarify developments of a number of information-related practices, such as: the development of knowledge organisations; to represent and clarify issues such as the relation between knowledge management, ICT usage and the complexity of political decisions; and the tendency of institutions to become advanced learning organisations (Cinquegrani, 2002: 782).

Scholars have developed various theories regarding globalisation. The *international regime theory* was such a theory, developed during the 1980s, as a tool for scholarly circles to debate and enhance the process towards reaching consensus about issues concerning international regimes of global interest or concern (Cogburn, 2003: 136). Examples of such regimes developed are found in a variety of areas, such as international shipping, international air transport, international environmental issues, and others, such as the global information policy regime (Braman, 2003d) (also mentioned in chapter one in this thesis), and the international telecommunications regime (Cogburn, 2003).

Various global developments indicate that information policy development is influenced by globalisation (also mentioned in Par. 3.4.3). Two such global policy movements, conceptualised in the literature as linked to the governance of information and telecommunication are the above mentioned global information and telecommunication

regime (Cogburn, 2003), and the global information policy regime (Braman, 2004). References were made to these regime conceptualisations earlier in this thesis (Par. 3.5), and are referred to in more detail below (in Par. 6.2.1 and Par. 6.2.3 respectively). The emphasis on the global information and telecommunication regime is on economic development and e-commerce, while the global information policy regime addresses issues concerning information content and the informatisation of society.

The global influences on information and telecommunication governance and policy are reviewed in this chapter with specific reference to developments within South Africa, linked to information policy.

6.3 GLOBAL INFORMATION POLICY DEVELOPMENTS

Developments regarding the global information policy regime and the international telecommunications regime are discussed in the following paragraphs within the context of international economic, social and cultural, political and organisational forces or influences, globally and within the context of South Africa.

6.3.1 Economic Influences

The oldest international regime developed for scholarly debate, the international telecommunications regime, is linked to the founding of the International Telecommunications Union (ITU). The ITU was established with the aim to help with the establishment of a global telecommunications information infrastructure. According to Cogburn (2003: 139) the international telecommunications regime was conceptualised for the industrial economy, but it is now facing changes, pressing for the emergence of a new regime to meet the requirements of the knowledge (information) economy and a global information society, seen as the Global Information Infrastructure/Global Information Society regime (GII/GIS) (Cogburn, 2003: 140).

Cogburn (2003: 140) points out that over the past decades numerous organisations and countries have attempted to develop global information and communications policies. These policies were developed in such a way that they would promote the development of a broad vision of an information society. According to Cogburn these policies were developed based

on the following wide-ranging principles adopted internationally at the World Information and Society Conferences:

- (a) Stimulating competition - the private sector needs to play a role in stimulating competition, attracting private sector investment in infrastructure and applications for the information society and move towards universal service;
- (b) Development of a strategic policy approach - a strategic policy approach is needed to stimulate the development of an information society, with an appropriate legal and regulatory framework;
- (c) Reflect world's cultures and languages - working to stimulate the creation of content that is relevant to and reflective of many of the world's countries, cultures and languages;
- (d) Create employment - using the potential of an information society to create employment (Cogburn, 2003: 140).

To date, however, the ideals set for the development of a global information society have been unfulfilled, leading to a narrower group of principles focused on supporting one aspect of the information society, namely electronic commerce. Cogburn describes this capitalistic and technocratic approach of the information society as follows:

... a range of social, political, economic, cultural and technological factors are eroding the existing telecommunications regime and a new regime is emerging, the contours of which are still being debated. If the broad vision of a new GII/GIS regime emerges it would enhance the quality of life of a large number of the world's citizens and would have to reflect the interests of a diverse group of stakeholders. However, in many ways, the wide-ranging potential of an Information Society is being unfulfilled and a global consensus is emerging around a narrower group of regime norms, principles and values designed to support one important Information Society application—electronic commerce.
(Cogburn, 2003: 140).

Cogburn (2003) explains that the broad vision of the e-commerce driven Global Information Infrastructure and Global Information Society (GII/GIS) is based on the following norms, values and principles:

- (a) telecommunications and information infrastructure—the emerging principle focuses on the importance of liberalization, privatization and a pro-competitive telecommunications environment;
- (b) customs/taxation—the principle that the Internet and e-commerce should continue to be a “tax free” zone;
- (c) electronic payments—the emerging principle that multiple and competing options for e-payments should continue to be developed, and that these systems should be interoperable, and should allow for both anonymous, pseudonymous, and traceable methods;
- (d) commercial code—that a common global commercial code should emerge to provide for the global rule of law and protection for contracts and private property;
- (e) intellectual property protection—that IPR regulation needs to be revised to reject the realities of the digital economy, while still providing an incentive for the production of information goods; [This point is not clear as given by Cogburn.]
- (f) domain names—that domain names are an important and contested commercial asset, and famous marks should be protected while not allowing them to abuse smaller enterprises, and that ICANN is the legitimate body charged with the responsibility to deal with domain name issues;
- (g) personal data—should be protected, while at the same time allowing for legitimate corporate uses of data profiling and targeted advertising;
- (h) security and encryption—is an important national and personal security concern that has to be balanced with personal privacy concerns;
- (i) awareness/trust—is a limiting factor for the growth of e-commerce;
- (j) trust—might be enhanced with the widespread use of authentication and digital signatures;
- (k) technical standards—should be technology neutral and industry driven to the fullest extent possible;
- (l) local content—should be promoted and protected, if e-commerce is going to reach its full potential;
- (m) labor and society—will be affected by the move towards a digital economy and society should work to minimize the negative impact, while harnessing the potential;
- (n) universal service/access—or lack thereof, as characterized by the “digital divide” is one of the most potentially limiting factors for global e-commerce, and finally
- (o) human resources and capacity—require immediate global attention (Cogburn, 2003: 140).

An analysis of the emerging GII/GIS regime, identifies the World Trade Organisation (WTO) as the central ruling governing body involved in the enforcement of its rules.

The WTO is assisted by ten other organisations, namely the World Intellectual Property Organisation (WIPO); Organisation for Economic Cooperation and Development (OECD); Internet Corporation for Assigned Names and Numbers (ICANN); Global

Information Infrastructure Commission/Global Business Dialogue (GIIC/GBD); Group of 8 Industrialized Countries (G8); World Economic Forum (WEF); World Bank Group; European Commission (EC); International Telecommunication Union (ITU); and Bi-lateral Aid Agencies (Cogburn, 2003: 143). Table 6.1 lists the organisations, their affiliation and primary function within the GII/GIS regime. According to Cogburn (2003: 142) these organisations are working together to formulate rules and make decisions for the new GII/GIS regime.

Currently, developed and developing countries are influenced by the developments linked to the GII/GIS regime, particularly by developments regarding e-commerce, as discussed later on in this chapter, especially with regard to issues such as copyright, industrial property rights and ICT development. World influences on national policy are also seen in South Africa. Ntshoe (2003) explains that globalisation has influenced policy-development in South Africa to be capitalist-driven:

... globalisation in South Africa is underpinned by neo-liberalism, which in turn has led to the radical curbing of the state's role in the economy, de-regulation, liberalization and privatization, and the cutting back of state expenditure. This has increased the mobility of capital and provided neo-liberal consensus on the centrality of the market, giving globalization a capitalist-driven character... (Ntshoe, 2003: 382).

Table 6.1 GII/GIS Regime enforcement organisations

GII/GIS Regime enforcement organizations

Organization	Organization type	Regime component(s)
WTO	Inter-Governmental (Global)	Principles, Values, Norms, Rules, <i>Enforcement</i>
WIPO	Inter-Governmental (Global)	Principles, Values, Norms, Rules, <i>Enforcement</i>
OECD	Inter-Governmental (Regional)	Principles, Values, Norms
ICANN	Global Non-Governmental	Principles, Values, Norms, Rules, <i>Enforcement</i>
GIIC/GBD	Global Non-Governmental	Principles, Values, Norms
G8	Inter-Governmental	Principles, Values, Norms
WEF	Global Non-Governmental	Principles, Values, Norms
World Bank Group	Inter-Governmental (Global)	Principles, Values, Norms, Rules, <i>Enforcement</i>
European Commission	Inter-Governmental (Regional)	Principles, Values, Norms
ITU	Inter-Governmental (Global)	Principles, Values, Norms
Bi-Lateral Aid Agencies	Governmental	Principles, Values, Norms, Rules, <i>Enforcement</i>

(Source: Cogburn, 2003: 143).

The capitalist-driven policy development has had negative influences on the country. According to Ehrenreich (2003: 84) these negative influences linked to globalisation include the influences of transnational organisations (including those listed in Table 6.1) in South Africa:

The rise of globalisation and its manifestation in South Africa has tended to expose the harsh side of this phenomenon associated with capitalism. This is not a blanket condemnation of globalisation because, without a doubt, there are many important opportunities that present themselves and arise from, or are a result of, globalisation. However, the negative aspects of globalisation have equally profound effects in our society because the power that transnational corporations, among the more important organisations, have obtained within the globalising world over the last few decades, has meant that they completely undermine the sovereignty of the state so that they can define policies in their own best interests. These are usually measured against the needs of their own people. These days, policies are measured against what is defined as acceptable by the neo-liberal agenda and have pushed us towards an economic trajectory that, according to our own experiences, is making it difficult for South Africa to realise many of its developmental objectives (Ehrenreich, 2003: 84).

Koebler (2003: 146) questions the democracy of a society where transnational agents and markets begin to exert control over economies once managed by national states. According to Cogburn (2003: 152-3) the "... e-commerce process, the World Trade Organisation and other regime formation and enforcement organisations have influenced South Africa significantly". He explains that these developments call for a need for research to "... better understand how to influence the development of an emerging regime for information and communication policy that benefits a majority of humankind".

In chapter five (Par. 5.2.1) the economic value attributed to information for development is found to be relatively unrecognized in South Africa. Even though the information sector is playing a significant role in the South African economy and is essential for economic development, its value and the importance of access to information is not generally recognised and only occasionally acknowledged in some public addresses. However, in practical terms information and access to it remain unaccepted as vital for South Africa and its government. Efforts to promote access to information tend to be technologically defined by the Government. The Government's technological approach is held despite the fact that global trade and development require understanding of the practical realities and conditions

regarding developments linked to social and cultural development, particularly in the developing countries of the world, as explained further in this chapter with regard to the situation in South Africa.

6.3.2 Social and Cultural Influences

Wasserman (2006: 71) points out that globalisation has had a far-reaching effect on media technologies worldwide, influencing the global spread of media forms, liberal views on the media's role in a democracy and attempts to globalise media ethics on the basis of a search for universal ethics. He (2006: 72) explains developments regarding the realities of the media and the processes of globalisation in the post-colonial post-modern world as one which is regulated trans-nationally by organisations such as the WTO, WIPO, GATT and ICANN:

... the nation-state can now no longer provide the only, stable normative framework for the media, and this has led to a more global view of media regulation through bodies such as the World Intellectual Property Organisation (WIPO), the General Agreement on Tariffs and Trade (GATT) and the Internet Corporation for Assigned Names and Numbers (ICANN). Furthermore, the increasingly global arena in which politics, economics, culture and ecological issues are being contested seems to call for a global formulation of what the media's role should be in reporting these phenomena that are no longer limited to the location of nation-states, but take place transnationally. Not only is journalism's subject matter globalized, media audiences are also dispersed across the globe as a result of the globalization of media technologies such as satellite television and the Internet.... Media institutions are dispersed across the globe and linked with multinational corporations... (Wasserman, 2006: 72).

The debate and search for a global media ethics has so far been dominated by scholarship from the West, failing to address the ethical contexts outside the West (Wasserman, 2006: 73). Chidester, Hadland, and Prosalendis (2003b: 314) object to the dominance of the West (Northern First World countries) stating, for too long have the developing countries,

... been subject to theorising from the North in which we [the developing countries] are either data, absorbed into someone else's theory, or consumers of theory, absorbing theory, even junk theory, from the North in thinking through our situation (Chidester, Hadland, and Prosalendis, 2003b: 314).

They add that the government of South Africa is also failing to protect local information and culture from global and commercial influences. According to Chidester, Hadland, and Prosalendis (2003b) the situation is perpetuated in a country like South Africa where the

government is not protecting and preserving the cultural record of the past. In this instance, they refer to the Government's handling of Robben Island as a tourist attraction versus its value as national heritage site. They point out that it is of great value for the country's indigenous and national heritage, and deserves to be protected from influences of the West and North. In this context they refer to the practice of placing emphasis on developing heritage sites in South Africa as tourist destinations, rather than conservation and research sites of national value and interest:

... Still, in the present, government policy needs to enable the preservation and promotion of the country's diverse, enduring cultural legacies... (Chidester, Hadland, and Prosalendis, 2003b: 312).

As in the rest of the world South Africa is influenced by global information dominance and there is a need to pay attention to the national content of information within the context of South African policy:

According to the research conducted by the International Network on Cultural Policy, South African policy makers are worried less about preserving the past than about competing in the global cultural market. At the core of government policy, according to this research, South Africa is threatened by the predominance of foreign culture, with the influx after 1994 of cultural productions from the United States, the United Kingdom and Australia, which has made it difficult for local cultural products to compete in the global cultural exchange. Although South African responses showed considerable reflection on the challenges of social diversity, national unity and cultural legacies, they kept returning to the dilemma of a new 'balancing act', balancing the homogenising threats to the local integrity of South African culture with the enabling potential of establishing South Africa's cultural products as competitive commodities in global markets (Chidester, Hadland, and Prosalendis, 2003: 312).

A further complication in the South African context is that the newly democratic South Africa is struggling to free itself from the damaging influences of the past apartheid government policies. The country is also struggling to develop a new national identity (Par. 5.2.2). This struggle needs to take place in the media, but the media has not been freed to open up for the democratisation of public participation in the national process for the development of a new national identity (Zegeye and Harris, 2002: 244; Par. 5.2.2). Barnett (2004: 251) explains the need for different conceptualisation of practices concerning the media, citizenship and political power (Par. 5.2.3). This understanding is based on the

principle that globalisation leads to a disempowering fragmentation of the public sphere. On a national level the public sphere needs to engage in the public debate.

However in South Africa the ordinary citizen is not using the media for public and current popular struggles around issues such as privatization, housing, poverty, democratic development and transformation in South Africa (Jacobs, 2002: 297). The debate for popular rights is increasingly moving to the law courts which are not conducive to encourage the development of participation in public media debates concerning democratic social and cultural developments, perhaps calling for a new framework for the South African media, as advocated by Wasseman (2006: 91).

In Par. 5.2.1 it was explained that the social situation in South Africa concerning information is a problem especially amongst disadvantaged communities who tend to have had little or no formal education, illiteracy, low levels of interest in reading, economic constraints and limited or no access to community centres or public libraries and mass media. Despite these existing shortcomings of formal education, illiteracy, low levels of interest in reading and related limitations concerning access to information, (as mentioned in Par. 5.2.1) there is a lack of action in addressing these issues in the interest of South Africa and its development. As pointed out earlier, no formal action has been taken to seriously address the shortcomings linked to poor levels of education, illiteracy, low levels of interest in reading, economic constraints and limited or no access to community centres or public libraries and mass media. The roles of educators, publishers, materials developers, curriculum developers, and learners or readers remain unrecognised in South Africa. As indicated in Par. 5.2.1 there is a need, amongst others, for a policy addressing the development of media for education, especially amongst the disadvantaged communities in South Africa.

6.3.3 Global Information Policy and Political and Statutory Variables (and International Forces)

As explained in Par. 2.1, according to Braman (2003d: 31) information policy developed as a distinct area, separate from the areas of information and communications activity. This development is based on three realities, namely (a) the shift in perception of information as a product in the 1960s and 1970s, to a domain as a commodity in the 1980s, to a process since the early 1990s onwards, (b) due to empirical change in its uses and application in business

and by society, and (c) due to a change in political status as relevant to government and society based on the right to access to information, and developments such as transborder information flow. For example, Brazil linked information and communication issues within its national policy in the 1960s, and in the 1970s the call for the New World Information Order linked the mass media and telecommunications issues, followed by a similar approach in Europe in the 1980s and the US in the 1990s (Braman, 2003d: 31). Empirical changes linked to the convergence of the media in the Internet environment required a common policy regime and political changes regarding the political status of information particularly in the 1990s with 80 to 90 per cent of arms treaties dealing with information rather than weaponry (Braman, 2003d: 31). Transparency of information for decision-making in all areas from defense to agriculture is influencing international trade negotiations and arms control agreements.

Based on the developments linked to the above three realities concerning information, Braman (2003d: 32) explains the emergent information policy regime as having some explicit features, as well as some contested features. The explicit features identified by Braman (2003d: 32) include:

- (a) Transparency - According to Braman (2003d: 32) transparency has become the subject of the international information policy regime itself, and has developed from being an element of the security regime, taken up in trade and is now widely used, and has replaced notions such as the free flow of information. This trend is influencing relations of individuals and societies to each other.
- (b) Networks as organising principles - The organisation of information is influenced by market forces, organisations and information networks. With regard to the information network and information economy, information was viewed as a product during the 1960s and 1970s, in terms of its domain in the 1980s, and in the 1990s in terms of its processes within the information economy (Braman, 2003d: 33).
- (c) Shared private and public sector responsibility for policy-making - the networked society enabled by the World-Wide Web (WWW) allows for shared decision-making by private and public sector participation in policy

development. This ideal is, however, still not fully achieved in most policy-making developments, due to the complexity of the decision-making process and lack of clarity regarding political power in policy-making processes (Cinquegrani, 2002: 782).

- (d) Information power as the dominant form of power (Braman, 2003d: 32-5) - Braman (2003d: 34) explains that information power is used as instrumental power in controlling behaviour in a material world; structural power by shaping rules and social processes; symbolic power by shaping beliefs, perceptions and ideas; and, informational power by controlling the informational bases of materials, institutions and symbols. The power may be exerted as an actual force, or a potential influence, or a virtual power influencing aspects concerning materials, knowledge, and skills, that do not yet exist (Braman, 2003d: 34-5).

A number of contested features still exist as areas which have not yet been resolved.

According to Braman (2003d) these include:

- (a) Information as a commodity vs. information as constitutive force - This issue is strongly linked to the negotiations over trade in services, and the need for the acceptance of multiple definitional approaches to information, and application of appropriate definitions in policy-making processes.
- (b) Information as final good vs. information as secondary good. - Current disputes call for the clarifying of differences regarding information as final good or secondary good. These differences are also linked to uncertainties regarding the defining of information services as a product or a process (as mentioned above).
- (c) Information as an agent vs. information as the subject of agency - the influence of [some] information may trigger other processes or events, and as such may be influential either by chance or by design as the subject of an agency.
- (d) Information as property vs. information as commons - Civil society has become involved in the offering of policy alternatives regarding the value of

information to be treated as commons, rather than property that can be appropriated (based on the governance of intellectual property rights).

- (e) Information as private vs. information as public (Braman, 2003d: 35-7) - The political debate concerning personal versus communal privacy has been heightened since post-9/11, with the potential conflict regarding national security and personal privacy rights (Braman, 2003d: 35-7).

Braman (2003d: 37) indicates that the global information policy regime is still emergent. The explicit features identified by Braman and her views regarding the perception, empirical change and change in political status of information, indicate the range of political forces on information policy development over the period from 1960 onwards.

The situation regarding information policy issues and the flow of information in South Africa was covered in chapter five. The review in chapter five included the achievements of the past ten years and the challenges met by the first democratically elected government of South Africa regarding media development, particularly within radio broadcasting and growth in publishing in the country. The review indicated that the library sector is still poorly funded adversely affecting the services, limiting book acquisitions and staffing. Community libraries are also not available in some of the poorer areas. These areas also have high unemployment rates and poor literacy levels. The current situation in South Africa regarding national information-related issues indicated that information is not valued for social development (Evans, 2000: 210) (Par. 5.2.2). These issues are all adversely influencing access to information in the country and are explored further in this chapter.

6.3.4 Organisational Issues (linked to the Communication Infrastructure and World Trade)

According to Sands (2006: 6-7) rules set by international law, adopted since the end of the Second World War have provided the foundations for globalisation, and the two main sources of international obligation to adhere to these laws are treaties and customary law. World trade is for instance, governed by the World Trade Organisation (WTO) (also included in Table 6.1). The WTO sets rules and settles trade disputes. Sands (2006) states that the WTO is limiting national sovereignty:

... the WTO has played a catalytic role in making the public aware of how far international law has developed, reaching ever deeper into day-to-day life and limiting national sovereignty...(Sands, 2006: 99).

Globalisation is an uneven process “... dominated by a hegemonic triad” of the U.S.A., Europe, and Japan (Fuchs and Horak, 2006: 8). These countries lay down a global rule that aims to reconstruct capitalism as a global network shaped by knowledge and computer-based information and communication technologies. They describe the development as global information telecommunication capitalism which has developed to form a transnational regime that allows for the increase of profit and the minimization of the turnover time of capital based on the immediate transfer of payment during electronic trade transactions (Fuchs and Horak, 2006: 8).

As explained earlier (Par. 5.2.4), national policy regarding the reform of the information communication infrastructure in South Africa, was aiming to provide more affordable access to communications services and accelerated development to meet the needs of a modern economy. However, as indicated (Fig. 5.1), the reform process has stagnated with the process of fixed-line installations, due to the continued monopolistic status for the company, Telkom (as explained in Par. 4.4.1) and the affordability of the subscription to the telecommunication services. The current imbalance that exists in South Africa’s technological development and infrastructure has contributed to the “... infringement of the people’s right to information and free speech and access to the media” (Zegeye and Harris, 2002: 256), especially in the rural areas of the country.

The following paragraphs review the impact of globalisation on information-related issues with specific reference to South Africa.

6.4 INFORMATION POLICY DEVELOPMENTS WITH SPECIAL REFERENCE TO SOUTH AFRICA

As explained earlier in this chapter, the viewpoint of the Transformationalists is accepted as the preferred view in this thesis. According to this view, globalisation is accepted as an historical process and it is necessary to accept the reality of the global influences on countries as part of an historical process. This historical process links the global and the local

perspectives influencing the existing traditionalist perspectives to become different from the perspectives held in the past. This reality makes it necessary to pay attention to global influences on information policy development globally.

The development of the transnational regime influencing information policy was described in this thesis as an historical process. As pointed out earlier in this chapter, the influences of national information policy developments are linked to (a) transparency and the free flow of information, (b) the development of information networks driven by market forces, (c) the development of a networked society involved in information policy development, and (d) the development of information as power influencing behaviour, structural and social practices, beliefs and ideas and the development of information as the base of organisations.

The historical process was found to be dominated by the hegemonic triad of the U.S.A., Europe and Japan. These countries are driving the development of computer-based information and communication technologies aiming to facilitate electronic trade transactions. The development is described as global information telecommunication capitalism as it forms the electronic network that allows for the increase in profit based on the immediate transfer of payment such as transnational electronic trade transactions, as explained in the previous section (Par. 6.3.4).

The previous chapters reviewed salient information policy developments in other countries and in South Africa. This section brings together the findings of the research as a situational analysis of information policy globally with special reference to South Africa.

6.4.1 Access to Information in a Globalised World

Throughout the thesis, access to information remained the core concept central to information policy. Approaches to the right to access to information were found to be linked to the value attached to information as a commodity. Sands (2006: 18) links the conceptualisation of the right to access to information as a “global entitlement” to the growing international legal consciousness with regard to the individual’s democratic rights, including the right to self-determination, freedom of expression, and the right to vote. Sands explains that the development of international organisations such as the World Trade Organisation, established

in the mid-1990s, created the need for access to information and participation in decision-making to address the challenge regarding issues of democratic governance.

Access to information is accepted as a human right in many democratic countries, and is also accepted as a right in South Africa. This right is addressed in the Constitution as a legal right in South Africa (Par. 4.3.1).

The right of access to information has become an international issue, (Sands, 2006: 18; Par. 1.5.5) and is measured globally, based on countries' *Networked Readiness Index* (NRI) (World Economic Forum, 2005: 1). The NRI uses three component indices to assess this (a) environment for ICT offered by a given country or community; (b) the readiness of the community's key stakeholders - individuals, business and governments; and, (c) the usage of ICT among these stakeholders.

The ratings given for the readiness of the community's key stakeholders in South Africa ranks the readiness for individuals as 49th out of 82 countries; 28th for businesses; and 36th for the government. The lower ranking given for the readiness of individuals is linked to national literacy levels, access to the Internet, and the degree of connectivity of individuals. Current global technocratic and capitalist influences and developments concerning access to information do not take into account situations like those in South Africa and are in conflict with the social needs for human development in South Africa. The readiness of individuals in South Africa regarding literacy and Internet access were some of the issues reviewed in chapters four and five. However, the problem of access to information and the media is a serious issue that hinders the social and economic development of the majority of the population in the country. In this study, shortcomings were found with regard to, amongst others: poor levels of education and skills (relevant to literacy) (Par. 4.3.5); inadequate access to information provided to the public, schools and learners by access to school and community libraries (Par. 5.5.3); low literacy levels (Par. 4.3.3); and an imbalance in access to Internet in the country due to past practices under apartheid rule in the years prior to 1994 (Par. 5.2.4).

Furthermore, as pointed out in the previous chapter, political change in South Africa,

the additional developments of trans-border flow of information via the media, and information and communication technologies have problematised the flow of information in the public domain in the country. These developments have influenced developments concerning the role of the media, the national press and public service broadcasting and the South African media and communications sector (Bornman, 2003b).

Society in South Africa is experiencing uncertainties regarding identity development under the new government dispensation in a post-apartheid democratic society. The uncertainty of the role of the media is not helping the development and establishment of a new South African identity to be realized. Public debate needs to take place in the media, but many South Africans cannot participate fully in the public debate in the media due to factors such as poor levels of education and skills (relevant to literacy) (Par. 4.3.5); inadequate access to information (Par. 5.11); low literacy levels (Par. 4.3.3); and an imbalance in Internet access in the country due to past practices under apartheid rule in the years prior to 1994 (Par. 5.2.4) (as pointed out in the previous paragraph).

In a developing country like South Africa, a technocratic approach to the development of information communication technology is useless to a community unless the people are literate, have access to information, education, computer training and the ability to make full use of the information they access. These basic skills are essential in the Information Age and the government of South Africa needs to acknowledge that countries with better overall levels of human development will create more favourable environments for the implementation of specific policies to strengthen “information and knowledge societies” (Accuosto and Johnson, 2004: 3). South Africa needs to approach the right of access to information as a public good and nurture the population to become better skilled in utilizing information and have access to information as a public good.

6.4.2 Government Communication and Globalisation

The value of public domain government information is not easy to quantify, but the value of government information for the larger economy is linked to its availability and use in the public domain (UNESCO, 2004: 10). This information is of importance to the development of the information society (UNESCO, 2004: vi; Woods, 2001: 244).

In a country like the U.S.A. the federal government spends many billions of dollars on producing information in the public domain and makes much of that information globally freely online available (UNESCO, 2004: 9). A different approach is taken in some countries in Europe where a fee is charged for the provision of public domain information. Public bodies in Europe are the largest producers of information and the information produced is valuable for national statistics, geographical information, company registration, education and health services, and scientific research, finance, libraries and museums (Woods, 2001: 244; Par. 4.3.2). Access to government information (Par. 2.6.1.1) is linked to the *Freedom of Information Act*, but, as explained in the *Policy Guidelines for the development and promotion of governmental public domain information* (UNESCO, 2005), laws are not in themselves sufficient to ensure access to government information (UNESCO, 2005: vi). This reality was also found to be applicable as explained in this thesis regarding access to government information in South Africa. As pointed out earlier, in South Africa (Par. 4.3.2) access to government information has become more complicated for several reasons, and compliance with the FOI act is low. It also lacks a clear framework regarding access to government publications and compliance with the *Legal Deposit Act* from the government departments (Lor, 2002: 15) and referred to in Par. 4.3.2. If access to government information is of importance for the development of the information society and its welfare, a clear framework regarding access to government publications and Legal Deposit from government departments needs to be addressed as indicated above.

6.4.3 Literacy Levels and Globalisation

There has been increasing international interest in information literacy since the 1970s (Johnston and Webber, 2003: 336; Par. 1.5.6; Par. 4.3.3). Information literacy is used in higher education as an initiative that seeks to address the demands of the information society. According to Johnston and Webber (2003: 343), information literacy needs to include training in library skills, information skills and information literacy and is addressed in educational programmes in countries such as Singapore, Canada, South Africa (Par. 4.3.3; Machet, 2000) and New Zealand. However, as shown in this thesis (Par. 4.3.3) and also earlier in this chapter, both literacy and information literacy training need to be addressed more effectively.

Recognition at national, provincial and local levels of government needs to be given as well as the provision of the necessary resources to address these.

6.4.4 Computer Literacy Level and Globalisation

The World Summit on the Information Society (WSIS) considers the promotion of ICTs for poverty eradication possible, but fails to consider the role of income distribution and educational and skill barriers, such as the affordability of computer technology equipment and network connectivity, as well as computer literacy (Fuchs and Horak, 2006: 11). Par 4.3.4 explained the importance of computer literacy. It explained that although technology and advanced equipment are necessary for the digital age, these are useless if people do not have the necessary skills to use these. These skills include advanced literacy skills, education, computer-training and the ability to use computers to access information and to use the information accessed effectively (Accuosto and Johnson, 2004: 3).

The situation in South Africa, indicates that although the total number of Internet users in the country has been increasing continuously, the distribution of Internet access is still not benefiting all sectors of the population (Fuchs and Horak, 2006: 14). The uneven distribution is mainly due to the problem of affordability (34.1 per cent of the South African population live on less than 2 USD per day) (Fuchs and Horak, 2006: 12), and past inequalities due to the former government's apartheid rule. This reality, once again, further illustrates the importance of information being valued as a social good, and not based on technocratic and capitalist values. It is not sufficient to ensure Internet access human skills to use Internet effectively must be developed if South Africa is to become an information society.

6.4.5 Levels of Education and Skills and Globalisation

Altbach (2004) explains the importance of education in the 21st century:

...Because of the centrality of the knowledge economy to 21st-century development, higher education has assumed unprecedented importance, both within countries and internationally, because of its roles in educating people for the new economy and in creating new knowledge. As evidence, the World Trade Organisation is now focusing on higher education. The current debate concerning the General Agreement on Trade in Services (GATS) – an effort by multinational corporations and some government agencies in the rich countries to

integrate higher education into the legal structures of world trade through the WTO – indicates how important universities and knowledge have become in the contemporary world ...(Altbach, 2004: 5).

Globalisation is influencing education unequally in countries around the world, with the main influence centred in the powerful universities located in the wealthier countries of the world. These centres tend to be in the countries of the North. Many of the universities in these countries are research institutions and receive government research funds. Furthermore, the major academic journals and databases are managed by leading universities and are predominantly published in the English language, with English as the Latin of 21st century research communication (Altbach, 2004: 8).

Education in South Africa has been influenced by the discourse on higher education based on developments in countries such as the United States, United Kingdom, Australia and New Zealand, as well as Asian countries (Ntshoe, 2003: 382). Education in South Africa has also been influenced by globalisation. This can be seen, for instance, in some of the aims set for the development of education in South Africa in order to achieve active participation in globalisation, marketisation and the development of high technology. Ntshoe (2003) argues that there has been a shift in the focus in developments in higher education:

... there has been a shift in the focus from fundamental issues like equity, the need to redress historical inequalities, social reconstruction and development, towards satisfying the demands of globalisation and the market economy (Ntshoe, 2003: 383).

Ntshoe (2003) refers to concerns expressed about the ways in which the globalised neo-liberal ethos is shaping higher education in South Africa:

... the impacts of globalisation and marketisation reflect the global trend that universities function increasingly as “entrepreneurial” or “market” institutions where students are considered to be customers and knowledge is a commodity... (Ntshoe, 2003: 384)

Altbach (2004: 24) points out that academic systems need to communicate and are influenced by the global academic environment. What is important is that inequalities need to be recognised and then ameliorated, while at the same time, ensuring that globalisation does not become the neo-colonialism of the 21st century (Altbach, 2004: 24).

South Africa's education, as reviewed in Par. 4.3.5, was found to have many imbalances regarding education levels and skills training in the country, as well as school facilities such as telephone connectivity, electricity, and school libraries. As explained above, it is necessary to address the inequalities, addressing basic skills such as literacy, information literacy and high educational standards for all.

6.4.6 Information Society Development

According to Fuchs and Horak (2006) Africa is not part of the information society, as it is a very uneven society:

This shows that the digital divide is a very pressing problem for Africa; most African countries are excluded from the information society. If the information society shall really be a global village (Marshall McLuhan), a digital agora, or virtual community (Howard Rheingold), Internet access and usage for developing countries would have to be assured because communities and democracy are inclusive and participatory rather than exclusive and segmented. Cyberspace in its current form as a socio-technical system that only gains meaning through human activities and communication is a segmented space that rejects the inequalities of society (Fuchs and Horak, 2006: 6).

Furthermore, global initiatives such as the World Summit on the Information Society (WSIS) is focusing on the expansion of infrastructure development and not paying attention to other a-technocratic aspects regarding access to information in the developing countries (Accuosto and Johnson, 2004: 3). The WSIS, took place in two phases, first in Geneva in 2003 and then in Tunisia in November 2005, and benefited the developed nations who promoted the expansion of their telecommunications companies in the developing countries of the South.

Current global developments regarding access to information leading to the development of information society is in the hands of a few trans-national organisations, as explained in Par. 6.3.1. Neither the technocratic approach of the WSIS nor the capitalist approach of the trans-national organisations is suitable for the situation in South Africa regarding growth towards an information society. South Africa (Par. 4.3.6) needs to accept access to information as a social good within the context of the country's unequal society.

6.4.7 The North-South Divide (including the Digital Divide)

As explained earlier (Par. 4.3.7), the economies of developing countries are influenced by the North-South Divide, information dependence and the impact of access to information. A technocratic approach to the North-South Divide and digital divide cannot address these issues on its own, as explained by Fuchs and Horak (2006):

... it is a false conclusion that the number of market players in the telecommunications sector is the relevant criterion for success. Neoliberal discourse focuses on market access... (Fuchs and Horak, 2006: 12).

Other factors contribute to the North-South and digital divide in South Africa, including social and economic factors that result in structural inequalities. These inequalities will not be closed by the privatisation of telecommunication development. Social problems need to be addressed in South Africa before these inequalities can be addressed effectively (Fuchs and Horak, 2006: 12). In view of these inequalities there is a need to achieve community-based economic growth with the emphasis on the uses and application of telecommunication access to societies (Mariscal, 2005: 412; Kebebe, 2004: 277) (refer to Par. 4.3.7). The market forces link digital access to information as a human right based on the right to have access to health information and education. The right to have access to information is based on the viewpoint that the information is a public good with opportunities to provide access to health care and educational content. However, Internet access is not available to a large percentage of the world's population, and is also very limited in many developing countries, including those in Africa. It is therefore very interesting to note that despite the limited access to online digital information and the Internet, global rhetoric consistently favours the digital format as the preferred option to provide access to information. The fact that this approach is potentially perpetuating the lack of development of the countries with little or poor access to telecommunication networks, is mostly overlooked, despite the reality that only approximately 11 per cent of the world's population have access to Internet connectivity (Liesegang, Schachat and Albert, 2005: 163). Likewise, in South Africa, access to online telecommunication is not widespread and many businesses do not use digital business systems and e-commerce. Despite limited online digital connectivity, the government of South Africa is promoting electronic access to information as the preferred mode of access to government information via its official website, managed by the Department of Communications.

In this study, shortcomings were identified due to a lack of a clear framework for the archives and publications for legal deposit of government. These shortcomings were shown to limit compliance regarding the right to access government information. Access to digital information was also not always ideal in the country due to factors such as illiteracy; the uneven distribution of telecommunication networks in South Africa due to apartheid; financial constraints limiting subscriptions to digital networks and telecommunication; and, poor levels of education and information literacy.

6.4.8 Information Content, Industrial Competitiveness

The Internet and World-Wide Web have had an immense impact on industry and commercial competitiveness. The promotion of competitiveness is also found in the publishing of research literature and the movement towards open access publishing. Pollock (2006: 8, 9) explains that over the past five years a significant amount of economic research has been done on the effects of online file-sharing over peer-to-peer networks, indicating the benefits to society of increased access to information in the public domain. He explains the value of public domain information by pointing out that

... the fact that most societies have, at the very least, firmly excluded general ideas (that is, those without 'industrial application'), as well as mathematical algorithms and business processes from patentability indicates that the social costs involved in privatising these types of knowledge outweighs the benefits. Second is the fact that in all countries non-private sources (such as governments and charitable foundations) account for a substantial - and in some cases a majority - of expenditure on research and development. Combined with the extensive evidence on spillovers from public to private R&D, such figures clearly indicate that all societies identify significant benefits in maintaining a system to public R&D and open science, not only for its own sake but also to act as a complement to, and input into, private, commercial activities... (Pollock, 2006: 8).

Par. 4.3.8 explained the development global communication and Open Access movement as a new model for the publishing of research literature. The World Summit on the Information Society (2003), co-sponsored by the United Nations and the International Telecommunications Union, endorses the principles of the Budapest Open Access Initiative. This Initiative calls for a commitment to making research articles in all academic fields publicly available on the Internet (Liesegang, Schachat and Albert, 2005: 160). The Open Access movement is supported by the World Summit on the Information Society (WSIS), and

in December 2003 the WSIS adopted the Principles and Plan of Action, endorsing the principles of open access to information content not limited by financial constraints or technological means.

The Open Access movement (Par. 4.3.8) introduced the ideal of free (gratis) access to information. Open Access as a right to scientific and research articles links the right to access to information content for all. This view sees access to information as a democratic right, and also argues that research funding is mostly supplied by government funding through taxes paid by the public. The argument is then made that public funding of research should then benefit the public by allowing access to research articles published. Access to information is linked to economic competitiveness based on research and development and innovation.

The Open Access movement also implies the right to access as a human right under the rule of law, but there is also the reality that the archiving of digital information and future access to the archival copies needs to be ensured. Furthermore, electronic publishing requires much of the same processes as paper-based copies and as such is still costly to produce. Electronic publishing is only cheaper due to the online channels of distribution via digital access and distribution of content, but it is not cheap to archive the published issues.

Publishing houses in the paper-based traditional publishing model carry the responsibility for the management and digital archiving of their journals. Their incentive to archive the journal issues is economical as the copies must be paid for. The open access movement does not offer economic benefits to motivate the archiving and preservation of journal content in digital format. Currently, the Open Access Initiative supports the complementary use of self-archiving in institutional/disciplinary repositories and open access journals, but there are a number of issues concerning the Open Access publishing model that indicate existing uncertainties and even risks. Liesegang, Schachat and Albert (2005: 156-163) point out the cost involved in open access publishing does not allow for the continuation of publishing in both paper and electronic format. The survival of the published digital content is, however, essential for the retrieval of past scientific and medical findings, other digital content, such as government information and business information. The loss of digital content due to inadequate digital archiving would affect many aspects of society. For this reason, politicians

in government in the United States Congress and the United Kingdom House of Commons are seeking to regulate this movement (Liesegang, Schachat and Albert, 2005: 156).

A number of concerns surround the Open Access Initiative. The main risks or concerns of the Open Access Initiative include the problem of sustainable and secure archiving, sustainable production by cost recovery without the income ensured under the traditional model which requires payment for journal issues and subscriptions, incentives to ensure high quality and control of information content and editing without any financial considerations. Liesegang, Schachat and Albert (2005: 163) raise a concern regarding the potential risk involved in publishing information content without additional verification of research findings. This concern is linked in particular to the publishing of research findings on clinical medicine without the constraints of financial incentives to ensure high quality content with absolute integrity. Another risk is the sustainability of scientific and academic research if there is no sustained financial motivation and framework to promote it leaving it entirely dependent on funding by government or other non-profit initiatives.

It is reported that scientific journals have been the fastest-growing media sub-sector of the past 15 years. The average price of research libraries' subscriptions to scientific journals has increased between 1986 and 2002 by 227 per cent. The increase in subscriptions to journals has influenced library expenditure and book purchases in the typical research library has declined considerably (Liesegang, Schachat and Albert, 2005: 162).

Although there are advantages to open access to scientific journals, it must be remembered that only 11 per cent of the world's population has access to the Internet. In addition, it is not certain that Open Access publishers will be able to cover the production costs of their articles in the way the subscription publishing model is able to (Liesegang, Schachat and Albert, 2005: 163).

South Africa is following the trend in encouraging open access publishing (Par. 4.3.9), even though it is not certain how secure the archiving model and sustainability of the new Open Access journal publishing model is, and how the new publishing model will develop, or how it will be funded and its financial sustainability. However, this trend is likely to impact negatively on the local publishing houses, publishing skills and stimulation of local

intellectual output and is likely to benefit the growth of Internet subscriptions and organisations such as the International Telecommunication Union.

6.4.9 Other issues - such as E-commerce

The commercial and industrial sectors in developing countries, like South Africa, have been influenced by developments such as Internet connectivity and the World-Wide Web. However, the influences are not as widespread as in the First World countries of the North. Internet connectivity is still not available in all regions in countries in the developing world, including South Africa, although they are aiming to establish connectivity in all geographical areas in their countries. Over and above the IT connectivity, various skills and infrastructure are necessary to benefit from this development, as indicated in this study. In this regard, Pollock points out that the technology alone cannot serve to achieve industrial growth in developing countries without other fundamental infrastructure being in place:

... The fundamental reason why technology businesses are difficult to export is that the underlying communications and IT infrastructure and economic fundamentals, which exist in the US, or UK does not exist in an emerging nation. The example of exporting eCommerce sites to other markets demonstrates this quite clearly. While the web site itself is easily translated into another culture and language, the ability to deliver the products by an efficient and low cost logistics system is unlikely. Thus, the underlying economic fundamentals are often more important than the mere existence of communications and IT technologies and an entrepreneur who is ready to start a business...(Pollock, 2006: 14).

As explained in Par. 4.3.9, global e-commerce is being managed by several organisations (Par. 6.2.1 and Table 6.1). For instance, the ITU, headquartered in Geneva, is an international organisation within the United Nations System where governments and the private sector coordinate global telecom networks and services. At the same time, the ITU is involved in promoting access prices to communications services to be regulated by market forces (Accuosto and Johnson, 2004: 4-5). The international organisations are not necessarily acting in the interests of the developing countries regarding development of global telecom networks and services.

In South Africa e-commerce is being developed within the existing uneven distribution of Internet connectivity and access to information. The capitalist forces driving the development

of e-commerce do not take into account issues such as poverty, poor levels of education and low literacy levels. This means that opportunities for e-commerce are open to a small sector in the country. E-commerce requires more than interconnectivity. Developments regarding e-commerce in South Africa need to take into account additional factors including poverty, poor levels of education and low literacy.

6.4.10 Telecommunication Infrastructure Issues

The World Economic Forum has devised technocratic measures over the past few years to assess “the state of readiness” of 104 countries’ economies to “participate in and benefit from ICT developments” in an increasingly networked world (World Economic Forum, 2005). This competitiveness is linked mainly to e-commerce and trade and the application of interconnectivity for commercial applications.

South Africa’s telecommunication infrastructure development by the state-controlled telecommunications utility, Telkom, has influenced the pricing of the services to be comparatively high in terms of international prices (explained in Par. 4.4.1). This has been a negative influence on the development of the network and use of and subscription to the telecommunication services.

6.4.11 Copyright Issues

The trade-related aspects of intellectual property rights (TRIPS) agreement under the WTO created an economic system that facilitates both capital and property accumulation (Saul, 2005:180). Market control through TRIPS and national copyright law, particularly in the communications field, are eliminating competition through a rigid system enforced by law. A practice, involving big private organisations’ getting control over research done in universities at public expense was begun particularly in the period 1980 onwards. According to the Copy / South Research Group (2006: 13) the copyright industries constitute an important sector in the current global economy, and as long ago as 1999, the value of the global copyright economy was one trillion USD (U.S.A. Dollar) growing at around five per cent per year, representing 7.3 per cent of the world’s GNP of 30.2 trillion USD.

In Par. 4.4.2 some of the difficulties regarding copyright law, especially with regard to digital information and the Internet were discussed.

Schönwetter (2006) states that the enforcement of intellectual property laws are having a negative impact on education in developing countries like South Africa

...the global trend towards restrictive intellectual property provisions, especially through the conclusion of bi- or multilateral Free Trade Agreements such as the SACU-US FTA⁵⁰⁴, and the reduction of the scope of fair use have a detrimental impact on developing countries as it hampers access to essential information, educational and learning materials as well as cultural resources. These so-called TRIPS plus agreements might eventually further limit the ability of the government to make education and learning materials affordable (Schönwetter, 2006: 118).

The practice involving big organisations such as the WTO, is increasingly being challenged by developing countries, such as Brazil and South Africa (Saul, 2005:182). The current debate regarding access to public information and intellectual property rights will take some time to resolve in the interest of both developing and developed countries.

6.4.12 Industrial Property Rights

IP governance is moving towards privatisation and monopolisation of information content as well as the channels of communication (such as digital access to information) (Copy / South Research Group, 2006: 13). Since 1995 intellectual property rights (IPRs) have been subject to the trade-related aspects of intellectual property rights (TRIPS) agreement, which is overseen by the World Trade Organisation (WTO) (May, 2003: 1). TRIPS was designed to promote the protection of national and international property rights (including trade marks and patents). These rights were fully integrated in the free trade rules. However, this development has given rise to controversy, especially regarding the pharmaceutical industry. Sands (2006: 106) outlines how this control limits the use of generic drugs and how this is affecting developing countries like South Africa. For example, pharmaceutical companies relied on TRIPS to try to stop South Africa from providing low-cost, generic treatment against HIV and AIDS. In 2001, 39 pharmaceutical companies dropped a lawsuit to prevent South Africa's 1997 *Medicines Act* from being enforced, allowing the use of affordable,

generic medicines (Sands, 2006: 106). In Par. 4.4.3 it was explained that the TRIPS agreement is being contested as it favours developed countries.

6.4.13 Freedom of Speech

As discussed in chapter four (Par. 4.4.4), freedom of speech is a considered a fundamental human right in international agreements. This freedom was agreed upon after the Second World War when the United States, Britain and the Allies introduced a rules-based system for the promotion of “respect for human rights and for fundamental freedoms for all without distinction as to race, sex, language or religion” (Sands, 2006: 151). The United Nations Charter of June 1945 created a global set of rules regarding these human freedoms. The rules-system was later replaced by a global treaty in 1966 by the *International Covenant on Civil and Political Rights* (Sands, 2006: 151). The Treaty came into force in 1976 and the US became party in 1992.

Despite the freedoms considered as fundamental human rights in international treaties such as the *International Covenant on Civil and Political Rights*, governments tend to enforce their own rules regarding freedom of speech on a national level. For instance, governments use media laws to limit the right of reporters while others use technology to limit or suppress the free flow of information among their citizens (see Par. 4.4.5).

Freedom of speech is accepted in South Africa as a human right (see Par. 4.4.4), but world trends indicate that online free speech is increasingly under threat. The South African government has recently drafted the *Films and Publications Amendment Bill*. The Bill is designed to protect children from “age-inappropriate” depictions of violence, discussions of reproductive health, and pornography. However, the Mail and Guardian Media Limited Board explains that other laws are already in place regulating the distribution of hardcore and child pornography. This Bill gives Government far more power, threatening free speech in the country. The Mail and Guardian Media Limited Board (2006: 26) considers the Bill unconstitutional as it “would be changing the principle of free speech as defined in South Africa’s Bill of Rights”. They state that the Bill is:

... imposing a sweeping new censorship and classification regime that puts free speech at the mercy of the state. As it stands, the Bill would expose a huge swathe of

expression, ranging from news stories with sexual content to violent computer games, to the whims of the censor ... The government, it seems, has realised that the Bill is probably unconstitutional, and it is now seeking an accommodation with publishers that will enable a modified draft to go through Parliament some time in the new year (Mail and Guardian Media Limited Board, 2006: 26).

Controlling access to information via the Internet or mobile cellular telephones will continue to be a challenge for governments in the Information Age and restrictive practices will violate the principles of freedom of speech and other fundamental human rights.

6.4.14 Censorship

Censorship is a more complex issue in the world today with transborder information accessed via information networks and the Internet. This is an issue that will continue to receive attention in countries across the world, especially with regard to undesirable information (threatening national security; unethical material; pornography; animal cruelty, inhumane violence). (See Par. 4.4.5).

Many governments suppress information on issues they wish to keep secret. Recent incidences in South Africa indicated that the South African government is not disclosing information that is in the public interest such as the crime-related statistics in recent years, figures of AIDS-related death statistics and information regarding the public broadcaster in South Africa, which has been found to be guilty of political interference in its broadcasting practices, and refusing reporters permission to gain access to the country's prisons for them to investigate practices in the prisons. These incidences indicate a worrying trend that despite legislation ensuring democratic governance, compliance with the rule of law is not necessarily practised.

6.4.15 Information Ownership

As discussed in Par. 4.4.6, access to information in the public domain is creating the need to re-examine aspects concerning information ownership. This issue is receiving much attention world wide as the current system protects the owners and sellers of the information, mainly held by the rich countries of the North as the main producers of information. Development regarding open access publishing is developing as a movement to make access to scientific

journals more affordable. This trend is supported by governments in developing countries such as South Africa.

6.4.16 Library Services and Archives

Par. 4.4.7 included an overview of the significance of libraries, museums and archives in the collection, preservation and provision of access to information in many countries and the complexities regarding developments in the period 1990 onwards with the convergence of technology, globalisation and international participation in telecommunication, audiovisual material and media industries. The situation regarding South Africa's libraries and archives was also included in that paragraph, and further described in Par. 5.5.3. The shortcomings in the library sector were stressed, especially with regard to access to reading material in the country, as pointed out in Par. 4.4.7. Read Educational Trust's national director, Ms Cynthia Hugo stated:

With only 27% of South African schools offering library facilities, and over half of our pupils coming from homes without any form of reading material, the distribution of books makes an enormous impact (Ntshingila, 2006: 1):

In view of other related issues mentioned earlier in this chapter regarding literacy and education, this sector will need to be re-assessed and addressed for the development of South Africa in economic, social, and cultural growth.

6.5 CONCLUSIONS

This chapter reviewed the influences of globalisation on national information policy development. The vision set by the Global Information Infrastructure/Global Information Society regime was found to be driven by capitalist ideals set by transnational organisations. Globalisation is dominated by the U.S.A., the countries in Europe and Japan. These countries are dominating the development of global information telecommunication and global telecommunication capitalism to increase profit through immediate transfer of payment during electronic trade transactions. It also benefits the North economically in other ways such as the dominance in publications.

On social and cultural levels the effect of globalisation on media technologies are far-reaching, also within the context of a developing country like South Africa. These influences are experienced in the country amidst national changes and developments, particularly in the period from 1996 onwards under the country's first democratic government and related political changes in the country. Reference was made to the emergent global information policy regime and its features, including the free flow of information, developments concerning market forces relevant to information networks development, the shared involvement of private and public sectors for policy development for the networked society and the World-Wide Web, and the use of information as a source of power.

As indicated in chapter one (Par. 1.4.6), the issues that are historically relevant to national information policy, namely freedom of access to official information and copyright and intellectual property rights, continue to be relevant to information policy, but other issues as listed in chapter four, Table 4.3, are also relevant within the scope of national information policy. Global influences on these issues were reviewed in chapter six.

Chapter seven provides a summary of the findings of the study regarding the issues relevant within the scope of national information policy as the outcome of the three research questions investigated in this thesis (listed in chapter one, Par 1.3), concerning:

- The main trends relevant to national information policy development worldwide, based on relevant literature
- The main trends and developments in other countries
- The implications of global and national developments regarding national information policy for South Africa.

The summary is followed by the conclusions and recommendations for further research.

CHAPTER SEVEN

SUMMARY AND CONCLUSIONS

7.1 INTRODUCTION

Chapter six reviewed the influences of globalisation on national information policy issues with special reference to South Africa. These issues and their implications for South Africa were summarised.

In chapter six the influences of globalisation on national information policy were found to be far-reaching. These influences are largely driven by the forces set in motion by transnational organisations and the capitalist ideals of the hegemonic triad, the U.S.A., Europe and Japan. The influences of globalisation were also found on social and cultural levels in both the developed and developing countries of the world. Chapter six discussed briefly the changes resulting in and from the commodification of information, which impacted on information usage in the workplace, commercially and socially. The increasing political status of information was also noted. The changes regarding the political status of information occurred particularly in the 1960s and 1970s with the call for the New World Information Order linked to mass media and telecommunication issues. In the 1980s Europe accepted the growing political status of information and the mass media, followed by the U.S.A. in the 1990s. These changes made it necessary to regulate media technologies worldwide, leading to the establishment of transnational organisations such as the WTO, WIPO, GATT and ICANN.

This chapter brings together the findings of the study and outlines the dichotomy created by the emergent Global Information Infrastructure/Global Information Society regime and its implications for national information policy. This chapter outlines some of the implications for national information policy development, with specific reference to a developing country like South Africa as found in this study.

7.2 SUMMARY OF FINDINGS

Chapter one explained that national information policy research is conceptually underdeveloped. Based on a survey of the literature, the researcher used a selection of theoretical frameworks to define the scope of national information policy for this research.

This chapter relates the findings in chapter six and the rest of the study to the research questions that informed this study, namely:

- i) What are the main trends relevant to national information policy development worldwide, based on relevant literature?
- ii) What are the main trends and developments in other countries?
- ii) What are the implications of the current global and national developments regarding national information policy for South Africa, based on the findings of the study?

The findings of the study regarding the three research questions investigated in this thesis are summarised below.

7.2.1 The Main Trends Relevant to National Information Policy Development

Trends observed indicated changes regarding the value attached to information, as reflected by national information policies. These changes occurred particularly during the 1960s onwards, partially linked to the influences of the development of computer technology. International influences during this time changed the value attached to information.

A national information policy can address several issues. It can also have various aims. Global trends in the latter decades of the previous century influenced the concept of access to information as a political issue and a human right as it started to link the value of information to political and democratic rights. Access to information came to be seen as essential to the achievement and implementation of democracy and a democratic way of life. With the developments of the Information Age information communication was linked to the concept of the common good. Just as health care came to be considered a public good, access to

information began to be considered a public good and a human right. With this understanding access to information for all was viewed of importance and of benefit for the welfare of society.

The aim for governments to act with transparency and provide citizens access to information became linked to the citizen's human and democratic rights. In this context, access to government information was valued as a human right and for the benefit of society as a public good. Legislation such as the *access to information act* was introduced in many countries since 1966 onwards.

The concept of access to information valued as public good has been influenced by the growth in information technology and telecommunication networking and particularly during the 1990s onwards a more technocratic and capitalistic approach is taken regarding access to information. This trend links information not to social development and the welfare of society, but to economic gain. Much emphasis is placed on the development of e-commerce and free trade agreements. The global influences tend to address information policy issues for economic (capitalist) and political benefit, increasingly based on technocratic aspects linked to telecommunication infrastructure development and e-commerce. The technocratic approach to information and access to information is linked to the idea that access to digital information will lead to development. This approach is aimed at global information telecommunication capitalism, and does not take into account the disadvantages faced by societies or individuals who are not information literate and thus do not have the skills to use information access points provided by telecommunication networks.

In this regard, access to information is not valued as a social good, but valued in economic terms for financial decision-making, commerce and trade and increasingly for political reasons. This trend links developments concerning information policy to capitalism, based on technocratic issues, and politically linked to the development of communication infrastructure and telecommunication, ownership and control over information and control over access to information.

The linking of access to information to capitalism for the information economy is in conflict with social aspects concerning the value of access to information for society. Information needs to be understood as a public good where information should be valued as a commodity

for the welfare of society, with regard to information for medical and health care, human communication and development, education and environmental issues. As explained in chapter six, the trend towards global governance of information policy, is economically motivated by large organisations. International organisations such as the WTO, ITU and WIPO are influencing global decision-making and governance of information, and access to information by encouraging trends towards privatisation and monopolisation of content and channels of communication.

The technocratic approach of these multi-national organisations towards development ignores the relevance of social issues. Social issues such as poverty, literacy, information literacy and education cannot be addressed by technology alone. Technology by itself cannot be used for the achievement of sustainable development. In a developing country like South Africa, it is imperative to address imbalances linked to issues such as poor levels of literacy, poor levels of education, limitations linked to the provision of access to information via libraries and information centres, and Internet access.

Other issues linked to public information, information ownership, open access and copyright developments are issues that are still being debated and have yet to be resolved.

7.2.2 Main Trends Relevant to National Information Policy Development in Other Countries

The main trends and developments observed in this study regarding information policy developed in other countries indicate that the developed countries find themselves at a distinct advantage in the current Information Age regarding access to information. Digital access to information and its application are providing a means to access information and also to distribute information directly to many users in the current Information Age.

Much of the rhetoric of the ideals set for the information society is technocratic. This approach is based on the vision of creating a global village and networked society with Internet access to all. This vision fails to acknowledge information for the public good in its perspectives regarding developing nations' development of information societies. Thus, the following main trends can be observed regarding information policy in the developed and developing countries of the world in the current Information Age:

7.2.2.1 *Information as a Public Good*

International trends have influenced general thinking regarding the value of information as a public good, with trends moving increasingly towards control of access to information for political power and influence, or uses of information for economic gain. Examples of the trend aimed at control of content and access to information are the extension of copyright protection (in a country like the U.S.A.), and control over digital format of online documents. These trends contradict the ideal of access to information as a human right as agreed upon with the Vienna accords on human rights, signed in 1989 by 35 nations.

Although access to information is generally accepted as central to information policy, and even though access to information is legally enforced in the Open Access legislation in many countries, access to information is not always provided. Further indications are that, global trends since 2000 regarding access to information are increasingly motivated by technocratic or capitalist values, or aimed at gaining political power as the central value attached to information.

The value of information has changed from that of a public good to one that is technocratic and driven by capitalistic values. Previously freedom of access to information was valued as part of the democratic ideal whereas now people, including government, are perceiving information as either a source of power or from a business point of view, a source of profit. This means that the idealistic view of the earlier part of the Information Age is now being subsumed under a more technocratic and capitalist view. Furthermore, the implementation of many aspects of the Information Age such as telecommunication is more beneficial to the people installing and controlling it (usually from the developed world) than the people supposedly benefiting from it.

One needs to question whether the Information Age and technological developments can lead to development or whether it is just rhetoric and ultimately only serves to widen the gap and further disadvantage the already disadvantaged. This is particularly true regarding access to

information, as information is often more difficult to obtain today for people without access to technology than it was previously.

Information should be valued more highly as a public good in developing countries, such as South Africa. The reasons for this are:

- (i) Access to information is provided at higher costs in developing countries. The reason for this is that information is not as readily available or accessible as the bulk of information in developing countries originates in the developed world. Thus much of the information is imported at high cost.
- (ii) Fewer channels are in place for the distribution of information resources in developing countries as the shops, libraries and access points for the sale or provision of access to publications, are more limited due to lower funding for public institutions such as libraries and limited demand for commercial publications, such as books. The demand for publications is limited in a country like South Africa for a number of reasons, including the lack of a reading culture, limited number of books in indigenous languages and poverty.
- (iii) Access to information in the public domain should be to the benefit of all. Information in the public domain provides as a channel of communication. This channel of information is important for the stimulation of public debate in the public domain regarding issues of national or international concern. Currently South Africa is particularly in need of the development and stimulation of public debate regarding political issues and the country's identity under a democratic post-apartheid government.
- (iv) Information published in the country such as books, journals and government information, must be collected, preserved and made accessible to all, as the living memory of the country's history and development. It is the task of the country's libraries and archives to collect, preserve and make these documents and publications accessible on demand. However, shortcomings in this regard observed in this study, indicate that the government does not adequately value the importance and relevance of the libraries and archives and their role in collecting and preserving the national heritage of the country. This is partially due to the problem that legal deposit is not adequately enforced. Although laws have been passed to ensure the collection of

South African publications, the National Library is struggling to perform its role or preserving the national heritage of the country.

7.2.2.2 *Access to Information and Human Skills*

The technocratic approach regarding access to digital or online access to information held by multi-national organisations and others towards development ignores the relevance of social issues such as poverty, literacy, information literacy and education (See: Par. 6.3.2). Social issues of poverty, low levels of literacy and education and information literacy are more prevalent in developing countries than developed countries. Societies with advanced levels of literacy and information literacy skills are able to benefit from the developments of the Information Age. Developing countries cannot address their development by technology alone. In a developing country, like South Africa, it is imperative to address imbalances linked to issues such as low levels of literacy, poor levels of education, limitations linked to the provision of access to information via libraries and information centres, and Internet access.

7.2.2.3 *The Cost of Creating Information*

Developing countries should value their own information highly. The production costs of publications are generally higher in developing countries as fewer copies are generally produced due to a small market. This results in lower profits and less competition in the market place which could result in higher prices for local publications. Research information on experimental and applied research is often produced at higher costs than in the developed countries. The creation and growth in technical and experimental research output become more costly when technical equipment and know-how needs to be imported. The maintenance of these facilities and laboratory equipment requires skilled technical staff adding to the cost of the research. Furthermore, less funding is available for research due to smaller government budgets for research and development. Opportunities and expertise for education and training in highly specialised research areas may only be available in developed countries, and this will add to the cost of training some of the researchers in developing countries. This indicates that the creation of some applied and experimental research findings take place at a higher cost in developing countries. Research facilities and equipped laboratories should be shared

by research institutions where necessary and practical in order to reduce the high costs of experimental research nationally.

It is also often difficult for researchers from developing countries to publish their research as English is spoken as a second language by most South Africans and the major journals are in English. Researchers in developing countries also struggle to get their research published in countries such as the U.K. and U.S.A., especially if the research is related to conditions pertaining to a developing country.

The bulk of the information circulated and available in the developing countries of the South originates from the developed North and is mostly supplied at high costs especially the copyright material which also needs to be paid for as regulated by the WTO. Current trends towards the promotion of Open Access Initiative regarding publishing, tend not to take into account that the publications from the South are more costly to create, and that only a small percentage of the world's population has access to Internet connectivity, mostly in the developed countries. These trends tend to benefit the developed countries and those who have digital access, while others are marginalized further.

The promotion of quality education and information skills in developing countries will help to increase the creation of local information material and publications. This will possibly assist in reducing the cost as the local information market grows and becomes more internationally competitive, while also creating a stronger voice for the countries of the South.

7.2.2.4 *Open Access and Digital Divide*

The Open Access Initiative is still in the early stages and a sustainable model for publishing online and peer reviewing journal articles has not yet been developed. Despite the uncertainties and risks in current open access publishing, this development is moving forward. The impact of this trend on the local publishing houses in developing countries may not be favourable if the role of editing and peer review were to move out of the country as part of the growing global system of knowledge production. This will lead to a decline in local skills in journal publishing. The income generated by local publishing will also move to benefit of

trans-national organisations controlling the conduit or networks for the distribution of the online journal content. Furthermore, those who do not have electronic access to information will not be able to view the online articles and as indicated earlier, only a small percentage of the world's population have Internet access, and it will take some time before network connectivity were to be widely accessible in all countries.

7.2.2.5 *Immediate Access to Information is Hastening Decision-Making*

Immediate access to information in newly released reports, conference decisions, or research findings is increasingly influencing attitudes towards the use of information. One of the influences is the tendency to make decisions based on newly released information. These decisions are taken more hastily than in the past before the existence of online access to information. The immediate access is leading to decision-making and perspectives to be more rushed, and perhaps based on ad-hoc findings and incomplete information gathered. The immediate access to information is replacing the “cooling off” period of the past, where decisions were made over longer periods and global influences were less dominant. Instantaneous communication is also causing the implementation of changes to take place over shorter periods. Some changes are introduced too quickly before considering all options or implications, leading to mistakes being made or inconsistencies with the changes introduced. This allowed governments to be less focused on global trends and international rhetoric such as digital communications.

A review of information policy trends indicate the need for governments to observe global trends, but to act according to local needs, certainly with respect to the development of the population, as found in this study. A developing country like South Africa needs to address the digital communication not from a technocratic or capitalistic point of view, but as a public good to provide access to information. This is particularly necessary with regard to environmental planning and development in view of water management related to environmentally sensitive areas such as wetlands, coastal development and river catchments areas and the potential impact of global warming on South Africa as a water-scarce country. In the past many wetland areas in the country were not adequately protected and development has taken place with the introduction of new settlements in environmentally sensitive areas

leading to soil erosion, river pollution, the outbreak of cholera and periodic floods experienced by the residents in these settlements. In some instances golf estates were allowed to be built along wetlands impacting negatively on the environment, even destroying the local habitat and sensitive ecosystems of these areas impacting negatively on aquifers and river systems in the country.

7.2.2.6 *Political Power, Capitalism, Ownership and Control*

Information policy developments over recent years indicate that governments use information for political power or economic benefit and increasingly treaties and agreements are influencing access to information based on ownership and control, linked to control over access to content in digital age. Technology is used to enforce access restrictions (such as DRM) and access to databases. The costs of access to information is increasingly being applied to the effect that it limits access to information for developing countries with less financial means, due to the application of longer periods of copyright and intellectual property controls. These technocratic and capitalist information policy trends are in stark contrast to the ideal of access to information as a human right. These trends are affecting developing countries more than developed countries.

7.2.3 Implications for National Information Policy Development for South Africa

As indicated in Par. 6.2, the viewpoint of the Transformationalists is the preferred view in this thesis. This viewpoint accepts the reality that global influences linked to globalisation are part of a historical process. This historical process links global developments and local developments by influencing local developments. In the process of linking the global and the local, globalisation tend to influence traditionalist perspectives. This reality makes it necessary to pay attention to global influences on information policy development. The findings explained in the paragraphs above make it necessary to take into account the influences listed within the context of South Africa:

7.2.3.1 *Information as a public good*

This study found that the South African government does not value information for development. The government has a technocratic view of information technology and

communication and does not appear to see information as a public good. This viewpoint is not in the interest of South Africa and its development in the current Information Age, as explained in the paragraphs above.

7.2.3.2 *Access to Information and Human Skills*

The current technocratic approach to access to information and information technology development in South Africa does not take into account the human skills needed to access and use the information. As explained earlier, the technology can be of little benefit without the necessary human skills to enable the accessing, use and application of the information accessed. Skills such as literacy, information literacy, basic education and training are essential for the society to benefit from the developments of the current Information Age. As shown in this thesis, both literacy and information literacy training need to be addressed more effectively in South Africa. Training of both literacy and information literacy skills need to be recognized at national, provincial and local levels of government in the country and the resources should be provided to address and provide training in these skills in the country.

7.2.3.3 *The Cost of Creating Information*

There is a need to stress the higher costs involved in creating information in developing countries like South Africa. The awareness of the higher costs involved should be linked to the value of development of human skills and growth in information output and capabilities in the country. This awareness will raise the profile of information as a valuable resource created for the good of society.

7.2.3.4 *Open Access and Digital Divide*

Trends regarding open access need to be understood within the context of the digital divide and the disparity regarding access to digital information. The Open Access publishing initiative is still in a development phase, but care should be taken to ensure that the benefits of this initiative are extended to the countries of the South.

7.2.3.5 *Political Power, Capitalism, Ownership and Control*

World trends link national policies regarding information policy to political power and national policy developments have shown that governments tend to move towards ownership and control of access to information. World trends in the Information Age include the convergence of different media, allowing access to information media. These world trends are influencing the media content and availability, while at the same time, the media are acting as facilitators of globalisation. Furthermore, information-related developments enable the transborder flow of information. The transborder flow of information has been growing together with the increase in the development of networks providing globalised access to information. The governance and control of these information-related developments are influenced, by trans-national organisations such as the WTO. These trends make it all the more important for governments in developing countries like South Africa to develop information policies to strengthen the skills of the population to participate fully in the information society of the Information Age.

7.2.3.6 *The Dichotomy of Global and National Information Policy Development*

The technocratic values driving global information policy highlight the unevenness of the developments in First World countries such as the U.S.A., Europe and Japan and the countries in the developing world as these values do not take into account factors such as illiteracy, low levels of education, and other related issues. The reality of the uneven process of information society development in a developed country and the situation of a society where it has not yet developed an information society was outlined briefly in the previous chapter (See: Par. 6.4.6). The emergent global information policy regime; (Par. 6.3.1) was also discussed in chapter three (See: Par. 3.4.3).

The Information Age highlights the uneven development of access to information in countries and even different regions in countries. Although countries have always had different literacy rates, levels of education, and some countries tended to have reading culture while others did not, the developments of information communication technology exacerbates the impact of these differences. For instance, First World countries tend to have well developed information

networks, easy access to information and advanced literacy levels, while developing countries tend to have comparatively limited access to information due to less developed information infrastructures, higher illiteracy rates, low levels of information literacy and other related disadvantages due to poverty. These influences have introduced a dichotomy in the issues addressed in the emergent global information policy and the issues addressed in a national information policy. This dichotomy is illustrated in this section by means of two models.

The influence of technology on global information policy is illustrated in Figure 7.1 as typically implemented in an information society in countries in the First World. Information is generally valued in these countries for economic, social and cultural development. Access to public domain information is similarly valued in these countries. The arrows in Figure 7.1 represent existing “bridges” such as the infrastructure, facilities or skills required to access information in an information society. These “bridges” include skills essential for the information society, such as information literacy and access to information content via networks such as Internet connectivity, libraries or other facilities. The global information policy regime does not address issues such as these as they are already in place in countries that are part of this type of society. The global information policy regime is motivated by technological or capitalistic values. The emergent global national information policy regime tends to focus on infrastructure development and the development of e-commerce. This model bases access to information on technocratic values motivated for the capitalistic benefits offered by telecommunication network developments and e-commerce.

Figure 7.1 National Information Policy defined by technological/ capitalist values

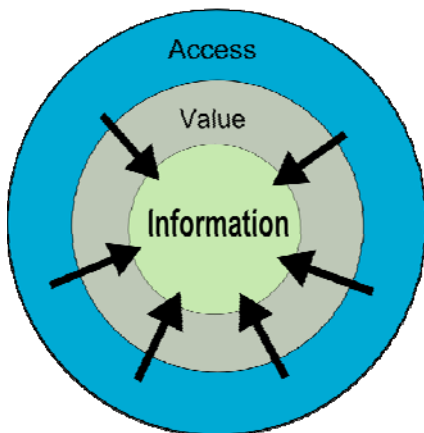
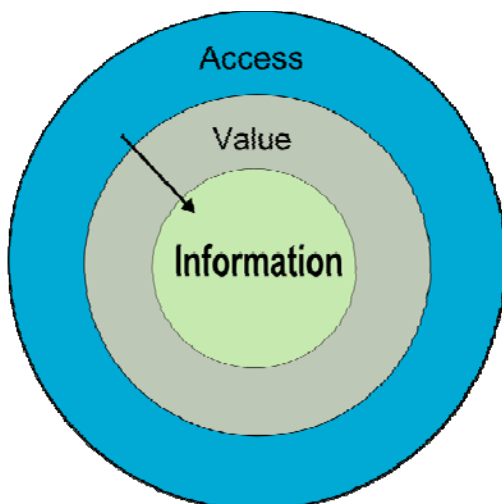


Figure 7.2 is a model of the information policy situation in a developing country where the society has not yet developed to an information society. This society does not have the same well-established “bridges” (such as information society skills, such as advanced literacy skills, information literacy skills, and access to information content via networks such as Internet connectivity, libraries or other facilities) available as found in an information society. In South Africa a dual system has developed as indicated in this study. South Africa has regions with a well developed information infrastructure and Internet connectivity and people who are skilled to access and utilise information effectively, while other regions lack connectivity and the people in these regions are generally not skilled to access information due to a number of limitations as explained below.

The single narrow arrow in Figure 7.2 represents the limitations regarding access to information in such a society. These limitations were discussed in this study with specific reference to South Africa regarding the high percentage of illiterates, poor levels of education, low information literacy skills and other socio-economic conditions linked to poverty, unemployment, access to libraries or other related factors.

Figure 7.2 National Information Policy defined by economic, social and cultural developmental needs



In both Figure 7.1 and Figure 7.2 the emphasis is on access to information as central to information policy. Access to information is well-established in Figure 7.1, as indicated by the many “bridges”. Access to information is readily available to this type of society by

means of well-established information and communication networks and facilities such as public libraries. The society is also skilled to access and utilise the information.

Par. 6.3.1 explained the values attached to information driving the Global Information Infrastructure and Global Information Society Regime. This emergent regime is driven by technocratic and capitalist values.

South Africa's information policy development has been influenced by this regime which is largely pushed by multinational companies in the telecommunication industry as well as the ideals of the countries in Europe, the U.S.A. and Japan. Related globalisation influences on social and cultural aspects were discussed in Par. 6.3.2 indicating the influences on national information policy developments in South Africa.

The value of information for development in South Africa was discussed in chapter five with reference to the flow of information in the country as facilitated by the country's information industry. The values attached to providing access to information by the emergent global information policy regime contrast with the value attached to access to information by national information policy for a developing country.

In this sense global information policy developments indicate a dichotomy regarding the issues that need to be addressed in a national information policy in a developing country like South Africa. Thus although South Africa is not yet an information society, global market forces are influencing national policy to reflect capitalist and technocratic values. The values of transnational companies, the capitalist values of the hegemonic triad, the U.S.A., Europe and Japan, as well as the technocratic approach taken by the WSIS, were found to be influencing South Africa's information policy development.

Thus, due to the unevenness of past developments and the challenges created by the emergent global information policy regime governments in developing countries are faced by two realities:

- the technocratic and capitalist values of globalisation pushing policy developments from outside the country, while at the same time
- national economic, social and cultural values are pulling from inside the country calling on governments to address national policy developments linked to the issues

such as illiteracy, low levels of education, the development of information literacy and a reading culture, and the provision of access to information in the public domain, by public and school libraries.

The values and pressures of the emergent global information policy are in opposition with the issues that need to be addressed on a national level pulling from inside the country regarding the developments of a national information policy specifically for a developing country like South Africa. This was indicated in the findings on the situational analysis conducted in this study regarding information-related issues that need to be addressed in South Africa.

7.3 CONCLUSIONS

Chapter two explains the political environment and process of national policy development in South Africa. The scope of national information policy is discussed in chapter four and tabulated (Table 4.3). All the information-related issues listed in Table 4.3 are reviewed with special reference to South Africa. These issues are motivated in this study based on the findings listed in Par. 2.4.1 in chapter two:

- Factors such as time, place and historical circumstances
- Policies implemented in other countries
- Policies with specific application, value attached, or intent.

This study found that the South African government has a technocratic view of information technology and communication and does not appear to see information as a public good. Currently, the South African government does not value information for development (Par. 7.2.3.1). However the situational analysis of South Africa indicates the need to address the information-related issues reviewed in this thesis in a national information policy. The issues are listed briefly below.

- Access to information
- Government information
- Literacy levels
- Computer literacy levels
- Levels of education and skills

- Information society development
- The North-South Divide (including the digital divide)
- Information content and industrial competitiveness
- Other such as e-commerce
- Telecommunication issues
- Copyright issues
- Industrial property rights
- Freedom of speech
- Censorship
- Information ownership
- Library services and archives
- Information valued for economic competitiveness
- Information valued for social, economic and cultural development in the Information Age (including media and communication policy, and international information flows).

The multiplicity of issues reviewed in the thesis, demonstrate the complexity of the situation regarding access to information and related issues in the country. This study outlines the main aspects of concern regarding each of the issues, but further research will be needed to clarify how these issues can be addressed effectively.

As indicated in the study issues such as copyright (a concern of many developing countries as present treaties favour the developed world); open access; legal deposit; access to information; the digital divide; as well as the others listed need to be addressed.

Thus, as discussed in this chapter the South African government needs to take into account the unevenness of past developments and the challenges created by the emergent global information policy regime. It needs to develop a national information policy to address and balance two realities:

- the technocratic and capitalist values of globalisation pushing global information policy development from outside the country, while at the same time

- addressing the national economic, social and cultural values pulling from inside the country, calling on the Government to address national information policy developments linked to issues such as illiteracy, low levels of education, the development of information literacy, the development of a reading culture, and the provision of access to information in the public domain, by public or school libraries.

Both realities are relevant and need to be addressed. On the one hand, South Africa does not want to be left behind regarding information technological development and needs to keep up with global information policy developments outside the country. On the other hand, the country needs to address the issues mentioned earlier in this section, including copyright; open access; legal deposit; access to information; the digital divide. It also needs to address the backlog in the country regarding internal issues such as illiteracy, low levels of education, the development of information literacy, the development of a reading culture, and the provision of access to information in the public domain, by public or school libraries. These issues will take time to address and there is no quick way to address them. As indicated in the study, technology can not be used to provide a short cut to development. Thus, Government needs to address the issues in a national policy to become an information society and be equipped for the challenges and opportunities for development and growth in the Information Age. South Africa needs to address the issues discussed even though it will take time. Should Government fail to address the issues, the country will not be able to participate fully in the emerging global information regime.

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