CHAPTER 5

INFORMATION POVERTY AND SOCIAL JUSTICE

5.1 General introduction

The aim of Chapter 5 is to illustrate that information poverty is of profound ethical relevance and as such a serious matter of social justice.

In the first part of the chapter I illustrate, by means of three core arguments, that information poverty is indeed a serious moral issue and therefore a matter of social justice. Following from this the second part of the chapter deliberates on justice as a moral tool that can be used to assess and guide information poverty. I argue that social justice has universal moral validity, that it has an important bearing on information-based rights as well as the fundamental freedom of people. Three core principles of justice are distinguished, and based on these principles I identify and discuss seven categories of social justice that can be applied to the moral problems associated with information poverty. I have published a summary of these three core arguments in 2004 in the Journal of Information Science (Britz, 2004).

5.2 INFORMATION POVERTY AND SOCIAL JUSTICE

It is clear, based on the discussion on information poverty in Chapter 4 that the gap between information-rich and information-poor people is a realy that affects the lives of millions of people. I will argue in the following chapter that this information gap is of profound ethical relevance. It is evident that the global modern capitalism driven by modern ICT, as well as the continuous trend to commercialise information products and serves, can lead to forms of social injustice in the creation, distribution of, access to and use of essential information. I present three core arguments, based on the discussion in Chapter 4 to further illustrate why information poverty is a matter of social justice.

5.2.1 Right of access to and communication of information

The fact that globalised capitalism is an information-driven model implies that the right of access to essential information is more than a basic

necessity. It must be regarded as one of the most important rights of the information era. I will elaborate on this important right in more detail later in the chapter. Alexander Graham Bell (1878), inventor of the telephone, said, "The poorest man [sic] cannot afford to be without his telephone" (Hamelink, 2000:84). One could rephrase Bell's famous words by stating that the "poorest person cannot afford to be without access to essential information".

The right of access to information is reemphasised today with the inclusion of Article 4 of the Declaration of Principles issued at the Geneva Summit of the WSIS (WSIS, 2003) stating:

> "We reaffirm, as an essential foundation of the Information Society, and as outlined in Article 19 of the Universal Declaration of Human Rights, that everyone has the right to freedom of opinion and expression; that this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers. Communication is a fundamental social process, a basic human need and the foundation of all social organisations. It is central to the Information Society. Everyone everywhere should have the opportunity to participate and no one should be excluded from the benefits the Information Society offers".

According to Habermas (1989), access to information is a fundamental and necessary pre-condition for personal development as well as socio-economic and political participation. One of Habermas' public sphere elements includes, for example, that museums as well as public libraries must make information available for free to everyone who lives and works or studies in a local area.

Building on Habermas' points of view I argue that a clear case can be made that access to information is a prerequisite for becoming a knowledge and information society. Acknowledging such a right not only allows access to the ideas of others, but opens up the opportunity to participate in global information-based socio-economic and political activities. The denial of access to information is therefore no longer merely a denial of access to the ideas held by others, or oppression of the freedom of expression; it will also marginalise people's participation in various economic, political and socio-

cultural activities. It touches the very heart of the modern information era (Lor & Britz, 2006).

The right of access to information has indeed become one of the fundamental individual rights. Not only is it an individual right. The fact that the global economy is based on the manipulation of information puts this right within the realm of a social right – in other words, the right to participate in economic activities. Apart from being one of the most important individual and social rights I also argue that access to information is an instrumental right, because it allows and empowers individuals to exercise all other rights. The South African Constitution rightfully defines the right of access to information within this framework (Constitution of the Republic of South African, Chapter 2 section 24, 1996).

The argument that access to information is an instrumental and individual as well as social right not only implies the protection of this right, for example, in a constitution and by means of legislation, but also ensuring the enabling of this right. One can indeed argue that society has a moral obligation and legal responsibility to create an accessible information infrastructure together with a legal regime that will allow citizens not only the protection of this right but also the means and ways for exercising it.

It is therefore clear, based on the preceding deliberations, that for poor and developing communities the exercise of this right is threatened by amongst others the commoditisation of essential information and the exclusive (and exclusionary) use of modern ICT. This dominant role of ICT not only excludes certain people from accessing information but also limits the creation of equal opportunities for participation in economic and other processes. This leads to the ethically relevant question: How could one find a proper balance between the interest of the creators of knowledge and the public interest? In other words, which information products and services should be regarded as a common good, and how should they be distributed in a fair manner? This question has a specific bearing on the current intellectual property debate and as I have indicated in Chapter 4, it is doubtful whether the current global governance of intellectual property rights can provide such a balanced approach.

Individuals and societies that are excluded from modern ICT are not only denied access to most of the information that is on the Internet, but, as a result are also denied the opportunity to let their voices be heard and to

express their opinions. This puts a serious burden on the world's dialogue and communication abilities, which are more critical that the mere exchange of information (Britz, 2004). Hamelink (2003:40-43) expresses his moral concern that without global dialogue, the sustainability of our common future is at risk.

I have pointed out earlier that Herbert Schiller, a prominent figure amongst a group of Critical Theorists, specifically criticises, from a moral perspective, the current political economy of the production and distribution of information products and services and of information-based technologies (1981, 1983, 1984, 1991). According to him the information society is driven by advanced capitalism and information products and services are produced to meet the needs of super-corporations and the national government bureaucracies of the advanced industrial states. The free market principles of production and distribution are according to him likely to exclude all but a small minority of the public. He further argued that the promotion of the marketplace will inevitably lead to a decrease in support for key information industries that were for very long dependent on public funding. He refers specifically to libraries, museums and certain forms of mass media like national television and radio. This leads to the so-called new "information class inequalities" whereby the ability to pay for information will become the determining factor for access to information. The "ability to pay" criteria for the information society led Schiller to distinguish between the information rich and the information poor (1983). This is according to him an "access gap" that will widen because the information rich will be the educated and economically privileged and they will be able to extend their advantages by being able to access value-added information resources that are mostly protected by intellectual property legislation. Those at the bottom, the information poor, will not only be denied access to this much needed information, but will be swamped by what he coins as "garbage information" – mostly entertainment, gossip and sport.

5.2.2 Power relations

Another ethically relevant issue is that information equals power and power implies responsibility. The problem, as I have pointed out in the previous chapter, however, is that information becomes a source of power only if there is an information infrastructure and when people have access to the information together with the skills to put information to use (Neill, 1995).

Giddens (1985) furthermore points out that power and the accumulation of information are intimately connected and lie at the heart of the modern nation state. This specific relationship between power and information is certainly not to be ignored and explains the growing concern amongst civil libertarians that institutions, and more specifically the state, want to see everything to put them in a position of power and control. Modern ICT creates the possibility for this to come true. The main concern is not only that it will threaten the rights and freedoms of individuals, but also that it can create asymmetric information relationships reflecting a scenario whereby citizens will experience that they don't know who knows what about them. The moral concern is that this development, fuelled by global terrorism, has become inescapably attractive to governments. This can and as a matter of fact has already caused government agencies around the globe to access data and files of individuals collected for other purposes. This is done in many cases without the consent or knowledge of those individuals (Webster, 2002).

Such an asymmetric information relationship whereby people are being observed without their knowing it can also be illustrated by the *panopticon* metaphor to which I have referred in Chapter 4. For the sake of the argument I elaborate on this discussion. This notion was popularised by the French philosopher Foucault (1977). The idea actually originates from the British philosopher Jeremy Bentham who used it to describe the architectural design of prisons and hospitals in Britain at the time. Custodians and guards, located in a central, but dark position could observe patients or prisoners without themselves being visible. Prisoners were usually held in separate, illuminated cells on the circumference. Foucault used this metaphor to describe what is happening in today's modern information-based societies. Due to modern *panopticon* technologies people are watched and decisions are made about them without their being aware of it. For Foucault this is a discipline society, because the observed cannot "see" the observers, neither do they communicate with others who are being observed. According to Foucault this new relationship between power and control is an integral feature of the modern advanced societies.

Power and the accumulation of information is not only limited to governments. Corporate capitalism has also discovered the economic benefits of surveillance and is a trespasser in this field. It started with F.W. Taylor (1947), the father of scientific management, who in the late 19th

century argued that managers are information managers specialising in the observation of workers to maximise production and serve the cause of capitalism.

Turner (1991) advocates a symbiotic relationship between intelligence and business. Intelligence includes the gathering, processing and use of information of workers, competition and consumers. In line with this, Webster (1995:72) argues that corporations "…have burrowed deeper into the fabric of society, both by developing the outlet networks which are readily seen in most towns, and by replacing much self and neighbourly provision with purchasable goods and services".

It is clear that these power relationships, based on control and surveillance, do not stop at the shop floor (Webster, 1995). The focus has shifted to find out more about lifestyles of potential and actual customers and consumers. Modern electronic technologies are used to profile customers, allowing big businesses to portray an individual's spending patterns, preferred shopping locations, buying habits as well as tastes.

The moral problem is that as the scope of surveillance and profiling in a society grows, the confidentiality of communications diminishes (Hamelink, 2000:126). It is therefore a legitimate concern for justice. This imbalance in power touches the very heart of human freedom, dignity and security.

The ethical dimensions of the relationship between information and power take on different forms. The first relates to ownership of information. Schiller (1991) argues, for example, that the commoditisation of especially collective information results in this information becoming the intellectual property of a few individuals and companies and that access thereto is controlled on the basis of this ownership.

New power relations can also be found in economic totalitarianism. It can be primarily attributed to the development and expansion of the so-called information conglomerates. The mergers of America Online and Warner Brothers as well as many telecommunication companies in the USA serve as a prime example of these information giants. In this regard Aidan White (2000), the general secretary of the International Federation of Journalists, remarks: "…this merger may redefine the worlds of entertainment, communication and commerce, but it may also threaten democracy, plurality and quality of media".

5.2.3 Relevancy and accuracy

Of ethical relevance is also the fact that, aside from the withholding of essential information, large amounts of non-essential information, including for example sport and entertainment as well as one-sided news reports are distributed via the internet, television networks and other forms of mass media (Britz, 2004:200). Schiller (1981, 1984) refers to this as cultural imperialism, and as I have pointed out in Chapter 4, the French philosopher Baudrillard (1993) is of the opinion that this phenomenon gives rise to more information and knowledge being available but with less meaning. This phenomenon, without a doubt, casts a shadow of suspicion on the quality and usefulness of the distributed information. In addition, the extent of the distribution of this information contributes to a form of cultural expansionism at the expense of indigenous cultures (Britz, 2004). In research conducted by Cullen (2003), it was found that especially non-Western cultures have no real need to search for information on the Internet as it was irrelevant to their needs. De Mul (2003) as well as Giddens (1991) pointed out that even for first world societies, cultural representation and expressions via the Internet and other forms of mass media did not reflect nay more a true reality and in this way created cultural as well as identity uncertainty.

It is thus clear, based on the deliberations in Chapter 4 and these three core arguments, that information poverty is a serious moral issue. It not only affects the individual and community in terms of human freedom, dignity and autonomy, but also limits the individual's and society's ability to make informed choices and to develop in the different spheres of live. Asymmetric information relationships also give rise to new power relations, and in many cases leave information-poor communities powerless and dependent. No society can exist without essential information; and the primary requirement of a just society is fair information distribution and equal access opportunities (Britz, 2004).

I argue therefore that information poverty is a matter of justice. In the following paragraphs I will deliberate on the notion of justice and human rights and explain how it can be used as a moral tool to assess and guide information poverty.

5.3 Justice and human rights: moral tools to assess and guide information poverty

5.3.1 Social justice, human rights and universal moral consensus

The debate on and search for moral foundations has a long and complex history and is indeed a difficult but important challenge. There are two possible approaches. One is the post-modernist approach that is in most cases inclined to reject a common moral foundation which has universal validity. At the other end of the spectrum there are those, within the modernist tradition, that are in favour of a shared moral foundation that has universal validity.

In line with philosophers such as Kant (1981) Rawls (1971) and Habermas (1993) I argue that, in dealing with the above-mentioned moral challenges facing information poverty in specifically developing nations, there is a need for a moral consensus that is in some sense universal. Such a moral consensus should be agreed upon by all the bodies that are involved in alleviating information poverty. Both Rawls (1971) and Miller (1999) point out that without a "basic structure" in society – which in this case is constituted by the international and national bodies involved in fighting of information poverty – it is impossible to define rights and duties and moral obligations. In other words, without the agreement of and the establishment of a "basic structure to eliminate information poverty" it is impossible to create a common moral foundation. In the process of establishing a common moral foundation it is furthermore of the utmost importance that the voice of the poor should be loud and clear. Moral consensus should not become, in the words of Lyotard (1985) another "grand narrative" with absolute truths that only represent one viewpoint. Habermas (1993:x) correctly points out that norms are only valid if they are approved by all affected parties. This can only be achieved when there is an open dialogue between equal role players (rich and poor) that are involved in information poverty.

In support of my position I quote Hamelink (2000:59) at length:

> "One of the problems with a relativist position is that there is little hope for justification outside the boundaries of a specific situation. Thus moral relativism may ultimately lead to moral indifference for events beyond the confines of a local scheme of values. Against this, the universalist position [the position that I support - JJB] accepts that there are values that transcend local boundaries

and that these are applicable to all. The universalist refuses to abandon the world and its people's common future to moral indifference".

Based on the value statement that the alleviation of information poverty serves a common good purpose, I am of the opinion that there are two moral principles that meet the requirement of universal validity and that can be used to guide moral decision-making regarding information poverty. These are justice and human rights.

The question can then be asked: why justice? The answer lies fundamentally in its definition: to give a person or a group – in this case all those who are involved in, and exposed to information poverty – what they deserve. Justice, as moral notion and if applied correctly, prevents harm and demands treatment that respects humanity. It would ensure that individuals, communities and society adhere to their moral obligations and responsibilities regarding the information poor.

Human rights, as an expression of human dignity and autonomy, are also closely associated with justice. Human rights can actually be seen as the legal articulation of the core and fundamental principles of justice. Miller (1999:13) strongly argues that "…a central element in any theory of justice will be an account of the basic rights of citizens…".

5.3.2 Defining justice

Justice, in the tradition of Plato and Aristotle, is seen as the most important virtue regulating human behaviour. John Rawls (1973) remarks in the introduction of his book on social justice that "justice is the first virtue of social institutions just as truth is for systems of thought". He therefore views justice as an important virtue for any social institution and indicates that it should be used primarily as a normative instrument in the evaluation of an institution or in societies (1973:5). The reasons for this are that social justice not only creates a consciousness within the community with regard to social injustice, but also that social problems, including the inequality between information-rich and information-poor communities, are addressed practically. As a social virtue it sets out important principles for a fair and equitable treatment of all people within communities and offers normative guidelines for the regulation of existing inequalities, for example between the information poor and the information rich, within social institutions.

According to Young (1990) it is a negative and positive virtue. The correct application of justice not only prevents conflict in society, but also contributes positively to the development of mutual respect and recognition of human dignity as well as the creation of a sustainable environment within which to live.

5.3.3 Scope and structure of justice

Justice is a public matter and addresses collectively public and social matters which can be changed or altered – such as poverty. The scope of justice "concerns any aspect of human life where people's lives can be harmed, their dignity be violated or their development be constrained" (Lötter, 2000:191).

For justice to have an impact on society there must be a common voice and a common point of view and agreement on justice. Such a common point should be embedded in a constitution, laws, rules and a social structure that recognises shared moral values and norms (Miller, 1999). This allows citizens the moral right to claim certain rights based on justice as it is expressed in the rules and regulations. Rights also imply duties, which mean that citizens also have a moral responsibility to others to treat them in the same just manner.

In discussing the scope of justice it is important to understand that justice is not only limited to the public and the societal spheres (Rawls, 1971; Sen, 2000). Justice as a public interest is not limited to the broader public, but takes into consideration the well-being of individuals – whether they are poor, marginalised, assaulted or raped. Justice therefore requires that individual and private matters, for example, family issues, become public matters (Young, 1990, Lötter, 2000).

Lötter (2000:191,192) also argues that, although justice covers most aspects of human life, not all norms and rules apply to all circumstances. People differ and so do circumstances. Treating people according to merit will, for example, only apply to certain sectors of society whereas respect for human dignity will apply to all spheres of live. I will elaborate on these important issues of justice and human differences in the next section.

Lötter (2000:188) and Hampshire (1989) both warn against the blindness of injustice when there is an assumption that a particular social arrangement in

a society cannot be altered or changed due to its perceived nature, social setting, customs or religion. These preset conditions make it difficult to change or alter society according to the moral imperatives set by justice. This explains why little is sometimes done to alleviate poverty in societies where the poor are voiceless or where women are perceived as inferior. These hidden forms of injustice need an in-depth and sophisticated analysis. This articulates again the complex nature of justice.

It is important to make a few pertinent remarks on globalisation and justice. Lötter (2000:200) correctly argues that in the era of globalisation it would be wrong and inappropriate to distinguish domestic justice from international justice. Two arguments can be used to support this point of view. Firstly, some local issues concerning justice intersect with international justice – such as the 9/11 attacks in the US, the former apartheid system in South Africa and the current state of poverty in most African countries. Secondly, the introduction of modern ICT opens up the world, simultaneously allowing interactivity, customisation and broadband (Evans & Wurster, 1997). The introduction of the Internet and the Worldwide Web, in the words of Tomas Friedman (2005:48), has flattened the world where the "walls came down and the windows went up". Time and space are no longer constraints for human communication and other activities. Virtual communities are formed and it has become nearly impossible to distinguish between the local and the global. The boundaries between local and global justice have become blurred and they have indeed become interrelated concepts. It is mainly based on the "flattening" of this world that the sense of international justice had a major impact on the way in which poverty in Africa is addressed by the rich nations of the world.

Justice has become a global normative tool that can successfully be applied to ensure fairness when it comes to the treatment of the information poor. As a normative tool it is based on the core values of concerns and fairness towards others (Kant, 1997; Hamelink, 2000; Belsey, 1992). As humans we share the same basic needs, have the same self-interest, but also share the same concern for others. These concerns must be expressed by the idea that "the other" is a person.

This core and fundamental principle of justice allows us to identify, apply and interpret universal principles of justice. The well-known Australian philosopher Peter Singer (1981) correctly argues that non-poor people, irrespective of where they live, or of how many people are able to assist,

have a moral obligation and responsibility to the poor. Not being involved in the lives of the poor (and one can add the information poor) is according to Singer a violation of the important value of respect for the other.

5.3.4 Justice and human capabilities

From the perspective of information poverty it is also important to give a brief overview of the capability approach which has it roots in Karl Marx, Adam Smith and John Stuart Mills (Robeyns, 2003; Clark, 2006). The main pioneers of this approach are the economist and philosopher Amartya Sen, whose first publication on the capability approach saw the light in 1979, and the philosopher Martha Nussbaum, a student of Sen, who started to publish on this topic in 1988. Sen (1995) initially saw his approach as the providing of an evaluation space for human well-being and not a framework for the development of a theory of justice. Nussbaum took a more specifically social justice approach but both authors argued that the focus of development theories and social evaluations and policies should be on what people are able to do and what they can become. I will explain these two important notions in the following paragraphs.

The capability approach is important for a study on social justice and information poverty for a number of reasons:

- As an interdisciplinary approach it allows the study of information poverty from both an applied social sciences and an applied philosophical perspective.
- As an approach it allows the study of international and global issues as well as evaluations of local and national conditions. Fukuda-Parr and Kumar (2003) pointed out that this approach is widely used in the design and application of development policies around the world.
- This approach applies to both the rich and the poor and presents a tool that can evaluate and facilitate development together with reform and change in welfare states (Robeyns, 2003:6).
- As a normative instrument to evaluate societies, it allows one to focus on the questions of why people are information-poor as well as the condition of being information-poor.
- It allows one to differentiate between individuals in terms of choices to be information-poor, conditions of information poverty as well as different sets of capabilities and how these impact on conditions of information poverty. Acknowledging human diversity is central to

Sen. According to Sen (1992:xi) human diversity "…is no secondary complication to be ignored, or to be introduced 'later on'; it is a fundamental aspect of our interest in equality".

- As an approach it allows for the notion of human responsibility to be introduced. The ability and opportunity to make choices implies a certain level of human responsibility regarding choices that are made.
- Based on this approach, it is also possible to develop a universal set of information-based human capabilities. Such a list can be expressed as a set of universal information-based human rights.

As an interdisciplinary approach, the capability approach deals with the full terrain of human development and in a nutshell can be defined as an approach dealing with social change in society by providing a normative framework for the analysis and evaluation of social arrangements, but more specifically for the well-being of individuals. The focus is primarily on inequality, human ability and poverty, and it is not based on a mere cost-benefit analysis to measure poverty and inequality. In other words, social evaluation of poverty and inequality is not done in exclusively monetary terms. As an approach it also identifies those social and structural constrains that influence and restrict human development and well-being (Sen, 1993; Robeyns, 2003; Kuklys, 2005).

As a point of departure, this approach takes individual capacity in terms of what people are able to do and to be. This focus on human capacity brings a new emphasis on human development and the fulfilment of human needs. As such it differs from the more traditional utilitarian approaches (Robeyns, 2003:5). According to Sen (1984) happiness represents only one aspect of our human existence. Sen (1984) further argues that we need to recognise human diversity in defining human well-being, and if it is not taken into consideration in social analysis, we will fail not only to understand the different resources people need to achieve human well-being, but also to address it properly. Sen (1984), although influenced by Rawls, also criticises him in this regard for not acknowledging sufficiently that different people have different needs and need different resources to fulfill those needs.

Sen (1993:30) formulates this approach as follows:

"The capability approach to a person's advantage is concerned with evaluating it in terms of his or her actual ability to achieve various functionings as a part of living".

The capability approach has as its focus what people want to be – in other words, their well-being, together with the opportunity to undertake actions and activities based on their individual capabilities to achieve their well-being. Sen (1993) refers to these actions and activities as functions which can, for example, include working, the ability to rest, to be healthy and to be educated. Functioning is therefore the use that a person has of commodities that are available and that such a person command. Sen (1993, 1999) makes an important distinction between:

- achieved functions – actions and activities that have been realised and
- capabilities – what is effectively possible to do to achieve well-being. This is also referred to as human 'freedom'. A capability in other words reflects a person's ability to achieve a particular function in different ways. A strength of Sen's approach is that there is no one particular set or list of capabilities.

However, functions and capabilities are closely related. According to Sen (1987:36) a "function is an achievement, whereas a capability is the ability to achieve. Functions are, in a sense, more directly related to living conditions, since they are different aspects of living conditions. Capabilities, in contrast, are notions of freedom, in the positive sense: What real opportunities you have regarding the life you may lead". What matters in other words is not what you have, but what you can do with what you have.

According to Sen, people must have the freedom (capabilities) to be what they want to be to live their lives according to their choices. These capabilities, if available, allow effective choices for individuals in terms of what they want to be. In practical terms it means that people must have, for example, the opportunity to work and to be educated and be part of a community. However, they should also have the choice of which community they want to belong to and what work they want to do. Having the opportunity and the freedom to choose implies responsibility regarding the choices that people are making. Robeyns (2003:21) explains: If you are educated and able to work, and there is a job opportunity available and offered to you, then taking the job that allows well-being is an opportunity. By not taking the job one will not be able to enable those functions (human well-being) and such a choice can be seen as a negligence of one's own responsibility.

Robeyns (2003:11) uses another example to illustrate the difference between functions and capabilities. Two people are both not eating enough to enable the function of human well-being. The one lives in Ethiopia and is a victim of famine, while the second person lives in the US and has decided to go on a hunger strike in front of the Chinese embassy in Washington DC to protest against China's occupation of Tibet. Although both persons lack the function of being well-nourished, the freedom (capability) to avoid being hunger is the crucial distinction. The protester in Washington had the capability (freedom to choose) to achieve the function of being well-nourished while the person in Ethiopia lacks this capability.

It is also important to distinguish and understand the relationship between the following variables:

- Means to achieve.
- Freedom to achieve.
- Achievement.

Means to achieve are the availability of those products and services needed to achieve human well-being; these goods and services are not limited to commercial transactions. The main characteristic of a product or service is the fact that it enables a function. For example, we are interested in a library because it allows access to certain information we need to make certain choices. Also, we are interested in a car, because it allows us to travel faster (function) than we can walk.

The availability and use of these products and services are influenced by three factors. Firstly, there are personal characteristics such as intelligence, level of education, skills and physical condition which influence the way in which a person is able to convert the product into a function. If a person is illiterate the use of books or other text-based material in a library will be of limited help to enable the function of being informed. Also, a car will be of little or no use to a blind person to enable the function of mobility.

The second factor is social characteristics. These include hierarchies in society, social norms, public policies, rules and procedures, cultural habits including gender roles and discriminating practices (Robeyns, 2003:12). Women in certain Muslim countries are, for example, forbidden to drive cars. Based on this social norm, embedded in public rules and regulations,

women have limited means to enable the function of mobility. The functionality of being informed and being knowledgeable is also severely limited in those cultures where girls, based on social norms, are excluded from certain levels of education. This approach therefore acknowledges the normative importance of groups.

Environmental characteristics which include climate, infrastructure, and public goods are the third factor that influences the way in which products and services can be conveyed into individual functioning. There is no or little use for a library if people do not have the means (transport) to get to the library to actually use it. Another example is the establishment of telecentres in the Sahara desert. However, if the computers at these centres are not adequately protected from environmental characteristics such as the heat and the sand, their effectiveness will be limited.

The availability and usability of products and services to enable human functioning is therefore complex and can differ from individual to individual. A clear understanding of individual, social, structural and climate (natural) conditions and circumstances is therefore a prerequisite for understanding and knowing the abilities of people to put available products and services to use to enable certain functionalities.

However, the capability approach does not use the function (for example, visiting the library or driving a car) as the ultimate normative measurement to evaluate society. The focus is rather on the real freedom of individuals, that is, in the words of Robeyns (2003:13), "…with their capability to function, and not with her achieved functioned [sic] levels". Functions are what we are and what we do in life whereas capabilities are the "…alternative combinations of functionings that this person can achieve and from which she can choose one vector of functionings" (Robeyns, 2003:13). Sen (2002) refers to this as the idea of opportunity. The focus of this approach is therefore on the ability of people to make choices (freedom to achieve) of what they want to be (achievements), and this can differ from individual to individual and from context to context. Products and services, including economic resources available, are important, not in themselves, but in terms of their effectiveness in the development of lives of people and to allow them to perform their chosen function.

Whether the focus of social analysis should be on achieved functioning or the freedom to achieve these functions (capabilities) will also differ and are

determined by context. For example, the capability approach will rather focus on the achieved functioning of the person who went on a hunger strike to protest against China's occupation of Tibet because of the fact that he went deliberately on a hunger strike. But as far as the famine and hunger in Ethiopia is concerned, the focus of the capability approach will be on the capabilities and freedom to achieve the function of being nourished.

Not only does this approach allow one to evaluate society based on either capabilities and achieved functionalities, but it also recognises individual differences. Two people, with the same capability sets, living in the same place, having equal access to products and services including information, might end up with different sets of achieved functioning because they made different choices based on a different set of priorities or because of social and other constraints such as legislation. This explains, according to Sen (2002), why the focus in social analysis should not be on achieved functioning only, but rather on capabilities.

The capability approach has some very important implications for information poverty. This approach re-emphasises the fact that access to essential information and the ability to benefit from this information is one of the fundamental sets of capabilities needed to achieve human well being. One can even rephrase Sen (1993) by stating that the ability to benefit from information is a "basic capability" (in his work Sen identifies certain "basic capabilities"). Not only is information essential to human well being, but it is instrumental to our freedom to make choices and to create opportunities to achieve this well being. The freedom to access information can thus be seen as a "fundamental freedom" that contributes to overall freedom. "Information freedom" can therefore be added to the list of five instrumental freedoms listed by Sen (1999:38). These are: 1) political freedoms; 2) economic facilities; 3) social opportunities; 4) transparent guarantees and 5) protective security.

As an approach it also explains and facilitates different contexts of information poverty (as I explained in Chapter 4). It allows focusing on different individuals within different settings by focusing on each individual's unique set of capabilities such as command of language and the availability of services to access information in a particular context as well as the choices individuals make in different contexts.

The capability approach can furthermore be used to explains how individual information-related attributes such as intelligence and blindness (in terms of access to information) as well as social amenities including the political economy of the distribution of information, intellectual property regimes and social settings (moral values and censorship) determine how products and services are converted into functions. Material assets alone are not enough to convert products and services into functions. Access to essential information and the ability to benefit from it is also crucial. Society's contribution to facilitate access to information and to ensure that people benefit from it (education) is therefore not only an economic necessity but also a moral imperative.

The capability approach therefore provides a normative framework to evaluate society's structure and policies based on the core principle of human well-being. Applied to information poverty it asks, for example, if people are information literate (achieved functions) and whether resources (for example, policies and taxes) are available to enable this capacity such as schools, libraries, information literacy programmes and access to the Internet. Are these resources present, accessible and affordable to those who need it to achieve their well-being? In other words, are society and policies structured in such a manner that they accommodate and support actions and activities to achieve information literacy? The capacity approach will therefore evaluate whether, and if so, to what extent, conditions are met to allow this capability (to be information literate) that will allow individuals to choose, which in Sen's terms can be translated as "human freedom", to materialise their goals. Resources required are not limited to financial resources, but will include issues such as the protection of freedom of expression, the right of access to information as well as a fair and just intellectual property regime that protects owners of intellectual property, but at the same time allows access to information and information resources.

5.4 Justice and human rights

Earlier in this chapter I argued that social justice not only has universal moral validity but that it has an important bearing on information-based rights as well as the fundamental freedom of people. In the following paragraphs I will deliberate on this relationship between justice and human rights.

Human rights can broadly be defined as just claims against someone or a society and can be seen as the protection of human dignity. Hamelink (2000) argues that the principle of human rights meets the requirement of universal validity. According to Hamelink (2000:59), "…human rights provide currently the only universally available set of standards for the dignity and integrity of all human beings". One can furthermore argue that although some of these claims do exist universally, the application and interpretation might differ from context to context. A variety of cultural interpretations and applications as well as legal articulations remains possible. The process of globalisation, stimulated by modern ICT, nevertheless reemphasises the need for a more cohesive application of human rights. Human rights reflect the following moral principles (Hamelink, 2000:62):

- Equal value of all people, implying that discrimination is inadmissible.
- Security and safety, implying that harm against human integrity is inadmissible.
- Freedom, implying that interference with human development and self-determination is inadmissible.

Human rights are therefore closely associated with justice. As I have argued earlier, one of the basic demands of justice is the recognition of the human dignity and the human rights of each and every person. As such it can be seen as the legal articulation of the fundamental principles of justice. Furthermore, human rights do not only act as a claim to ensure future justice but also as a remedy against injustice of the past.

Any vision of the development of an information and knowledge society, and of the alleviation of information poverty without a core set of information-based human rights, will only contribute to the widening of the gap between the information rich and the information poor while contributing to authoritarian models in society. Burch (2005:11) states: "Indeed communication has become so central to our lives, and the forces controlling it so powerful, that defending and guaranteeing communication rights has become an imperative for the women's movement, and indeed for any person or organisation concerned with democracy, development and social justice". In the same vein the WSIS (World Summit on the Information Society, 2005) has accepted the following declaration: "Communication is a fundamental social process, basic human need and the foundation of all social organisation. It is central to the Information Society.

Everyone, everywhere should have the opportunity to participate and no one should be excluded from the benefits the Information Society offers". The Council of Europe (2005) recognises that limited or no access to ICT can deprive individuals of the ability to exercise their basic human rights.

I propose a set of information-based rights which can broadly be defined as the body of existing information-related rights under international law that relates to

- freedom of the flow of information;
- access to essential information;
- freedom of opinion and freedom of expression;
- freedom of the press;
- the right to privacy;
- the right to be educated, and
- the right to own and control information.

Information-based rights, just like all other rights, are not absolute. They allow for exceptions and are confined by social responsibility. For example, the right of an individual to privacy is a *prima facie* duty that allows for exceptions. Two examples can be given. Firstly, police may violate a criminal's privacy by seizing personal documents and a government has the right to collect personal and some private information from citizens to ensure order and harmony in society. Governments are, for example, allowed to collect personal data for tax purposes (Britz, 1996b). Allowing collection of personal information related to taxation nevertheless does not give governments the liberty to spy on their citizens. In guaranteeing freedom of expression, national governments and international decision-making bodies must ensure that content related to child pornography, defamation, racism and sexism are combated by effective legislation. The right of access to information is also confined to that information a person needs to satisfy a basic need.

The distinction made by philosophers between positive and negative rights also applies to information-based rights (Johnson, 2000). Negative rights are those rights that require restraint by others and society. For example, my right to own information requires that society refrains from stealing my information. However, a society is not obligated to take positive action that will ensure my ownership of information. On the other hand, some

information-based rights are positive rights, implying that others do have a duty to take some actions to ensure that I can exercise these rights. These rights include the right of access to essential information and the right to be knowledgeable. For example, it can be argued that society has a moral obligation to ensure basic education for all because it will not only allow people access to essential information but also empower them to benefit from this information.

The inadequate enforcement of information-based rights is one of the main obstacles in the effort to successfully apply and protect these rights. There is abundant evidence around the world of the violation of these and other rights and the moral principles they stand for. There are a number of reasons:

- The classic gap between our moral knowledge and words and the way we act morally as humans.
- The limited powers of national and international bodies (for example, the UN) to enforce human rights are very limited.
- The lack, in many cases, of a political will to enforce these rights.

5.5 Human rights, freedom and social justice

From a moral philosophical perspective, these information-based rights are furthermore a matter of human freedom and social justice. There is a long philosophical tradition, starting with John Locke, recognising human freedom as one of our highest values. Social justice is the required moral tool for ensuring the protection and allowing of this right to freedom in society (Rawls, 1971).

What is then the relationship between human freedom and access to information? Freedom not only relates to our ability to choose, but also to the content of the choices that we make. The former category is known as formal freedom (the ability to choose) and the latter is material freedom (what we choose). The identified information-based rights, in particular the right of access to information, have a direct bearing on both these categories of choices. Without access to an information infrastructure, for example, libraries, books and the Internet, together with the ability to read and write, our ability to choose (formal freedom) will be seriously limited. To put it in Sen's terms: we will lack the capabilities to achieve our well-being. Our material freedom (what we choose) is also closely related to access to information. Irrelevant, biased and incorrect information all affect our ability

to make informed choices (Britz, 1996a:244). In the era of globalisation and the digital economy one can furthermore argue that limited access to relevant and accurate information not only limits our choices but also our ability to participate in the different information-based socio-economic and political activities – in other words: our freedom to participate. Freedom's prerequisite is indeed access to information infrastructures as well as relevant and accurate content.

Material freedom can furthermore be divided into negative and positive freedom and the one corresponds with the other (De Villiers, 1984). Negative freedom is expressed as "freedom from" and emphasises the negative side of our freedom according to which individuals have the freedom from negative actions that can inhibit their freedom. A good example of negative freedom in the political sphere is "freedom from" oppression and "freedom from" intrusion into the private lives of citizens. Negative freedom is therefore the absence of any negative actions and structures that inhibit our freedom. Corresponding to negative freedom (for example, absence of oppression and non-intrusion in our private lives) is positive freedom which is also expressed as "freedom to". This form of freedom allows us to positively express our freedom by means of our activities and the choices we make. Based on the above mentioned example "freedom to" would imply the freedom to participate in a free and fair manner in a democratic process. Such a form of "freedom to" can only be exercised when there is a negative "freedom from" in place – in this case, freedom from oppression. In other words, negative freedom protects our rights and positive freedom allows us to exercise those rights.

Negative and positive freedom have a direct bearing on our right of access to information. This can be explained as follows. Negative freedom (freedom from) implies freedom from those obstacles that bar access to information. These obstacles include legal regimes, for example, strict copyright legislation and censorship, moral convictions, including strict censorship based on moral values, and economic models that exclude the poor from accessing essential information. Our ability to make well-informed choices is to a high degree determined by the absence (freedom from) from these obstacles. Negative freedom therefore puts a moral burden on society to ensure that the political economy of information production and distribution is fair to all. Corresponding to negative freedom is of course positive freedom – freedom to. Applied to information-based rights it would mean that we have the right to express our views and to have access to the ideas of

others (corresponding to the negative freedom from oppression and censorship). The new digital economy also implies that we must have the right of access to information allowing participation in different economic and political activities. In the same way as society has a responsibility to ensure the absence of obstacles to access essential information (negative freedom), so does society have the obligation to ensure that people are able to access and use information. The protection of freedom (freedom from) has little or no meaning if it is not also an enabling right (freedom to).

From the above it is clear that freedom to and freedom from assign to both society and the individual a certain level of moral responsibility (Huber, 1993; König, 1988:83; Kant, 1997). As individuals we have the obligation to exercise our right to freedom of access to information in such a manner that we respect the freedom of others and do not trespass on their freedom and corresponding rights. In other words, we need to restrain from defaming others, recognise their right to intellectual property and their right to freedom of expression. In the same manner society has an obligation to ensure that individuals can exercise their freedom. It can therefore be argued that society should organise the information infrastructure in such a manner that individuals are protected from draconic information laws (freedom from), and have the equal opportunity to access essential information (positive freedom).

5.6 Basic principles of justice

Based on the discussion of justice, human rights and freedom, I identify 3 core principles of justice. These principles, based on Rawls' theory of social justice (1971) form the basis for addressing the moral concerns raised in the thesis. I have summarised these three principles in an article published in the Journal of Information Science (Britz, 2004: 201).

Principle one
The most important claim of fairness (justice) is that all people (information-rich and information-poor) must be treated equitably and be judged according to the same norms. Justice should allow the recognition that we are all human beings with equal values and similar cases must be handled similarly. Frankena (1962:26) correctly points out that the main purpose of justice is to allow everyone in a society to enjoy the fullest life possible. Justice therefore claims respect for the humanity of people and has the well-being of humans as its priority. This principle of justice reflects Rawls'

(1973:60) first principle of justice which reads as follows: "Each person is to have an equal right to the most extensive basic liberty with a similar liberty for others".

Principle two
Second, justice implies that a person ought to get that which is due to her/him (Rawls, 1971:10). According to this principle of justice everyone should get what they deserve – be it good or bad. The problem is of course that this principle of justice is empty if one does not determine what exactly a person in a particular situation ought to get that is due to him/her. It therefore "presupposes detailed arguments to convince others of what people ought to have a right to" (Lötter, 2000:196). This principle of justice illustrates the complexity of the fair application thereof. As I have argued in the previous section, in dealing with the capabilities approach, people differ, societies are unequal and contexts and situations differ from another. It is therefore important to determine, based on an in-depth analysis, not only what specifically information-poor people require within a particular context, but also to determine the opportunities available, human capabilities to enable those choices as well as means (products and services) available to allow human well-being.

Principle three
Although fairness recognises the fact that all people are of equal value, it also recognises the inequality between people in certain cases, for example, income, set of personal traits and different categories of work. Rossouw (1995), as quoted by Lötter (2000:193), makes the point that unequal treatment is justifiable in those cases where differentiation between people is based on publicly accepted criteria representing all. Inequality must, however, be based on certain norms and may not be at the expense of the equal value of all people. A common set of norms and rules to address the different situations and issues in question therefore needs to be in place in order to correctly accommodate differences based on merit and outcomes. According to this principle justice recognises the fact that information-poor and information-rich people differ and that there are certain inequalities in the distribution of and access to information. These inequalities must, however, not be to the disadvantage of the information poor. This principle of justice reflects Rawls's second principle of justice which states: "Social and economic inequalities are to be arranged so that they are both a) reasonably expected to be to everyone's advantage, and b) attached to positions and offices open to all" (Rawls, 1973:61).

If properly applied, and mutually recognised by all living within a particular society, these three principles of justice will contribute to the establishment of a fair, stable and well-ordered society. The fundamental rights of people will be recognised and protected, and the differences between individuals and groups will also be recognised and dealt with according to the degree of differences and contexts. According to Rawls, inclinations to act unjustly will be overridden by a strong sense of justice shared by society as a whole (1971:454, 5). Behaviour motivated by self interest will also be limited.

The three principles of justices are summarised in the following table:

Principle	Description
Principle one	All people must be treated equally and judged according to the same norms.
Principle two	Every person ought to get what is due to her/him – be it good or bad.
Principle three	Inequality between people should be recognised but it should not be applied at the expense of the poor and marginalised.

Table 3: Core principles of justice

5.7 Different categories of justice

A number of different categories of justice can be distinguished. Relevant to the discussion on information poverty I distinguish seven categories. These are: justice as recognition, justice as reciprocity, justice as participation, justice as enablement, justice as distribution, justice as contribution and justice as retribution. (Britz, 2004: 201-203).

Justice as recognition
Justice as recognition can be broadly defined as the finding of ways to appropriately recognise and respect the humanity and autonomy of fellow beings (Lötter, 2000: 193). It insists on a pursuit of equitable treatment of all people because they are of equal moral dignity.

Justice as reciprocity
Justice as reciprocity deals with the "nature and scope and content of fair terms of cooperation in the personal, social and institutional levels" (Lötter, 2000:224). It is closely related to Aristotle's notion of commutative justice,

and it requires "fundamental fairness in all agreements and exchanges between individuals or social groups" (National Conference of Catholic Bishops, 1997:42). It also entails that the same rules and norms will apply in all similar situations. This will eliminate any arbitrariness in exchange relations.

Justice as participation

Justice as participation refers to the creation of equal opportunities (Bedford-Ströhm, 1993). It implies the elimination of negative inequality, as well as the termination of the marginalisation of poor communities in society. Participatory justice positively emphasises the equality of all people in respect of access to equal opportunities. In this regard I agree with Sen (1999) that the fair distribution of opportunities and capabilities are to a certain extent more important than only the fair distribution of goods. The purpose of participatory justice is, in other words, to ensure that each individual in a community has an equal opportunity to fulfill his/her live.

Justice as enablement

Justice as enablement is concerned with the extent to which society enables or constrains the self-determination and self-development of individuals (Young, 1990). As a form of justice it oversees the process whereby societies, based on their moral obligation and responsibility, allows human development to such an extent that people are enabled to make their own choices in order to fulfill their human well-being.

Justice as distribution

Justice as distribution has it roots in the thoughts and writings of the Greek philosopher Aristotle and can be described as the fair distribution of income, wealth and power in society with specific reference to the satisfaction of basic needs (National Conference of Catholic Bishops, 1997). Different criteria for distribution can be distinguished – for example, merit, need and equality.

Justice as contribution

Justice as contribution ties in closely with distributive justice and relates to the manner in which society is organised in order to enable people to make a productive contribution to the general well-being of society (National Conference of Catholic Bishops, 1997). In economic terms it deals with the common good as well as the private good and centres on the selection of

products, the volume that must be produced, and to whom the particular production processes are allocated.

Justice as retribution

Justice as retribution is also known as punishable or transformation justice. It is based on the principle that any normative mechanisms that are responsible for the application of justice would be hollow without an enforcement/punishment component. It does not only refer to the fair and just punishment of the guilty, but also to how to transform and change existing practices and institutions as well as human behaviour (Lötter, 2000).

5.8 Categories of justice applied to information poverty

The question can then be asked: how can these different categories of justice be applied to information poverty to ensure that the moral concerns are addressed in a fair and just manner? In the next section I will illustrate how these different categories of justice can be applied in addressing the moral concerns related to information poverty.

5.8.1 Information poverty: justice as recognition

This principle is broadly defined as the finding of ways to appropriately recognise and respect the humanity and autonomy of fellow beings (Lötter, 2000:193). It insists on a pursuit of equitable treatment of all people because they are of equal moral dignity and reflects the first and second principle of justice. Essential resources are therefore due to the information poor because they are human. This form of justice confirms, in other words, that the information poor must have a right to all information-based human rights. It can furthermore be argued that those (government, private sector and individuals) who are in a position to do so have a duty and responsibility to provide or support the providing of an infrastructure that will ensure that these rights can be exercised (Britz, 2004:201). Singer (1981) would even argue that this obligation involves all who have the means to ensure such an infrastructure.

Equal recognition therefore implies respect for every human being. This in turn implies that those things that people need to live a meaningful life and to fulfill their humanity are due to them irrespective of their colour, income, merit, gender, religion or lifestyle. Acknowledging the equal moral worth of each individual implies, as a standard practice in all societies, the recognition of equal information-based human rights. All must have a

similar right of access to the information needed to satisfy basic needs (in other words, essential information), to have freedom of expression and access to the ideas of others, to be respected in terms of their privacy and the right to be knowledgeable to enable responsible decision-making regarding opportunities available to allow human well-being.

Based on an interpretation of the first principle of Rawls, one can argue that justice as recognition means to allow, at least in principle, equal opportunities of access to essential information that will allow equal opportunities to all individuals to participate in the different socio-economic and political activities of a society. However, as I have argued in the previous chapter, the increased censorship in many parts of the world (most recently in China), together with high levels of illiteracy, the high cost of specifically scholarly publications and limited access to the Internet in most developing countries has severely limited the creation of equal opportunities for participation. This puts a serious constraint on finding ways to recognise the humanity and dignity of fellow human beings appropriately. Information-poor people are in many cases also poor in terms of material means. This does not only mean that they are price-sensitive regarding available information products and services in the marketplace, but also that they are treated with less respect. Not having the means to access essential information in the marketplace puts them at risk of being unable to make choices or to participate. This can leave the information poor powerless and exposed to the mercy of those who are informed and knowledgeable. Having to rely on the knowledge of other people creates asymmetric power relationships (I have elaborated on this in the first part of the chapter) and puts them at risk of exploitation.

Allowing equal access to essential information will not only empower the information poor, and put them in a position to make informed choices, but will have a great significance for the information poor as it will contribute to recognising them as equal human beings. Allowing freedom of expression on an equal basis, as well as access to the ideas of others, will mean that the information poor will have a platform where their voice can be heard and to voice their interest, thereby recognising their equal status as human beings.

Justice as recognition also means that people must be treated and respected according to their own terms and conditions. Information-poor people may suffer massive injustices because they are regarded as less intelligent or even stupid. It must be borne in mind that the information poor, approached from

a person-to-person perspective, might have different needs and circumstances than the information-rich.

5.8.2 Information poverty: justice as reciprocity

Just as all societies before them, modern information and knowledge societies can be characterised in terms of contractual agreements that define their relationships, outline benefits and burdens and specify duties, obligations and responsibilities towards one another. Ensuring fairness in all these matters is an important issue of justice and explains why moral philosophy is being influenced to study social contracts.

Justice as reciprocity deals with these contractual relationships and can be defined as the form of justice dealing with the "nature and scope and content of fair terms of cooperation in the personal, social and institutional levels" (Lötter, 2000, 223). It is closely related to Aristotle's notion of commutative justice, and it requires "fundamental fairness in all agreements and exchanges between individuals or social groups" (National Conference of Catholic Bishops, 1997:42).

It entails that the same rules and norms will apply in all similar situations. This will eliminate any arbitrariness in exchange relations. An important issue of justice as reciprocity is to determine what qualifies as fair contracts and mutual agreements concerning trade relations with regard to information products and services. Information-poor people can be vulnerable to different forms of injustices when unfair procedures are used to determine these agreements. This might imply that the information poor are excluded from having the freedom in making informed choices in life and from the opportunity to participate fully in the different socio-economic and political activities that provide for the achievement of human well-being as well as development (Britz, 2004:202).

Lötter (2000:224) correctly points out that the procedure for determining fair terms of contracts and co-operation must be evaluated in itself, because "…an unfair procedure cannot lead to a just outcome". For example, the procedure followed to formulate and implement intellectual property legislation needs to be evaluated to determine whether these regimes are fair to the creators of the knowledge as well as the users thereof. Justice as reciprocity will investigate whether the creators and users of knowledge had enough power and influence to make any meaningful contribution to the

process of formalising intellectual property regimes. Similarly, the decision of governments on how many resources are allocated for education, and who can benefit from them, must be judged in terms of whether the allocation is fair in terms of the available resources and also whether it is just to all who have the ability to be educated. The problem is that the uneducated (information poor) and poor in many cases do not have the authority or power to ensure fairness in allocation of resources to enable access to education for all.

Terms of co-operation are based on trust and promises and create expectations. If a government promises to allocate resources that will allow affordable access to education for all and in addition promises to create an information infrastructure that will allow each individual to have access to a telephone within walking distance, expectations are created amongst the information poor. The information-poor communities can demand that the government fulfill these promises. Such information-based promises (education and communication) make the government accountable and imply that the government has a moral responsibility together with the legal obligation to fulfill its duties towards society.

Free riders of information products and services are also a serious matter associated with justice as reciprocity. Information-poor people can, depending on the circumstances, easily decide to become free riders if they perceive the agreements and contracts regulating the distribution of information as unfair (Britz, 2004:202). The problem is of course that modern information and communication technologies allow free rides at the press of a button and copyright owners do not trust society to have sufficient moral integrity to keep to the agreed contracts as they are spelled out in intellectual property legislation. This has led to a stricter application of intellectual property legislation in many countries – particularly the rich nations (Drahos, 2003).

Justice as reciprocity is therefore concerned with the fair procedures and outcomes in terms of social contracts and co-operation regulating the creation, gathering, adding value to, distribution and use of information products and services. If these procedures and outcomes are viewed by all involved as fair and open and to the benefit of all, modern information and knowledge societies will benefit enormously.

This category of justice reflects the second and third principles of justice.

5.8.3 Information poverty: justice as participation

From an economic perspective participative justice is defined as the way in which an individual makes a contribution (input) to the different economic processes in order to make a living. To enable this, equal opportunities for gaining access to private property in productive assets as well as equal opportunities for engaging in productive work need to be in place. Having equal access does not guarantee equal results. However, it requires that every individual in society is guaranteed the equal human right to be able to make a meaningful contribution to the economy. This can be by means of labour (as a worker) or by means of a person's productive capital, in other words as an owner. This principle of justice therefore rejects the following (Center for Economic and Social Justice, 2006):

- Monopolies in the marketplace.
- Special privileges to a few.
- Social barriers that exclude people from participating in the economic process.

Bedford-Ströhm (1993) refers to the creation of equal opportunities as participatory justice. According to him it implies the elimination of negative inequality, as well as the termination of the marginalisation of poor communities in society. Participatory justice positively emphasises the equality of all people in respect of access to equal opportunities. This position is in line with Sen's (1999) idea that the fair distribution of opportunities and capabilities is to a certain extent more important than only the fair distribution of goods.

As an expression of a basic form of justice it recognises the importance of policies and systems that not only support family life and smaller communities, but also enhance the economic, socio-economic and political participation of all. Economic systems that marginalise the poor and benefit the rich are challenged as unjust. Participatory justice therefore "…demands the establishment of a minimum level of participation in the life of the human community for all" (Economic Justice for All, 1995:439).

One way of violation of this form of justice is the marginalisation of people and treating them as if they are not human beings. There are many examples. I mention two – repressive governments and the inability of developing

nations to fully participate in the global economy due to restrictive measures taken by the rich nations to protect their own markets. Current trends reflected by TRIPS and GATT agreements are examples of these measures. Overcoming marginalisation is seen by the Catholic Church as the "… most basic demand of justice" (Economic Justice for All, 1995:439).

The purpose of participatory justice is, in other words, to ensure that each person in a particular community has an equal opportunity, not only to gain access to essential information, but also to receive education in order to benefit from access to information (Britz, 2004:202). In Sen's (1991) terms this will allow individuals the opportunity to develop their own dignity and to achieve their human well-being.

From an information poverty perspective examples of the violation of this form of justice include:

- Restriction of the freedom of expression.
- Violation of a person's right to privacy.
- Strict censorship and unfair intellectual property regimes.
- Creation of information monopolies.
- Economic policies that do not allow affordable access to essential information.

The application of participative justice therefore implies that there must be a basic level of access to essential resources for all, including essential information. Such participation is "…an essential expression of the social nature of human beings and their communitarian vocation" (Economic Justice for All, 1995:439).

This category of justice reflects the first and second principles of justice.

5.8.4 Information poverty: justice as enablement

This form of justice is concerned with the extent to which society enables or constrains the self-determination and self-development of individuals (Young, 1990). The modes of injustice as disablement include oppression and domination, preventing people from becoming fully who they are and preventing them access to the necessary material means needed to achieve their human well-being. Justice as enablement is therefore closely related to Sen's capabilities approach. These conditions of disablement are mainly due

to identifiable social factors such as actions of government and business that limit people's efforts to achieve what they want to be (Lötter, 2000:226). Certain conditions, such as poverty and natural disasters, furthermore contribute to the conditions that can disable people "…into lives far below their capacity" (Lötter, 2000:227). The problem is that poor people, which in many cases include the information poor, do not have the material means to develop themselves and to achieve human well-being and may therefore experience social isolation.

Human interaction and social isolation are two important notions in the discussion on the justice as enablement. Part of human self-development and self-determination is the fact that all humans are mutually interdependent. We all are to a certain level dependent on others to achieve our well-being and to satisfy our basic human needs. However, one crucial element of our self-development and self-determination is our ability to make our own choices – alone or in consultation with others. This ability not only allows human freedom, but also takes human responsibility into account. To make it relevant to information poverty one can argue that the lacking of emotional or intellectual ability to make choices makes people suffer because of their dependency on others to make basic decisions regarding their personal lives.

Based on the importance and value of human interdependency Lötter (2000:230) argues that caring for the disabled and those that are dependent on others to satisfy basic needs should not focus on doing as much as possible for them, but rather on encouraging their independence. This will assist in achieving their human well-being.

In applying the justice as enablement to the information poor I argue that information-poor individuals and communities frequently experience conditions of economic, social and political marginalisation that constrain their development. A variety of reasons exists. The most important is probably, once again, a lack of access to essential information needed for development as well the inability to benefit from access to essential information. Added to this is of course the fact that important resources needed for development are not always accessible even though the information related to development itself might be available. I dealt with this relationship in depth in Chapter 4. Illiteracy and information illiteracy also strengthen a feeling of powerlessness that can lead to the constraining of information-poor peoples' lives. This form of justice must therefore focus on

lessening information-poor communities' levels of what can be referred to as "information dependence" and powerlessness and implement positive education initiatives, such as development of human intellectual capacity, that can contribute to the actualisation of the self-determination and self-development of people (Britz, 2004).

How can the role and functioning of dependence be applied to the information poor? Depending on the reason for information poverty, information-poor people are in many cases "intellectually" disabled – not because they lack the necessary intellectual abilities, but because of a lack of education or related information skills to access the appropriate information, to understand and apply it correctly and to benefit from it. These disabilities severely limit their capability to make independent choices regarding important decisions in their lives. This not only degrades the information poor, but it creates a situation of powerlessness. This can add to further harm of the information poor. In many cases, particularly in the developing world, the information poor are voiceless and lack the political power and access to information channels to let their voice be heard. Information poverty is indeed a disabling condition that places restrictions on the ability of the information poor to make their own decisions and to develop themselves to achieve their own well-being.

This category of justice reflects the second principle of justice.

5.8.5 Information poverty: justice as distribution

The Aristotelian notion of distributive justice is linked with the equitable distribution of goods and a major part of the discussion on justice refers to the fair distribution of goods. Distributive justice can best be described as the fair distribution of income, wealth and power in society with specific reference to the satisfaction of basic needs (National Conference of Catholic Bishops, 1997). In other words, it has to do with the way in which benefits or burdens are allotted in society (Rawls, 1971; Frankena, 1962). Benefits include amongst other wealth (high income), opportunity for education, access to information that enables participation in various socio-economic and political activities and access to resources that provide opportunities in society for achieving well-being. Burdens, on the other hand, will include low income and poverty, lack of access to essential resources, including access to essential information, together with hard work accompanied by low wages. Distributive justice is therefore concerned with the formulation

of principles that must lead to a fair division of benefits and burdens in a society. These principles of justice must prohibit not only the unfair distribution of benefits and burdens in society, but must also ensure that distributive decisions are not made on arbitrary grounds.

Although different criteria for distribution can be distinguished (merit, need and equality), distributive justice in this context is primarily approached from a social perspective focusing on the basic information needs of the information poor. A good indicator of whether distributive justice prevails in the information and knowledge society is to note what different people and societies have, not only in terms of access and accessibility of essential information, but also in terms of the ability of those individuals and groups of people to benefit from the access gained. Distributive justice will ask:

- Who are the information rich in a particular society?
- What are the benefits they gain from being information-rich?
- How did they acquire their information wealth?
- What is the burden on the information poor and what are the main causes thereof?
- Why is there an unequal distribution of education opportunities within one country but also between countries?

In the information and knowledge society, operating within the new paradigm of a dematerialized economy, the information poor suffer many forms of distributive injustices. The growing gap between the information rich and the information poor is in many societies staggering. The information rich are in most cases well – educated and have the material means to pay for access to valuable information that allows the materialisation of opportunities. Conversely, most of the information poor in the developing countries are illiterate, do not have the material or infrastructural means to access the information needed and by implication are marginalised in terms of the materialisation of their opportunities in life. Affordable broadband access to the Internet is a near given in most information-rich countries and societies. The information poor living in Africa, for example, can hardly afford access to the Internet and in most cases access to the Internet is not even available. I will elaborate on this issue in the next chapter.

Distributive justice should therefore allow for the affordable or even free distribution of essential information to those who do not have the material means to afford it. Such an application of distributive justice will furthermore promote the creation of equal opportunities not only to participate in the different political and socio-economic activities in society, but also to achieve human well-being. Society thus has an obligation to the poor to fulfil these basic information needs. The only exception would be when resources are so limited that it is strictly speaking impossible to do so.

Based on the third principle of justice that I distinguished it can be argued that the unequal distribution of benefits and burdens in society is not necessarily unjust. There are, for example, good economic reasons why the COE of Intel makes more money that a professor or why people living in the US might have more affordable and easy access to the Internet than someone who lives in a rural town in Zimbabwe. However, what should be investigated is whether there are patterns in the divisions of burdens and benefits (Lötter, 2000:221). For example, does gender or race play a role in the division of burdens and benefits in society? If so, it should then be investigated whether some form of injustice is responsible for the fact that some people, based on their race or gender, are less well off than others. Why, for example, are fewer girls than boys on the African continent attending school (Britz, *et al.*, 2006; African Economic Outlook, 2006)? If the difference is based on a gender prejudice, it represents a kind of distributive injustice that needs to be investigated.

Rawls allows certain forms of inequality in society as long as they are to the benefit of the poor. I repeat his second principle here for the sake of the argument:

"Social and economic inequalities are to be arranged so that they are both (a) to the greatest benefit of the least advantaged and (b) attached to offices and positions open to all under conditions of fair equality of opportunity" (1971:83).

Inequalities are therefore only allowed if they benefit the information poor. If not, these inequalities are viewed as unjust. In other words, paying researchers a high income can only be justifiable if their research findings also benefit the poor and marginalised. The payment of copyright fees by universities to gain access to and use essential educational information is allowable if it benefits the students and society as a whole. As I have argued

earlier, the current trend in intellectual property legislation favouring the financial protection of the distributors of information products and services at the expense of access is strongly contested as it is believed to be unjust. One can indeed ask the question: how can the distributors of information products and services increase their profit margins – in some cases by more that 200% – while the actual production and marginal cost have decreased dramatically due to modern ICT? There does seem to be a pattern in current international intellectual property regimes that could be suspected of being unjust.

Related to the abovementioned issue is the unequal distribution of wealth between the actual creators of knowledge versus those that package and distribute it. Currently authors of scholarly publications, mostly journal articles, are not or scarcely compensated for their work, while the publishing houses make the profit (Lor & Britz, 2005).

Although distributive justice based on merit therefore allows the treatment of certain categories of information as a commodity that can be owned, distributed and used unequally in society, it can never override the principle of affordable or free distribution of essential information to poor and marginalised people.

This category of justice reflects the second and third principles of justice.

5.8.6 Information poverty: justice as contribution

This form of justice is closely linked to distributive justice and according to Ebener (2005:5), distributive justice without "…the fine points of contributive justice are moot". Justice cannot really be served if one fails to understand how contributions are made and by whom in order to ensure fairness in distribution.

Contributive justice plays a central role in the social teaching of the Catholic Church and is defined in the US Bishops' Pastoral Letter as the principle according to which people in a society are enabled to make a productive contribution to the general well-being of society (National Conference of Catholic Bishops, 1997:43). According to the social teaching of the Catholic Church, contributive justice emphasises three notions of social justice. These are:

- Duty: All who are able to create the goods and services necessary for the welfare of the whole community have a duty to contribute to the well-being of society. In the words of the belated Pope Pius IX: "It is of the very essence of social justice to demand from each individual all that is necessary for the common good" (National Conference of Catholic Bishops, 1997:43).
- Productivity: Productivity is a prerequisite if a society wants to have the necessary resources to serve the well-being of all. Individuals in society therefore have a responsibility to be productive to ensure that the means of serving the well-being of the community is found. However, productivity should not only be about economic efficiency. Patterns in productivity, such as discrimination in the workplace, and the well-being of workers should also be considered.
- Contribution of society: The organised economic and social institutions have a duty to organise their activities in such a manner that individuals can have the opportunity to contribute towards the well-being of the community without sacrificing their freedom and human dignity. "Work should enable the working person to 'become more a human being' more capable of acting intelligently, freely and in ways that lead to self-realisation" (National Conference of Catholic Bishops, 1997:43). The emphasis on self-realisation reflects Sen's notion of abilities and achievements. The document calls in particular upon business, labour unions and other groupings in society that shape of economic life to give in a more systematic manner towards the common good.

Contributive justice is therefore primarily concerned with the responsibilities and duties of members to not only the group to which those members belong but also to the broader community and even strangers. It requires a person who receives certain benefits from a society to maintain and support that particular society. Failure of contribution normally ends with enjoying fewer or even no benefits from society. As a form of justice it is not in the first place about the concern for the "self", or self interest; it is about our relationships in a given community and about our moral responsibility and legal duties to be contributing members of society towards what Aristotle and Aquinas called the "common good". It is about my time, resources and talents that I contribute toward the common good (Ebener, 2005:6). This is the reason why we pay taxes and are willing to pay for the use of certain information that is protected under intellectual property legislation. However, paying taxes is not only about what I can get back, but is more of

"…an unconditional contribution towards the common good" (Ebener, 2005:4). Contributive justice ensures that confusion and destruction is avoided in society and that all benefit from the same advantages that are offered. In the era of globalisation "society" has been redefined in a much broader sense. This implies that my duties and obligations towards "society" are not anymore limited to a specific group of people located in a particular geographical area.

Contributive justice also calls upon governments and other organised structures in society, private or public, to make a contribution to the common good. Governments, for example, have the responsibility to ensure that the rights of individuals in a community are protected, their human dignity respected and the least in society taken care of. This implies amongst others the fair distribution of those information and other goods and services that are regarded as common goods. The social and economic structures of society need to be organised in such a manner that everyone has an equal opportunity not only to contribute towards the creation of wealth in society, but also to participate in the various socio-economic and political activities in society.

The basic principles underlying contributive justice are very well articulated by the Kentucky Council of Churches which released in 1991 the following principles based on contributive justice in a "Call for Justice" statement (Commission on Justice Ministries, 2004):

- The mutual responsibility of all people, both as individuals and groups, for each other must be recognised.
- The participation in the opportunities and responsibilities of citizens in society must be promoted.
- Support and resources adequate for basic life necessities must be provided.
- All citizens must be encouraged to examine how existing social structures maintain injustice.

Violation of the principles of contributive justice includes free riders in the market place (see also Chapter 4). Free riders are those who benefits from advantages offered by the market system without wanting to contribute to the production of those products and services or the cost of distributing them. A case in point would be those who make use of local government services such as libraries, running water and electricity, without paying

(direct or indirect) for them. Contributive justice is also violated in those cases where individuals purposely deny others the use of a common good. There are several powerful illustrations. Creating viruses and distributing them on the Internet serves as one such an example. By spreading viruses on the Internet people are limited in their use of this common tool. Another example relates to insurance fraud – which can in essence be referred to as "information – fraud". If a false claim is not detected by the insurance company, a wrongful payment will be made to the claimant, which in turn will drive up the insurance cost. The additional cost will be carried over to all policyholders (O'Boyle, 2003:22). Governments and other institutions that shape the economic life in a society also violate the principles of social justice when they fail to create a system where all have the equal opportunity to participate in socio-economic and political activities. Failure by governments and other related institutions to fairly distribute basic services and products in society to those who need them to satisfy their basic needs can also be considered a violation of the principle of contributive justice.

Applied to information poverty, contributive justice would among other things be concerned with the production and dissemination processes of information, particularly essential information. For the logical flow of the argument, I repeat the definition of essential information here. By essential information is meant that information that is required for survival and development. This includes information related to the basic minimum needs of humanity, as well as information tools for trade and economic development – information essential for the development of capital generation and the infrastructure needed to support it, which includes backbone industries, basic science, and survival services in health, education, welfare, agriculture and labour. Since there is a societal benefit from using essential information, it is regarded as a public good, which is in most cases non-exclusionary in nature.

Contributive justice will ask the following questions regarding essential information:

- Who is involved in the production processes (creation) of essential information and is enough produced to meet the basic needs of people?
- Is the distribution of essential information in the marketplace fair and do government and other agencies involved in the socio-economic and political processes adhere to their moral obligation to ensure

affordable and accessible essential information for all? This question is based on the premise that essential information, which is non-exclusionary in nature, could be funded be means of taxes, donations and/or advertising.

This form of justice also emphasises the duty and moral obligation of knowledge creators to make a positive contribution to society as a whole. It also implies that individuals and communities must be permitted an (equal) opportunity to develop to their full potential and in the process make a substantial contribution to society that will benefit society. An example of contributive justice is the obligation on members in society to share their knowledge that will contribute to development of society (Britz, 2004:203).

By the same token, society has a responsibility to create an environment that is conducive for individuals to do research and produce information products that can be to the advantage of society. This category of justice can also serve to maximise the use of information for productivity. Based on this viewpoint it can be argued that society also has a responsibility to create a legal and moral environment that will stimulate creativity and productivity – for example, the encouragement of knowledge creation.

Following from this it can be argued that contributive justice also implies the effective enforcement of protective measures to ensure the fair protection of the economic interests of authors and publishers. Society has a duty to encourage and foster this participation and productivity in a climate that does not interfere with the freedom and dignity of an individual or society. For example, the promotion and protection of indigenous knowledge should not interfere with the practice of the indigenous culture or otherwise insult or disparage that culture. The patenting or other development of indigenous fauna and flora that results in the inability of indigenous peoples to engage in the use of the fauna and flora, through exclusivity or depletion or alteration, interferes with the basic freedom of the indigenous people to participate in their culture and can be seen as a violation of the principles underlying contributive justice.

Other forms of violation of the principles of contributive justice which are of specific relevance to information poverty include the following:

- The current trend in international intellectual property rights legislation benefiting the disseminators of information products and

services (mainly publishers) at the expense of the users. This brings into question the dual nature of intellectual property regimes according to which lawmakers have not only a responsibility to ensure the fair protection of the creators of information products and services and the economic interests of the distributors of these information products, but also the obligation to ensure fair and affordable access to the information products and services (Drahos, 2003; Hamelink, 2000).

- The profits that scientific publishers are making. In most cases it is exorbitant and at the expense of the developing world which cannot afford to pay for access to essential scholarly journals (Hamelink, 2000; Nayyer, 2002).

- The trend of depriving the original creators of knowledge of their rightful economic benefits. It has become common practice that authors and other creators of knowledge sign off their intellectual property rights (mostly the economic rights) to the publishing houses and other distributors of information products. This runs contrary to the principle of contributive justice according to which society has an obligation to ensure the creation of an environment that is conducive for individuals to be able to do research and produce information products that can be to the advantage of society.

- Intellectual property rights theft. The software and entertainment industries in particular are suffering big losses due to intellectual property rights theft. These "information free riders" violate the principle of contributive justice because they do not contribute to the production and disseminating costs of information but nonetheless want to benefit from it.

This category of justice reflects the second and third principles of justice.

5.8.7 Information poverty: Justice as retribution

This category of justice is also known as punishable or transformation justice. It is based on the principle that any normative mechanisms that are responsible for the application of justice would be hollow without an enforcement/punishment component. It does not only refers to the fair and just punishment of the guilty, but also how to transform and change existing practices and institutions as well as human behaviour (Lötter 2000:231). As a form of justice it aims to restore the position of both the offender and the victim to their appropriate positions in society.

The interpretation and application of this form of justice do not always imply criminal sanctions only, but must also ensure some form of retribution for harm inflicted in the past. This is different from a concept of just compensation in transactions (commutative justice) which is prescriptive. Retributive justice is post-scriptive as it is used to punish, correct or retribute past behaviour. Retributive justice comes into play, for example, on the debate whether to consider indigenous knowledge as property that belongs to indigenous people and whether use by First World developers is then a seen as a "taking" (owning) of that collective property.

Retributive justice therefore deals with the question of how society deals with the victims of injustice as well as with those who are responsible for inflicting harm on the victims. There are different ways of dealing with past injustices. One way would be to put the focus primarily on retribution and to look at ways to blame and punish the guilty. It is more or less in line with the idea that justice must prevail even if it means the end of the world – reflecting the Latin proverb: *fiat iustitia, pereat mundus*. This can be seen as the negative side of retributive justice because the focus is on revenge and retaliation that in many cases involve emotions such as hate, bitterness and anger. Another way would be to focus on the transformation of society and its institutions in such a way that it becomes nearly impossible to repeat the injustices of the past (Lötter, 2000). The process of transformation in Germany after World War II is a good example. The third option would focus both on retribution and transformation. The focus will be on investigation of past injustices, assigning of responsibility, but also on how to reconcile people, transform society and institutions and to develop new and shared values to ensure that past injustices will not happen again. The working of the Truth and Reconciliation Commission in post-apartheid South Africa serves as a good example.

The last option is the preferred option in dealing with past injustices. Not only does it take past injustices seriously and work towards reconciliation, but it also allows the victims of those injustices to raise their voice and be heard on their experiences of society's injustice against them. However, society must be open not only to listen to the victims of injustice, but also to create new structures and policies and to mutually develop a set of core values. Lötter (2000:234) formulates it as follows: "Openness to new demands that injustice be rectified thus fulfils a vital function in protecting the moral and social health of a constitutional democracy". Such openness

presupposes a system where victims can mobilise and let their voice be heard against injustice and against the violation of their humanity (Waltzer, 1983). The information poor that are excluded from access to essential information and being oppressed and not allowed to view their thoughts must have a platform and opportunity within a system to mobilise themselves and rightfully protest against economic, social and political oppression that violates their basic information rights. The information poor must be allowed to take responsibility for initiating social changes that will not only ensure the protection of their information rights, but will also restore their human dignity. Part of the process will be to determine who caused the violation of those information rights, the effect thereof and how to compensate the information poor appropriately. Such actions will help to restore their human dignity and prevent future injustice.

It is important, in the process of restoring justice and of transformation, to have a very clear vision of what kind of harm has been inflicted on victims and how to correctly assign responsibility to the guilty. The word responsibility originates from the Latin *respondeo* which relates to accountability, blame and punishment – in other words, to be accountable or answerable in terms of a relationship or obligation. It is a second-level normative concept, by which I mean it is always associated with a set of values and norms on which responsibility is based, but also judged. A person is being held responsible for something (Lipinski, Buchanan & Britz, 2004:235). Different degrees of responsibility can be distinguished. Shklar (1990) differentiates between active and passive injustice. Active injustice occurs when perpetrators of injustice purposefully inflict harm on others. Passive injustice occurs when people turn a blind eye when injustices happen. Injustice is tolerated and those who are the victims of injustice are ignored. In other words, passive injustice occurs "when people just stand around and do nothing, calm in the belief it could not be helped" (Shklar, 1990:3).

The distinction that I made in Chapter 2 between information content and information carrier is valuable and of relevance in this discussion regarding the assigning of responsibilities and the question of who can be held accountable for information-based wrong-doings. Different categories of responsibility can be distinguished. The first is functional responsibility, which refers to the function or role of ICT with regards to the effective and efficient flow of data. Based on functional responsibility it is, for example, possible to hold telecommunication companies accountable in those cases

where they failed to update and maintain those technologies that are needed to effectively communicate data.

There is also the distinction between moral and legal responsibility. Moral responsibility reflects a core set of values that are shared by a society or group of people. Moor (2001) distinguishes, for example, the following core shared values: happiness, knowledge, freedom, resources and ability. In this thesis I have argued that social justice and human rights, which can indeed be seen as an expression of Moor's core values, should form the basis for moral consensus and by implication of moral responsibility.

Legal responsibility on the other hand is based on and an expression of the moral consensus in society. Legal systems, for example, intellectual property rights, are developed to guarantee the legal protection of our shared values and human rights and also to ensure fairness and stability in society. Those who develop intellectual property regimes have therefore the moral responsibility to ensure fairness and the protection of the right of access to information. Legal responsibility also differs from moral responsibility in the sense that we might break the law while acting morally responsible.

In assigning responsibility it is very important to be clear on the distinction between being responsible and misfortune or loss of control. Five types of misfortune/loss of control can be identified (Buiter-Hamel, 1998:58-60). These are:

Ignorance: When a person is ignorant of the true nature of a situation or of the consequence of a specific action. For example, a person cannot be held responsible for the actions of a company when taking up a new job without having prior knowledge of the criminal activities of a company that trade in information products and services. Another illustration of being ignorant of the consequences of a particular action occurred in the building industry in the 1950s when people used asbestos as building material without being aware of the dangers associated with its use. In both these examples, it would be very important to prove true ignorance. Once a person becomes aware of the true nature of a certain situation or of the consequence of a specific action, she/he is responsible for taking action.

Force: There are certain conditions where a person acts under duress and where there is no other choice than to act in a certain way. Information professionals might, for example, be physically forced to provide illegal

information. To use force as an excuse to justify certain actions is only valid if there is proof that a person really had no other choices.

Skills: The lack of certain skills needed in a particular situation can be an excuse not to act, or not to be held responsible for any actions taken. For example, a person who cannot swim cannot be held responsible for not personally saving the life of a person who is drowning. However, the non-swimmer should then explore all other possibilities to save the life of the drowning person. In the same manner an information professional can not always be held responsible for the content of the information that she/he retrieved. This example is appropriate in those cases where information professional do not claim to be knowledgeable or subject specialists in specific areas. One can, for example, not hold information professionals responsible for the correct interpretation and application of complex medical information if such a person is not a trained medical practitioner.

Being out of control: There are certain situations/conditions beyond the control of a person that justify not taking any action, and according to which a person cannot be held responsible for certain actions or non-actions. Examples include natural disasters, a car accident or the breakdown of a computer which got struck by lightning.

The difference between responsibility and misfortune/being out of control certainly matters in assigning responsibility to those who inflicted harm in the past. Moreover, it is important to determine to what extent people or groups could have acted in cases of misfortune. For example, the authorities in the US could have acted earlier and more efficiently, based on the information they had, to contain the loss of lives in Hurricane Katrina in 2005. The same level of accountability could not be assigned to the Mozambique authorities during the devastating cyclone that hit the country in the early 1990s. In the latter case the authorities simply did not have enough information available, nor the communication infrastructure and other needed resources to assist people.

There are numerous examples of injustice that requires retribution. Employers exploiting their workers by paying low wages expose themselves to retributive justice. Governments allowing unjust policies, such as strict censorship, and the intellectual oppression of their people are also under the judgment of retributive justice. Lötter (2000:237) argues that passive injustice is highly relevant when discussing the link between poverty and

justice as retribution. For example, when rich people do not care for the poor and in some cases even allow them to die from ill health, Lötter's (2000:238) comment is significant: "Standing by while some people suffer from so much difficulties inflicted by a social disease like poverty, makes non-poor people guilty of acting unjustly through violation of the positive intent of principles and norms of justice". Applied to information poverty one can also ask the question to what extend society cares about the illiterate and uneducated in society for whom it is not a given to access and benefit from information in the same manner as the literate and educated in society?

The way in which indigenous knowledge has been treated in the past and is still treated today is also a clear case for retributive and transformative justice. The question is indeed whether modern intellectual property regimes do not inflict harm on indigenous people and their body of knowledge. Traditional communal rights and the formats or ways of expressing knowledge in oral tradition or by means of artifacts, do not translate well into modern intellectual property rights systems. Multinational corporations hence globally exploit indigenous knowledge with impunity, because insufficient provision is made for protecting indigenous knowledge in intellectual property regimes. The question arises: Can an inappropriate legal system be used an as excuse for not taking responsibility to protect indigenous knowledge from active exploitation and selling it to tourists, among others, at the expense of the indigenous people (passive exploitation)? In many cases the essence of the cultures of indigenous peoples is commoditised (Lipinski & Britz, 2001). It is a cause for grave concern that this cultural commoditisation in many cases occurs without the consent of the indigenous people or without compensation. Justice as transformation demands a fresh look at, for example, trademark legislation that will respect the cultural heritage of indigenous peoples, allow the restoration of their cultural dignity and ensure fair compensation for their creations.

This form of justice reflects the first and third principles of justice.

5.9 Conclusion

In this chapter I have illustrated the value of analysing information poverty from a social justice perspective. I have first shown, based on three core arguments, that information poverty is indeed a serious matter of social justice. Following from this I analysed social justice in terms of its scope,

application and functions. I argued that justice is a normative instrument that can be used to evaluate societies, and that it, as a social virtue, sets out important principles for the fair and equitable treatment of both the information rich and the information poor.

Based on the three principles of justice that I identified, justice must ensure that people (the information rich as well as the information poor) get what is due to them. What is "due to them" can differ from one context to another and also from one individual to another as long as it is based on fair and appropriate values shared by all.

The fact that justice seeks to recognise the human dignity and human well-being of all – irrespective of who they are – was shown to be fundamental to the understanding of justice. I further illustrated that our human dignity and search for well-being is closely associated with freedom.

In my deliberations on justice as a moral tool I argued that seven different categories of justice can be distinguished to deal appropriately with the different and complex moral issues raised by information poverty. These are briefly reiterated here. Justice as recognition can be broadly defined as the finding of ways to appropriately recognise and respect the humanity and autonomy of fellow beings. It insists on a pursuit of equitable treatment of all people because they are of equal moral dignity. Justice as reciprocity deals with the "nature and scope and content of fair terms of cooperation in the personal, social and institutional levels" (Lötter, 2000, 224). It also entails that the same rules and norms will apply in all similar situations. This will eliminate any arbitrariness in exchange relations. Justice as participation refers to the creation of equal opportunities. It implies the elimination of negative inequality, plus the elimination of the marginalisation of poor communities in society. Participatory justice positively emphasises the equality of all people in respect of access to equal opportunities. The purpose of participatory justice is, in other words, to ensure that each individual in a community has an equal opportunity to fulfill his/her life. Justice as enablement is concerned with the extent to which society enables or constrains the self-determination and self-development of individuals. As a form of justice it oversees the process whereby societies, based on their moral obligation and responsibility, allow human development to such an extent that people are enabled to make their own choices in order to fulfill their human well-being. Justice as distribution can be described as the fair distribution of income, wealth and power in society with specific reference

to the satisfaction of basic needs. Justice as contribution is closely linked to distributive justice and relates to the manner in which society is organised in order to enable people to make a productive contribution to the general well-being of society. Justice as retribution is also known as punishable or transformation justice. It is based on the principle that any normative mechanisms that are responsible for the application of justice would be hollow without an enforcement/punishment component. It does not only refer to the fair and just punishment of the guilty, but also to how to transform and change existing practices and institutions as well as human behaviour.

The question then arises which guidelines, based on social justice, can be formulated to address the moral concerns raised in this thesis. In the next chapter I will explore this issue.

CHAPTER 6

INFORMATION POVERTY AND MORAL GUIDELINES

6.1 General introduction

In Chapter 5 I made a strong case for the fact that in order to address the moral challenges facing information poverty, there needs to be a moral consensus that is in some sense universal in terms of its recognition and its application. Social justice and human rights are the two fundamental tools that have this universal validity and that can be used to address these moral concerns.

In line with Rawls (1971) and Miller (1999) I also argued that social justice and human rights, as the two proposed universal moral tools, can only be successfully applied if they meet two conditions. First there must be a basic structure in society, which in this case constitutes all those bodies, national and international, that are confronted with the moral challenges posed by the conditions that lead to information poverty. Secondly, all parties, both the information rich and the information poor, must have an equal voice when it comes to the interpretation and application of these two normative tools for alleviating information poverty.

In this chapter, based on the abovementioned conditions, I have identified eight moral guidelines that can be used to address the major moral concerns associated with information poverty. Examples, mostly taken from the developing countries and Africa in particular, are used to illustrate the practical application of these guidelines.

I start this chapter by describing the economic realities and the complex notion of information to illustrate the complexity of applying social justice as a moral tool to address information poverty.

6.2. Social justice and economic realities

In the application of social justice to information poverty two preconditions related to economic realities need to be met. First, ethical idealism must be precluded and it should not become in the words of Lyotard (1985), just another grand narrative. Secondly, that social justice should not be based on a political ideology (Sterba, 1991). We should therefore not romanticise the

idea of a prefect moral economy, but we certainly should value the core virtues underlying the economic processes. In line with Booth (1993) as well as Calabrese (2005) we have to ask the question to what end our economic lives and activities are geared.

When considering the manner in which a moral economy, based on social justice, can be applied in information-poor communities, it must be born in mind that free market forces mainly determine and control the economic processes in the global information era. Ethics, reflecting core values such as social justice and human rights, primarily play a normative role to ensure fairness in these economic processes. Economic realities, such as the regulation of production and distribution processes by supply and demand with the accompanying uneven distribution of certain products and services, cannot be radically changed by applying ethical imperatives (Britz, 2004). Thompson (1991), in his work on moral economy argues that in economic system (he particularly referred to the British system) an ethical tension exists between equality (in terms of human rights) and inequality (in terms of advantages that economic systems offer certain persons and groups). Rawls (1973:65) accommodates this tension between equality and inequality in the different socio-economic and political spheres in his second principle of social justice. I quote this principle again: "Social and economic inequalities are to be arranged so that they are both a) reasonably expected to be to everyone's advantage, and b) attached to positions and offices open to all".

A global economy, based on social justice, must therefore ensure that the equality of all people is maintained – for example, that basic human rights are not affected, and where inequality does occur, that it does not disadvantage a poor and underprivileged person. Barbour (1993:48) strongly argues that: "…inequality is justified, in short, only if it helps to correct some other form of inequality or if it is essential for the good of all".

In the application of social justice to the different socio-economic activities attention should also be given to the role of the big corporations and the state as instruments of power. Huber (1993) argues that the demand for justice is primarily directed at those in power. This particularly relates to the manner in which essential information products and services should be distributed and the creation of equal opportunities for all to participate in the different socio-economic and political activities.

6.3 Social justice and the complexity of information

Social justice as it is applied to information poverty is further complicated by the very nature of information. In Chapter 3 I have elaborated in detail on the different characteristics of information and illustrated the relationship between information and poverty. In the following paragraphs I will elaborate on the unique characteristics of information that relate to social justice.

6.3.1 Information is instrumental to all human activities

Information and access thereto can be equated to fresh air. Without it we cannot survive. Information is instrumental in all human activities, ranging from gathering information on where to find food to searching for information on the Internet about stock market activities.

Information therefore has instrumental value because we use it to improve our capacity as humans to cope with our environment. As such, information can be valued as a common good that benefits all. Access to information is therefore regarded as an instrumental and basic human right and is for this reason closely associated with social justice. What complicates the relationship between this information right and social justice is the fact that the right of access to information is limited to the information a person needs to satisfy other basic rights. The application of social justice needs to determine these categories of information while bearing in mind the different contexts of the use of information.

6.3.2 The two spheres of information

Apart from having a "common good value", information also has a competitive value and it can give a "knower" a competitive edge because he/she might have access to and the use of a scarce resource (information) that is needed to gain a livelihood. In this sense information can be subjected to the laws of supply and demand and an artificial scarcity is created by means of intellectual property laws and other regulations. In turn it leads to the creation of asymmetric information markets, the creation of information monopolies and an unequal distribution of information. The competitive value of information raises some vexing questions regarding the fair production, protection and promotion of information (Lor & Britz, 2005).

The problem is also that the same information can have more that one type of value. Information which is created as part of the common good, can end

up as a competitive value in the marketplace due to a variety of reasons, including intellectual property rights and the efforts of publishers to stay in business (Lor & Britz, 2005). Information that inhabits two different spheres, each with its own value system – one in the free market system driven by capitalism and the other in the domain of the common good – can make the application of social justice complex and difficult.

6.3.3 Information as a merit good

Information, in terms of its supply, can also be treated as a merit good. At a minimum level there is a societal benefit in the provision of information in the marketplace. The provision of certain categories of information is benefiting society beyond the benefits to the individual. In other words, it has a value for others, apart from its value to the person who accessed the information. Education serves as prime example, and the policy that underpins public education with public funding reflects this view of information as a merit good. The positive externalities created by the provision of education are considered sufficient reason to warrant public support for public education (Lester & Koehler, 2003:166). The provision of public funds to support public libraries is based on the same argument.

From a social justice perspective the challenging issue will be to determine the point at which the societal benefit of information provision is greater than the societal cost that will allow a merit good approach. The fair measurement of this point might be difficult to determine.

6.3.4 Economic complexity of information

Information differs in many respects from other resources, which makes it difficult to address in both moral and economic terms. Information is not depleted by its use. Using information does not diminish the amount of information available to others. Actually, the use of information "…has at least the potential for making the volume of information increase" (Lester & Koehler, 2003:164).

Another unique feature of information that has a bearing on social justice relates to the production and reproduction cost of information. It is hard to calculate the cost of information production, reproduction and dissemination accurately. This is mainly because it is hard to determine indirect and other hidden costs. Unlike most other resources, information can be reproduced today by using modern ICT, at nearly zero marginal cost. Eben Morlen,

professor of law at Columbia University, remarks: "If you could make enough food to feed everyone on earth by baking one loaf of bread and pressing one button, what would be the moral case for denying anyone food?" (cited in Bekker, 2003:1). However, reproduction at zero cost is only part of the picture and can be misleading. One must bear in mind the cost associated with research, the use of electronic media and labour to ensure a final product of high quality. Also, cost sometimes only reflects those costs associated with the conduit (carrier) and not the content itself. To therefore assume, from a social justice perspective, that the marginal reproduction cost of digital information is zero and therefore justifies the free distribution of information is not only an economic but also a moral fallacy. Costs are indeed reduced, but have certainly not been eliminated.

6.3.5 Access to and accessibility of information

For the purpose of the moral analysis of information it is important to distinguish between information as content and information conduits, as I explained in Chapter 3. Information conduits, which include language, books, CDs and other electronic storage devices, represent the information resources that are used to store, package and carry the message (content). As such information conduits have the following attributes:

- People can be excluded from their use. For example, if I borrow a book from the library it might exclude another user from access to the book.
- In some manifestations, for example, information available on the Internet, many people might have access to the same information resource at the same time.
- Access to the conduit does not guarantee access to the content. For example, a person might have access to a book in Russian, but due to an inability to read Russian cannot access the content.
- Access to the conduit and content does not guarantee beneficial use of the information. People need the intellectual ability to apply it successfully.

This important distinction between access and accessibility needs to be reflected in any deliberations on social justice and the fair distribution of information in the marketplace.

6.4 Moral guidelines based on social justice

Bearing in mind the economic realities and information complexities, and based on social justice and human rights as explained in the previous chapter, I propose eight moral guidelines that can be used to address information poverty. A summarised version of these guidelines has been published in the Journal of Information Science (Britz, 2004), and a number of the African examples have been summarised in the article published in the International Information and Library Review (Britz, *et al*.,2006).

Guideline 1: Each person in the community has an equal right of access to essential information required to develop and exercise other basic rights

This guideline is based on the core principle of the equality of all people, irrespective of who and what they are, and on the fact that people have certain basic human rights. This is also based on reciprocal justice and justice of recognition according to which no negative discrimination based on among others race, gender, religion or economic status may occur with regard to access to essential information needed to satisfy basic human needs. Reflecting Rawls's first principle, this right of freedom of access to essential information may not be affected or compromised for any greater economic gain. It is furthermore a positive right and corresponds with the duty of society, and more specifically the state, to ensure that essential information is available and accessible. This right is thus considered fundamental and inalienable.

There are a number of examples that meet the criteria of social justice as expressed in this guideline. I highlight three:

- The South African Constitution, which protects this fundamental information right;
- Egypt's vision of access to information for all its citizens;
- The eEurope project.

South Africa entrenched the right of access to information in its Constitution, and passed a law, the Promotion of Access to Information Act, Act No. 2 of 2000, that protects its citizens' right to access essential information (Promotion of Access to Information Act, 2000). In the Constitution, Chapter 2, Section 32[1] it is stated that everyone has the right of access to information held by the State, while everyone has the right of

access held by any other (natural or juristic) person which is needed for the exercising or protection of any rights. Section 32[2] mandates the South African Parliament to pass legislation that will give effect to the rights in Section 32[1], and states that provision may be made for reasonable measures to assist the State in the administrative and financial burden that will be brought about by the exercising of the right of access to State-held information.

The main intention of the Act is made clear in Section 9 where it is stated that the Act must (Ackermann & Britz, 2006):

- give effect to the constitutional right of access to information;
- give effect to the reasonable limitations provided for in the Constitution;
- provide for the "vertical" and "horizontal" working of the Act by providing for access to records of public and private bodies;
- make the access to records as swiftly as possible; and
- empower everyone who wants to use the Act by enhancing knowledge about rights of access and the functions and records of public and private bodies.

It is clear, based on the working of the Act, that this right is viewed by the South African government as a positive right according to which the State has a responsibility to ensure that its citizens can exercise this right. Public and private bodies must have manuals available describing information procedures and requests and an information officer must be appointed to manage information request for citizens. If access to information is refused, a reason for doing so has to be stated and the aggrieved party may follow legal procedure if dissatisfied with the reasons. Also, the information officer has a duty to assist information requesters in the following manner:

- An illiterate or disabled requester may submit an information request orally, and it is the responsibility of the information officer to reduce it to writing (section 18[3]);
- The information officer must render reasonable assistance free of charge (Section 19[2]);
- If the request refers to a record that is in possession of another public body, the information officer has to transfer the request within 14 days to the mentioned public body (Section 20).

The Egyptian government also made a conscious political decision that access to information is a basic necessity for all its citizens and therefore supported the notion that access to the Internet should be affordable and that there must be a computer for every household. As an outcome of a national information project which was initiated by the Egyptian government, it was decided in 2000 that Internet services would be provided for free to all Egyptian citizens. The only cost would be the telephone call. This was followed by a so-called "computer for every home" project according to which the government subsidises computers for poor households by means of easy installments (El Gody, 2003).

Another example stressing the value of access to information is the eEurope initiative which was initiated in 2002 and according to which an affordable information infrastructure must be developed in Europe that will allow all access to different categories of information, including essential information such as education, health information and government information (The Information Society, 2003).

Guideline 2: Access to essential information should also imply the accessibility and benefit thereof

As I pointed out at the beginning of the chapter, this ethical guideline is necessary since access to information does not necessarily imply the accessibility thereof. If the Namibian government should, for example, decide that all essential government information should be made available in electronic format only, this would mean that the vast majority of citizens could not exercise their right of access to essential government information because of a lack of access to computers and/or the Internet. In this case, in support of Huber's position (see 6.2) one can argue, based on contributive and distributive justice, that the state, as an instrument of power, has a responsibility regarding the fair and equal distribution of government information to ensure that it is also accessible by other means, such as printed newspapers and the radio.

Distributive and contributive justice, therefore, implies not only the fair distribution of information, but also making it accessible and affordable. However, accessibility to and the affordability of essential information alone are not enough. Based on the view that essential information is a common good and that it is instrumental to the creation of human well-being

(capability approach), people must also be able to benefit from access to information. It can therefore be argued that, based on justice as enablement and Sen's capability approach, institutions (both government and non-government) should launch educational initiatives to enable the benefit of access to information.

I have argued in this thesis that the most valuable asset of an information and knowledge society is its intellectual capital and that societies, to be able to become information and knowledge societies, must invest in their people. Education and investment in human capital are therefore fundamental in addressing information poverty and in the development of human capabilities. Based on Sen's capability approach it is an imperative that society should meet the conditions that will allow the development of the human intellectual ability (education) that determines their well-being and allows them to achieve their goals. Social justice, in particular as expressed in this guideline, requires the making available of resources to allow not only accessibility of essential information but also to allow the development of humans to benefit from the information and allowing participation in different socio-economic and political activities.

As I pointed out earlier, the affordability of information proves to be one of the major obstacles regarding access to information. Access to electronic content at first glance appears to offer an economic solution. After all, once scientific and scholarly material has been put on in an electronic format on a publisher's web server, few additional costs are generated even though the number of use and of document accesses might increase. The expectation is therefore that modern ICT can actually contribute in a positive manner to narrow the economic divide between the information rich and information poor. The reality is however that the publishers of electronic content are also driven to make profit and, as I have argued (see 6.3.4), even though reproduction cost has come down dramatically, the overall cost of digital information production has not been eliminated. Electronic publishers also guard their intellectual property vigilantly. The problem therefore remains, namely that the normal commercial cost of electronic journals, handbooks and databases are beyond the reach of many institutions in the developing world. In this context reciprocal justice demands fairness in these exchange relationships.

A further important aspect of the accessibility of information relates to the way in which the content is packaged – i.e. the medium in which the

information is presented, must not be contextually unfamiliar to the receivers thereof or in a language that is totally inaccessible.

Africa is a good case in point when it comes to the justification of this guideline. Africans are to a certain degree in a privileged position when it comes to language and access to the global body of knowledge. A large number of Africans living on the continent can speak or understand either French or English, two international languages that have a prominent representation on the Internet. Furthermore, both languages are the dominant political, economic and scientific languages on the continent. The drawback is the low level of literacy (Britz, *et al*.: 2006). In the 2005 the average illiteracy rate on the African continent was 35%. One sign of hope is the fact that the average illiteracy rate of people between 15-24 is substantially lower at 20% (African Economic Outlook, 2005:581).

Moreover, the problem is not so much the ability of Africans to understand foreign languages as the preservation and promotion of their own indigenous languages. There are more than 1000 languages spoken on the African continent, many of which do not have a written form. Also, very little scholarly and other scientific work gets published in local African languages (Britz, *et al*.: 2006). This excludes the majority of the world's population from a valuable source of indigenous knowledge and therefore reaffirms the importance of this guideline.

I will use a number of examples to illustrate where social justice is fulfilled in respect of the accessibility of information and the ability to benefit from use of information. The first two examples refer to initiatives by publishers and other distributors of information to make scientific and other essential information accessible and affordable to specifically developing nations. The following two examples focus on language initiatives to overcome the problem of access to information, and finally I will highlight some educational initiatives aimed at the education of people to benefit from access to information.

The first two initiatives discussed are:

- African journals projects and
- Open information movements.

The first of the African journal projects is the African Journals Online Project (AJOL). The launching of the (AJOL) in 1998 can be seen as an effort to make Africa's own body of scientific knowledge more accessible to the world. As such the AJOL not only displays the tables of contents of African journals but provides an article delivery service to African scholars. This is done free of charge. AJOL, running on Open Source software, is now managed from South Africa in partnership with National Inquiry Service Center (NISC). It covers over 220 titles. Strict criteria apply for submission to the AJOL, including that is must be scholarly, peer reviewed and published on the African continent (AJOL, 2005). The NISC also launched the NiPAD database that provides access to more that 2 million African records in 40 databases, some with full text links (NICS, 2006). A project similar to the AJOL is the USA based Michigan State University's African eJournal project (AEJP). This initiative aims at making African scholarly journals electronically available (Rosenberg, 2002:54).

There are other initiatives by scholars and scientists to make their knowledge more freely available, without the unnecessary restrictions of intellectual property regimes, as is expressed amongst other in the Open Access and Creative Commons movements (2000). Education, and in particular scientific knowledge, is viewed as a merit and public good that benefits society more that individuals. The aim of the Creative Commons is for instance to "…use private rights to create public goods: creative works set free for certain uses. Like the free software and open-source movements, our ends are cooperative and community-minded, but our means are voluntary and libertarian. We work to offer creators a best-of-both-worlds way to protect their works while encouraging certain uses of them - to declare some rights reserved" (Creativecommons, 2000).

The Open Access Movement can be defined in short as the free online availability of digital content (Wikipedia, 2006). There are two major statements on the Open Access Movement. One is the Budapest Open Access Initiative of 2002 and the other the Berlin Declaration on Open Access to Knowledge in the Science and Humanities (2003). The Budapest statement recommends two complementary strategies or roads to open access (Budapest Open Access Initiative, 2004). The one is self archiving and the other open access publishing. One of the main goals of the Berlin declaration is to disseminate knowledge, through this open access paradigm, via the Internet (Berlin Declaration, 2003). The common thread of the Open

Access Movement is therefore to persuade scholars and other researchers to make their knowledge freely available on the Internet.

The following example focus on language initiatives to overcome the problem of access to information and the ability to benefit from access gained. I have argued that access to a language is essential for accessing information (Chapter 3). The UNESCO Universal Declaration on Cultural Diversity is a very good example in support of this guideline (UNESCO, 2002). I quote articles 5 and 6:

> *Article 5 - Cultural rights as an enabling environment for cultural diversity*
> Cultural rights are an integral part of human rights, which are universal, indivisible and interdependent. The flourishing of creative diversity requires the full implementation of cultural rights as defined in Article 27 of the Universal Declaration of Human Rights and in Articles 13 and 15 of the International Covenant on Economic, Social and cultural Rights. All persons should therefore be able to express themselves and to create and disseminate their work in the language of their choice, and particularly in their mother tongue; all persons should be entitled to quality education and training that fully respect their cultural identity; and all persons have the right to participate in the cultural life of their choice and conduct their own cultural practices, subject to respect for human rights and fundamental freedoms.
>
> *Article 6 - Towards access for all to cultural diversity*
> While ensuring the free flow of ideas by word and image, care should be exercised so that all cultures can express themselves and make themselves known. Freedom of expression, media pluralism, multilingualism, equal access to art and to scientific and technological knowledge, including in digital form, and the possibility for all cultures to have access to the means of expression and dissemination are the guarantees of cultural diversity.

Some initiatives on the African continent meet the criteria of social justice expressed in Guideline 2. The first is the African Language Material Archive (ALMA). ALMA is an initiative of the West African Research Association (WARA), the Council of American Overseas Research Centers (CAORC), the Columbia University Libraries for African Studies, and the Information

Society Division of the United Nations Educational, Scientific and Cultural Organization (UNESCO). This initiative aims at increasing dissemination of and access to materials published in indigenous African languages through electronic formats (ALMA, 2005).

There is also in the recent years on the African continent a recognition and reaffirmation by African people themselves that African languages must and should play a pivotal role in the development of Africa, specifically in terms of science and technology (Britz, *et al*.: 2006). This has led to the second initiative on the African continent namely the organization of a conference by African authors and scholars. The main focus of the conference was on the future role that African languages can play in Africa. It was held in Asmara, Eritrea and in January 2000 the Asmara Declaration on African Languages and Literatures was issued. It stated amongst other points that:

- Equality of African languages must be recognised as a basis for future empowerment of Africa.
- African research must be done and documented in African languages (Asmara Declaration, 2000).

Other educational and research initiatives on the African continent are worth mentioning as these also meet the criteria of social justice as is expressed in Guideline 2.

The education budgets of some countries on the continent and on the list of priorities set by NEPAD and the G8 countries, clearly reflect an understanding of the importance that education and human development are essential to alleviate information poverty (NEPAD: Three years of progress, 2004). One of the top 10 priorities of NEPAD is *Human Development*, with specific reference to education. The average primary school enrollment percentage on the African continent stands currently at 92% (African Economic Outlook, 2005). Some countries in Africa have made remarkable progress in education. Mozambique, for example, has doubled the number of children in school over the past five years and Kenya recently introduced free primary education. This has brought more that 1,2 million children back to school. In Tanzania 1000 new schools have been built and 18 000 new teachers were recruited (G8 Gleneagles, 2005). Spending on education has also increased. I list a number of African countries budgets on education, expressed as a percentage of the GDP.

- Ivory Coast (4,6%);
- Kenya (6,2%);
- South Africa (5,7%).

These figures compare very favourable with developed countries such as the United Kingdom (4.8%) and the USA (5.5%) (Pocket World Figures, 2006).

NEPAD has also launched a 10 year e-school initiative, the first being in Uganda. It involves the establishment of an Africa - wide satellite network that will eventually connect schools via the Internet. This initiative is part of the Human Capacity Development strategy and the main focus is on teaching school children and teachers the necessary ICT skills needed to participate in the global information society. There will also be so-called "health points" allowing the distribution of essential health care information. This project has received the Global Intelligent Community Visionary 2005 award (Commission for Africa Report, 2005; NEPAD Dialogue, 2005:2).

Sir William Arthur Lewis has been quoted many times for his famous saying namely: "The fundamental cure for poverty in not money but knowledge" (Capurro, 2006). Based on the priorities of NEPAD, it becomes more evident that leaders on the African continent understand this important truth, specifically regarding investment in research and development in Africa. It goes without saying that investment in R & D is as crucial to any economic development as education. Currently Sub-Saharan Africa contributes only 1% to the scientific publications of the world. NEPAD organised a meeting of African ministers of science in 2004. At this meeting it was agreed that Africa should increase its spending on R&D to at least 1% of GDP in the next decade. The current spending is less that 0.1% (Science and Development Network, 2003). Specific R&D plans by NEPAD includes the immediate elimination of poverty, improvement of health, access to safe water and environmental protection. Under the leadership of NEPAD the number of Academic of Sciences in Sub-Saharan Africa have increased to 10 (Schneegans & Amelan, 2006).

There are some brain-gaining initiatives in Africa that meet the criteria of social justice. It is clear that Africa is aware of the brain drain which can end up in a "brain-dead continent" and a permanent state of information poverty on the continent. I list a few of these brain gain initiatives in Africa:

- Intellectual diaspora networks. More that 40 countries in Africa are part of these networks (Meyer, Kaplan & Charum: 2001). The main aim is to maximize the use of the skills and knowledge of expatriates in such a way that they can contribute to the country's development. It is based on the idea that a pool of knowledge must be potentially available without the expatriates having to return to their home countries permanently (Brown, Kaplan & Meyer, 2001).

- Transfer of Knowledge through Expatriate Networks (TOTKEN). This program was initiated by the United Nations Development Program (UNDP). The main aim is to promote the greater use of well skilled expatriates to train Africans at home. The focus is on short term service in economic and social development. According to the UNDP "…proficiency in the local language, strong motivation to serve the home country and demonstrated success in their profession, all contribute to produce significant returns" (TOTKEN Program, 2006).

- South African Network of Skills Abroad (SANSA). In South Africa, a similar programme, known as the South African Network of Skills Abroad, has also been initiated. The basic idea is also to encourage expatriate South Africans to make their body of knowledge and skills available to continue contributing to South Africa's development without having to return permanently to South Africa (S.A. National Research Foundation, 2002). According to the South African National Research Foundation contributions by expatriates can include the following activities:

  - Receiving South African graduate students in laboratories or training programs;
  - Participating in training or research with South African counterparts;
  - Transferring technology to South African institutions;
  - Transmitting information and results of research which are not locally available;
  - Disseminating cultural and artistic creation;
  - Facilitating business contacts;
  - Facilitating discussion forum(s);
  - Initiating research and commercial projects (SANSA, 2006).

- Higher Education. African universities, in association with the Association of African Universities and the Association of Commonwealth Universities play a leading role in initiating projects to enhance higher education in Africa. A ten-year partnership programme has been launched and it is called "Renewing the African University". The cost of this ambitious project is estimated at $500 million per annum. The G8 Commission on Africa Report strongly recommends that the international community support this initiative (Renewing the African University, 2005, Commission for Africa Report, 2005:138).

Guideline 3: The creation of a minimum information standard for society that will ensure a gateway to access essential information

In order to ensure the right of access to essential information, a minimum information standard in a society must be set that serves as a gateway to essential information for each individual in the society. It implies the creation of an accessible – with the understanding that it must also be affordable – and context-friendly information infrastructure. This guideline is based on contributive and distributive justice but also reflects Sen's capability approach and justice as enablement, according to which society has a moral obligation to provide resources and develop policies to enable functions and human well-being. This will include the provision of schools, libraries, information literacy programmes and access to the Internet as well as fair intellectual property regimes that protect and promote information products and services. Such a minimum information standard would naturally differ according to community and country and must be co-determined by the people who need it. It will furthermore empower people to make informed decisions and to participate in the main socio-economic and political activities.

Two apparent examples of the setting of a minimum information standard in society are the Netherlands and South Africa. In the Netherlands it was decided to provide the homeless with a permanent e-mail address (NRC Handelsblad, 2001). During 1994 the South African government also drew up a policy according to which it should be possible for each South African to be within walking distance of a telephone (Van Audenhove, 2003).

It is also clear, based on a literature overview, that there is a broad consensus in Africa that modern ICTs play a major role in boosting economic growth

prospects and that access to ICT should be a standard information requirement for Africa. These initiatives certainly meet the criteria of Guideline 3. In the following paragraphs I will elaborate on some of these efforts on the African continent.

It seems that since the late nineties efforts in Africa to implement and utilise modern ICT have been coordinated much better – at least at policy level. I list a few of these initiatives:

- The establishment of the African Information Society Initiative (AISI). AISI was established in 1996 under the leadership of the Economic Commission for Africa (ECA). The main aim was to connect Africa to the Internet and thereby build Africa's own information highway. A further aim was to investigate the use of ICT for socio-economic and political development in Africa. A direct outcome of the AISI was the encouragement of African countries to develop their own National Information and Communication Infrastructures (NICI) to ensure that sound ICT policies are in place. Up to 2004 more that 30 countries in Africa initiated such NICI (Barka, 2004).
- NEPAD ICT survey and ICT master plan. One of the main priorities of NEPAD (2004) is "…the building and improving infrastructure including ICT". As a direct outcome of this priority NEPAD launched a survey on the current status of ICT use and policies in Africa. An alarming, but not surprising finding of the study was that enabling laws to drive e-strategies in Africa are nearly non-existent. Mauritius was mentioned in the report as an exception. According to the findings of the survey the country has a good e-strategy in place to become a "cyber island". The study also concluded that in those countries where projects such as e-learning, e-health and e-commerce are started it is mostly done without a policy framework. As a direct outcome of these findings NEPAD adopted a recommendation of a broad and comprehensive continental ICT survey. Such a survey will help to identify current technical and regulatory obstacles that can jeopardise the development of a coherent ICT plan and infrastructure in Africa. An envisioned outcome of this initiative will be the development of a comprehensive database on ICT in Africa that will form the backbone of a ICT master plan for Africa (Baradu, 2005).
- The establishment of a policy and regulatory framework. As a commitment to NEPAD's broadband infrastructure network project,

Communication Ministers, representing various African countries, will sign a policy and regulatory framework protocol for a number of ICT infrastructure development projects, including the Eastern Africa Sub-marine System (EASSy) cable. This cable system will integrate intercontinental communication by connecting ICT infrastructure initiatives across Africa. This will enhance Africa's broadband connectivity largely (Fin24.com, 2006).

The second positive trend reflecting Guideline 3, is the exponential growth of ICT, both in terms of implementation and applications, on the African continent. This exponential growth is mainly due to huge financial support from amongst other the World Bank, the G8 countries as well as the United Nations. Up to 1995 only six countries in Africa were connected to the Internet. In the year 2002 nearly all the countries on the continent were connected in some or another way to the Internet (Ya'u, 2002:8). Access to and the use of modern ICT on the continent have also become a little bit more affordable. Not only is there an exponential growth of ICT on the continent. Africa has also leapfrogged into new ICT's in particular cell phone technology. Africa was the first continent where the use of cell phones outnumbered the use of landlines (Sullivan, 2006; Butler, 2005). The application of cell phone technology, in particular the use of text messaging, has radically changed the way people work, live and communicate in Africa. It has made live easier, safer and to certain extend, more prosperous (Sullivan, 2006). Cell phone technologies set a new information standard, and made information policy decisions regarding landline telephone accessibility absolute. A recent study found that 97% of people in Tanzania indicated that they could access a mobile phone while only 28% could access a landline (Butler, 2005). Of more importance than the ability to leapfrog into new technologies is the fact that ICT allows Africa to avoid to a certain extent the first socio-economic effects of radical technological changes. These effects are mostly negative, for example, unemployment and initial slower economic growth. By leap-frogging and avoiding the errors made by the developing nations in respect of the development and applications of new ICT, Africans can directly benefit from the so-called secondary (rebound) effects of innovation, namely job creation and sustainable economic growth (Britz, *et al*., 2006).

Thirdly, Africa has also its best ever representation on the World Economic Forum's Global IT ranking which was published in March 2005. This ranking is based on the Forum's Readiness Index Ranking. Amongst others

it measures countries' ability to take advantage of ICT. The ranking covers technical infrastructure, government policies on information technology, the quality of education, and the affordability of telephone and internet services. Twenty-one African countries made it to the top 100 list. Tunisia (31), ranked top of the African list, followed by South Africa (34), Botswana (50) and Morocco (54). Zimbabwe and Mozambique are respectively ranked 94 and 96 (Networked Readiness Index Rankings, 2004).

It is therefore clear that the AU and many individual African countries have embarked on a route to have access to modern ICT as a minimum information standard for the people of the continent.

Guideline 4: The creation of a minimum physical infrastructure that will allow "information deliverability" in the dematerialised economy

One of my points of departures in this thesis is the new paradigm shift towards the economics of information, which has introduced advanced capitalism and the process of globalisation (see Chapter 4). I have also argued that through globalisation a network of economic and social networks is created. The gap between the rich and the poor countries is no longer only limited to a "physical object gap", but has become also an "immaterial asset gap", where the key immaterial assets are information or knowledge (Clark, 2003; Britz *et al*., 2006). The immaterial asset gap has some important implications for the right of access to and accessibility of information. As I have argued in Chapter 5, this right is no longer concerned only with freedom of opinion and expression or to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers – a right understood primarily as an intellectual right. In the era of this new economic paradigm and of globalisation the right of access to information has become one of the most important social rights, since it is a precondition for participation in the various socio-economic and political activities of a modern society.

As I have pointed out earlier the problem is that the new information economy is underpinned by a material, efficient and in many respects a top-heavy infrastructure that includes harbours, airports, railways, roads, warehouses and physical addresses of people. In previous chapters I argued that access to "unbundled" products and services, in most cases offered via modern ICT (education and banking are two exclusions), does not allow

access to the physical object itself. Medicine, cars, food and household items such as refrigerators cannot be shipped as e-mail attachments. Delivery of these products requires a highly sophisticated and efficient physical infrastructure. A dematerialised information-based economy without a physical infrastructure to allow the delivery of the physical products is therefore of little use and can even create unmet expectations. A rural healthcare worker may find wonderful information on the Internet about the prevention of a killer disease like malaria, but this will be of little use if there are inaccessible roads and no vehicles to deliver the necessary medication in time to the clinic, or if there is no working refrigerator to keep the medicine at a regulated temperature (Lor & Britz, 2006). The digital divide has indeed more than ever become a physical (infrastructure) divide and therefore necessitates this important guideline which is based on participative justice, the capability approach and contributive, distributive justice as well as justice as enablement.

From an economic and political perspective one can actually argue that a well-developed information infrastructure and a corresponding physical infrastructure form the backbone of all socio-economic and political activities of the information and knowledge society. From a moral perspective I also argue that a well-developed and well-maintained information infrastructure and corresponding physical infrastructure form the "moral backbone" to our human freedom (Lor & Britz, 2006). This freedom is mainly expressed in our respective individual and social rights, including the right of access to information and the right to participate in socio-economic and political activities (see Chapter 5). Such a well-developed and maintained information infrastructures, as well as physical infrastructures, provide the vehicle allowing us to make informed choices and to participate in the various socio-economic and politic activities of society. We will not have the ability to choose if we do not have the ability to access these vehicles that facilitate our right to participation in the various socio-economic and political activities.

Based on this guideline I therefore argue that both governments and the private sector have a moral obligation to develop and maintain affordable infrastructures facilitating access to the physical products and serves that are made accessible through modern ICT. A well developed information infrastructure, supported by an efficient physical infrastructure, can assist people to create a national economic identity, will allow access to basic services (e.g. health care and education), and will contribute to allow nations

to sell their products and services globally (African Economic Outlook, 2005:47).

The African continent again serves as a good example of the application of guideline 4. Until very recently Africa had an extremely poor track record regarding physical infrastructure development and maintenance. Based on reports published by the World Bank (2005), NEPAD (2004) the World Economic Forum (2003) and the OECD (African Economic Outlook, 2005) I list a few infrastructural realities in Africa that impeded the development of Africa to become a competitive economic role player in the era of globalization. These are:

- Of a total of 1.5 million km of roads in Sub-Saharan Africa, only 19% is paved in comparison with 27% of Latin America and 43% of Asia;
- Most people in Africa are further away from a road than anywhere else in the world. This is specifically true of Ethiopia. Inaccessibility to infrastructure makes economic interactivity and development nearly impossible;
- One third of the roads build in Sub-Saharan Africa over the last 20 years are not maintained;
- Transportation is unreliable and expensive. Transport cost are one of the main factors that explains variable local economic activities;
- In Sub-Saharan Africa only airports in South Africa and Ghana met the FAA standard of Category 1 for international flights;
- Landlocked countries in Africa face higher insurance and transportation costs than anywhere else in the world;
- In 1999 only 1 out of 5 Africans had access to electricity;
- It is estimated that African will need to invest at least 6% of its GDP per year to not only maintain, but also further develop the continent's infrastructure.
- There is still operational inefficiencies and Africa, and in the words of the OECD report (African Economic Outlook, 2005:47) "…remains a continent of stranded mobility".

Since the turn of this century much has changed on the continent that reflects this guideline. All the major stakeholders, both in Africa and international, are realising the importance of a strong and well maintained physical infrastructure alongside information infrastructure development in Africa. Most of these role-players are not only economically, but also morally

committed to bring about change (World Bank 2005). There is a clear understanding that a well developed and cost effective physical infrastructure will create import as well as export opportunities for Africa. This will in turn foster private sector involvement and hopefully attract international investment. It was therefore not surprising that infrastructure development featured as a major agenda item at the September 2005 "UN Millennium plus 5 Summit". It was also a central theme of the Commission for Africa Report (2005) (African Economic Outlook, 2005:47).

As an expression of this moral commitment to Africa, a number of international organizations have provided and pledged monetary support for the development of infrastructure in Africa. The most notable contributions and pledges are:

- The World Bank, who provided US$409 million in 2000 to the eight countries of the West Africa Economic and Monetary Union. This financial aid was specifically provided to improve 1 300 km of cross-country roads in the region. This allowed, according to the World Bank, for the creation of a regional market and accordingly more competitive advantages for these countries (World Bank, 2000).
- During 2005 the World Bank has also committed itself to lend another $1,8 billion a year for infrastructure development in Africa (World Bank, 2005).
- During the G8 meeting, held in 2005, Britain urged the member states of the G8 countries to embrace what is called a new Marshall Plan for Africa. This plan includes a financial contribution of $25 billion over the next three to five years and plans to write of the debt of most of the poorest countries on the continent. This initiative is part of the G8 Africa Action Plan which was already agreed upon by the G8 countries in 2002. Part of the African Action Plan included commitments on promoting economic growth (including infrastructure development), expanding knowledge and improving health on the continent (Commission for Africa Report, 2005).

The Southern African Development Community (SADC) countries are also involved in major and imaginative road-construction projects. This includes amongst other the Maputo Corridor, which will eventually link Maputo (Mozambique) to Walvis Bay (Namibia) via the Trans Kalahari Highway (Botswana). The development and implementation of the Mozambique - South Africa toll road is also a success story – economically as well as

morally. The project started in 1996 and was completed at a cost of R3 billion in 2000. It was a joint venture between the public (Governments of South Africa and Mozambique) as well as private sectors (4 major Banks in South Africa plus the Development Bank of Southern Africa). Since its completion in 2000 transport use increased on average 6% per year, tourism flourished (in particular Mozambique) and more private investments were made in Mozambique. Of particular interest is the fact that the financial risk was shared between the different role-players and a lower financial burden was put on the poorer Mozambique. Mozambique users are also charged less for use of the road (African Economic Outlook, 2005: 59).

The Economic Commission for Africa (ECA) is furthermore involved with the implementation of the Almaty Program of Action in Africa. The program, initiated in 2003, allocated $4.6 million to fund projects aiming to develop transit support for landlocked countries in Africa. The target date for completion is set for 2007 (African Economic Outlook, 2005:50).

Another initiative on the African continent to review the links and coherence between infrastructure (in particular transport) and poverty reductions strategies, is the Sub-Saharan African Transport Policy Program (SSTP). The SSTP is multi donor funded and support the formulation of action plans to ensure poverty reduction by means of transport improvement. The SSTP supports currently 26 countries in Africa (African Economic Outlook, 2005:69).

Siemens Southern Africa is also highly involved in implementation and upgrading of power-station infrastructure in Southern Africa (ESI Africa, 2003).

There is a clear understanding, as well as a moral and economic commitment in Africa, and by the major international role players, to develop the continent's physical infrastructure to the extent that an equal and fair participation in the global dematerialised economy will become possible.

Guideline 5: The creation of equal opportunities that will enable individuals to exercise the right of access to information

Guideline 5 is based on justice as participation, justice as enablement and distributive and contributive justice. According to this guideline equal opportunities must be created and in place with regard to the exercise of the

right of access to essential information. In those circumstances where this right of equal opportunity for access to essential information is withheld or where certain levels of inequality between people, for example, social status, political affiliation or economic class distinctions, is used as a principle to determine which category of essential information an individual may have access to, it must be viewed as a form of social injustice (Britz, 2004:204).

I argued in Chapter 4 that according to this guideline, and as an expression of participatory justice, there can in certain circumstances be justification for the application of inequality to ensure the creation of equal opportunities in society. The subsidisation of certain essential products and services serves as a good example. Subsidisation of essential products and services, including information, will help to created equal opportunities for participation of all people to enable self-actualisation. Participatory justice requires therefore from society to support (amongst other by means of subsidisation) those who do not have an equal opportunity to participate in essential socio-economic as well as political activities. The Catholic Pastoral letter (1997:44) refers to this as institutional pluralism whilst Bedford-Strohm (1993) uses the concept *Koöperationsfähigkeit*.   This form of subsidisation would satisfy the requirements of contributive and distributive justice.

In applying this guideline to information poverty one can argue that it is fair to distribute essential information, such as health and education-related information, to poor and underprivileged communities at very affordable rates, and/or to subsidise the repackaging of the content thereof to ensure that the users can have access to the content. The subsidised distribution of computers to these communities and the providing of affordable access to the Internet as well as the implementation of information literacy programmes also serve as applicable examples. However, it is important to point out that these processes may not be based on a paternalistic perspective, according to which the suppliers and creators of information make information available without really determining the needs of the people or ensuring the possibility of self-development.

In acknowledgment of the value of the creation of equal opportunities to access educational material (see Chapter 4) I discuss three examples related to accessibility of scholarly publications. These three examples meet the criteria of guideline 5. These are:

- the Health InterNetwork Access to Research Initiative (HINARI);

- the Global Online Research in Agriculture (AGORA) and
- the Programme for the Enhancement of Research Information (PERI).

HINARI is an initiative of the World Health Organisation (WHO) that focuses on the distribution of health information to developing countries. Viewing health information as essential information from which people cannot be excluded, it provides free or highly subsidised access to major journals in biomedicine and related fields to non-profit organisations such as universities, medical libraries, hospitals, and government offices in developing countries that meet eligibility criteria based on per capita gross domestic product (GDP) (HINARI, 2005).

For the sake if the argument I quote a large section of the original statement of intent by the publishers. It was signed in 2001 and reads as follows: "The partners in the Initiative acknowledge that access to primary biomedical journals is a critical issue in developing countries – one of many obstacles to improving health – and are willing to work with committed governments, international organisations and others to find ways to open access to this information. Intended to benefit research, academic and other organisations in developing countries working for the public good, such an initiative would:

- Provide access to a wide range of key biomedical journals at prices which reflect the state of national economies in the developing world.
- In some cases, access may be provided at no charge.
- The Initiative applies only to bona fide academic and research institutions.
- The Initiative includes most of the countries classified by the World Bank as low or lower-middle income.
- Each publisher will offer access in the broad terms of the principles on which this Initiative is based, and will be free to provide specific arrangements according to its own business model.
- Access will be only to the Publishers' biomedical and health information.
- Access authentication will be provided by WHO's Health InterNetwork project.
- Through this Initiative, the publishers are indicating support for the World Intellectual Property Organisation, the International Publishers Association and other organisations in promoting respect for the Berne Convention in the use of important scientific information.

- All partners recognise the key role national governments will take in supporting this Initiative and developing it.
- The Initiative will commence as soon as practical issues are resolved, and it is hoped that access will be provided from early 2002.
- The Partners are committed to the success of the Initiative, and while monitoring its progress, expect it to continue for at least three years.
- The publishers hope to work with the WHO in encouraging research publishing programmes in developing nations.
- New partners will be sought to increase the amount of content within the Initiative and to provide funds and technology to establish a firm infrastructure for the future." (Publishers' statement of intend, 2001)

Six major international journal publishers joint HINARI in 2001. These were Blackwell, Elsevier Science, John Wiley, Springer Verlag, Wolters Kluwer International Health Science and Harcourt Worldwide STM Group. More publishers joint over time and the current number stands at 70. The total number of titles available currently exceeds 2000 and the retrieval of some full text articles is also available. Currently more that 1100 institutions in more that 100 countries are benefiting from the programme. The criteria, reflecting the principles of social justice, are designed to separate the poor developing countries from the rich countries. Hence African countries such as Ethiopia and Sudan are eligible for free access but South Africa, as a richer nation based on GDP, is not (Aronson, 2003).

AGORA is similar to HINARI, but focuses on agriculture and views agricultural information as essential to human development and instrumental to ensuring a livelihood. It was established in 2003 and it is administered by the United Nations Food and Agricultural Organization. The aim is to provide institutions in the developing world with free or low-cost access to scientific journals in the hope that this will help reduce famine and improve food and nutrition quality in these countries. AGORA currently provides access of 908 journals to 69 countries. Publishing partners include Blackwell, Elsevier Science, John Wiley, Springer Verlag and Oxford University Press (AGORA, 2005).

PERI is a worldwide research initiative coordinated by the International Network for the Availability of Scientific Publications (INASP). Its main objective is to "support capacity building in the research sector in developing and transitional countries by strengthening the production, access and dissemination of information and knowledge" (INASP, 2005). Like

HINARI and AGORA, PERI helps developing countries to obtain affordable or even free access to publications published by commercial publishers. Part of the process entails assistance to developing countries to negotiate affordable and sustainable licenses from publishers to enable access to research journals. There are more than 11 000 full text online journals available via PERI. The economic status of developing countries are determined by using the World Bank's Gross Income per capita Index as well as the Human Development Index of the UN. PERI also puts more emphasis on the development of programmes to assist journals from developing countries to become more professional and improve their scientific and editorial quality.

Guideline 6: The adoption of the right to communicate to enable meaningful participation and global dialogue in the information and knowledge society

The creation, processing, fair distribution and use of information and knowledge are not the only moral concerns. Based on justice as recognition it can be stated that communities must also have the right to communicate, to share their views and to learn from others. Contributive as well as distribute justice also demands the establishment of a global communication platform to address social justice which can include issues such as information poverty and environmental issues.

Hamelink (2003:3) correctly points out that we should move beyond "information and knowledge societies" towards "communication societies". The right to communicate is essential in the globalised society in which we are living because "globalisation without dialogue becomes homogenisation and hegemony. Localisation without dialogue becomes fragmentation and isolation" (Hamelink, 2003:3). Modern information technologies, in particular the Internet, have for the first time made such a global interactive dialogue possible and allowed more and effective inter- and cross- culture communication opportunities. The new communication media also gave new meaning to the right to communicate by allowing groups to organize, mobiles and publicise much more effectively than in the past. The new ICT platform opened a global discourse on matters such as global poverty, global warming and respect for human life. In this regards Calabrese (2005) argues that this new global movement for communication rights is an expression of the global justice movement, representing mostly civic society.

The right to communicate featured prominently at the first WSIS meeting (2003) and scholars such as Kuhler (2003) and Hamelink (2003) strongly argued, in line with the WSIS agenda, that the right to communicate be adopted as an additional universal right that must form part of the Universal Declaration of Human Rights (UDHR). In the Draft Declaration of Principles of the WSIS (Geneva 2003) it is also stated that the "right to communicate and the right for citizens to access information are fundamental to the Information Society" (WSIS, 2003). The idea is that such a right must guarantee participation in the global information-based society.

The right to communicate is also closely related to the debate about who owns and controls the media markets and the Internet (Britz, 2004). Based on this guideline it is argued that governments have an obligation to create a media environment that is independent and of a diverse nature, guaranteeing the right of the public to receive information from a variety of sources and, in the word of Habermas (1989) to maintain an open public sphere.

According to Calabrese (2005) the arena for the debate on communication rights should move away from "…a preoccupation with rights [including intellectual property rights – JJB] and entitlements, and more towards norms of social responsibility" (2005:303). I agree. Communication rights should not only focus on issues relating to the commodification of media and control of governments and corporations in terms of the development and application of stricter intellectual property right regimes or censorship. The right to communicate is also about the fundamental right to communication social justice issues.

There are a number of examples that meet the criteria set by guideline 6. I briefly discuss two examples namely the recent initiative, in particularly the USA, to introduce free WIFI services to towns and cities and the development and application of modern ICT in Africa.

It has become technically possible to provide cities and towns wireless grids that support Internet connection on a notebook and cell phone, allowing more people on a regular basis to communicate globally. This technical possibility has become hot areas of exploration by many cities in the USA, because it can allow people to access the Internet for free, or at a very affordable rate, at any place and time – as long as their computers or cell phones have wireless connections. A number of cities in the USA like Herman Beach and Riverside (California) already provide free WIFI

connections to their local populations and even make some revenue by means of advertising. Google announced in August 2006 that they will fully fund a WIFI system for Mountain View – the hometown of Google. The Chicago public library system, with its 79 branches, also provides free hot spots to it users and thereby gives a new meaning to the "public sphere" where people can have the opportunity to share and exchange ideas in a virtual public sphere.

Combining this free/affordable WIFI Internet broadband connectivity with

- free downloadable communication software such as Instant Messenger and Skype (Voice - over - internet - protocol [VOIP]);
- 24/7 access to the Internet;
- free email accounts, for example G-Mail, Yahoo and Hotmail as well as
- relatively cheap computers and cell phones

create indeed a technological possible, economic feasible as well as ethical acceptable platform for global communication that will allow people to exercise their right to communication and to participate in a meaningful way in a global dialogue.

This ICT based communication platform is however only limited to the rich developed nations of the world where there is a well developed, and free market driven ICT backbone that allows affordable or even free broadband access to the Internet on a 24/7 basis.

The ICT based communication platform in Africa, and other developing regions in the world, tell a different story. This is mainly due to a lack of affordable and regular access to the Internet. Broadband access is either not available, and if available, a luxury that is unaffordable for most people. For the sake of the argument I quote part of a report released by ResearchICTAfrica.net on Internet cost in Africa:

> "In most countries in Europe and in the U.S.A., the prices of high speed internet connections have declined dramatically in the last few years. Where ASDL technology is available, the cost per month for a 512 kbps. line is 25 to 40 USD per month. Dial-up lines cost about the same, if you include telephone charges for 15-25 hours

per month. In Africa, the cost of a dial-up connection is similar or often more expensive than in Europe, but only gives half the performance. A shared fixed line – often called a VPN (Virtual Private Network) – will often cost 300 to 500 USD, for a very mediocre performance. If you also consider the vast difference in incomes between most African countries and Europe, the difference becomes even greater. Measured as the number of hours you must work to pay for an Internet connection, a user in Africa is disadvantaged by a factor of 100 or more" (ResearchICTAfrica.net, 2005).

Most people in Africa rely therefore on mobile phone technology to be able to communicate. However, the use of mobile phones is Africa is still very expensive and that explains why more that 90% of all mobile phone users in Sub-Saharan Africa are pre-paid subscribers – using their phones mainly to be reached (receive calls) and not to reach others (make calls) (Towards an African e-Index, 2005:23).

There are however some exiting developments in South Africa that partly meet the criteria set in this guideline. A second fixed line telecom operator has been introduced in August 2006 which will hopefully bring the necessary competition to lower fixed line communication costs in South Africa. VOIP was also deregulated in 2005, opening up the possibility for cheaper calls and cheaper broadband access to the Internet. Vodacom and MTN, two mobile operators in South Africa, have also introduced a "third generation" mobile technology that can deliver broadband access to laptops. Some municipalities, for example Knysna, started to roll out wireless services in place of the very expensive fixed line services provided by Telkom, which is one of the two official national telecom operators. It is predicted by BMI-T, a market-research firm, that there will be more that 400 000 broadband connections in South Africa by the end of 2006 (Economist, September, 2006:56). These new developments will certainly allow more South Africans to communicate and be part of a global dialogue. The concern however remains: will it be affordable? According to Storm, a telecom firm operating in South Africa, some telecommunication costs in South Africa is still on average 30 times more expensive that in the liberalised markets – in particular the USA and EU (Economist, September 2006:56).

Telecommunication cost is therefore one of the main obstacles for Africans to establish and be part of the global communication platform that will allow them to fully exercise their right to communicate. I argue therefore that the private as well as public sectors in Africa and around the world need to introduce imaginative initiatives to reduce the cost of telecommunications, both in terms of access to the Internet as well as the cost associated with the use of mobile phones. Those efforts that succeed to substantially lower the cost of ICT - related communication in Africa will meet the criteria set in this guideline.

Guideline 7: The allowing of the inequality in the distribution of information if it contributes to the improvement of information-poor communities' lives

As I have already argued in Chapters 4 and 5 (see 4.4.9.2 & 5.8.5) that social justice does not imply absolute social equality. People differ, and so do circumstances as well as contexts. Some people have more money to buy books and access the Internet and other are illiterate, thereby being denied access to most text based information. Another economic factor contributing to information inequalities relates to the fact that creators of information products, such as composers and authors, are compensated for their work. Information stakeholders who are involved in the generation, processing, value-addition, and distribution of information products and services as tradable commodities also contributes to this economic based information inequalities in society. Information has truly become a tradable commodity in the dematerialised global economy, thereby creating a wider gap between those who own and control information and those who need access thereto. Rawls recognises these differences between people and contexts and states in his second principle of justice that inequality between people is permissible if it is not to the disadvantage of the poor, but contributes to improving their situation (1971). I elaborated in detail on this second principle in Chapter 4.

According to this guideline, which is based on my third principle of justice (see Chapter 5 under 5.6), as well as on distributive justice, contributive justice and justice of reciprocity, certain information inequalities can be justified. I will explain this justification in the following paragraphs.

Justice as reciprocity, as well as distribute justice, allows inequality with regard to access to and use of information based on merit and acquired rights (Buiter-Hamel, 1998). The distribution according to merit, as a basis for

justification for information inequality, is based on justice as reciprocity according to which a person who is involved in the life cycle of an information product can be compensated fairly for, for example, the creation of or adding value to and distribution of information products. This reflects the basic and first principle of justice according to which individuals must get what is due them. Contributive justice furthermore requires that the state and other influential information role players in the marketplace, must put in place an effective mechanism, for example, fair copyright legislation, to protect this economic interest of the creators, value adders and distributors of information products and services. This will ensure that a fair legal framework is created to regulate the inequalities in the information market place.

There are however certain important preconditions that must regulate this form of information inequality. Rawls articulates this very well in his second principle. He describes it as follows (1971:65): "All social values – liberty and opportunity, income and wealth, and the bases for self-respect – are to be distributed equally unless an unequal distribution of any, or all, of these values is to everyone's advantage".

Intellectual property legislation in South Africa, if applied correctly, meets the criteria of this guideline. It is based on two basic principles reflecting contributive justice, distributive justice as well as justice as reciprocity. The first principle reflected in the South African intellectual property legislation is the fact that it accommodates the right of people to access information. The second principle corresponds to the belief that authors, composers and other knowledge creators and information distributors deserve to enjoy the benefits of their work (Ackerman & Britz, 2006). This reflects the merit principle which, as I have argued in the previous paragraphs, allows unequal income and distribution of information products and services. South African intellectual property legislation therefore acknowledges the fact that knowledge creators' and information distributors' social and economic advantages should be protected fairly.

I pointed out that the application of intellectual property rights must be fair and just to both users, as well as creators and distributors of the information products and services. The following example will illustrate my point. The inventors of a medicine to treat HIV/AIDS have a responsibility to make this knowledge available, within the framework of fair trade, to society so that all can benefit from it. The decision in September 2003 by the World Trade

Organization (WTO) to allow poor nations to import and use generic medicines, but by the same token to protect the patent rights of pharmaceutical companies in the rich countries, serves as another good example of social justice based on this guideline (WTO, 2003).

Distributive and contributive justice also requires that part of the economic gains garnered on merit be distributed to the advantage of society. This can for example be done if a part of the profit is re-invested in the community (contributive justice). For example, the awarding of a mobile phone license to a particular company in Africa can be made subject to a contractual obligation according to which a percentage of the profit must be invested in the construction of rural information centers and the teaching of information literacy programmes to information-poor communities.

Guideline 8: Ensure the fair protection and promotion of indigenous information property and the transformation of society to enable reconciliation

This ethical guideline is necessary because of the numerous examples of injustice against the information poor. In the previous chapter I referred to the treatment of indigenous people regarding the exploitation and misuse of their indigenous knowledge as well the inability of modern intellectual property regimes to recognise, protect and promote indigenous knowledge.

Transformative justice requires a new look at not only possible harm that has been inflicted on the information poor but also at the means to restructure and transform society in such a manner that these injustices do not happen again.

In recent years there has been an increasing awareness of the exploitation of indigenous knowledge by means of wrong patenting and other forms of IPR applications. This has led to the recognition of the need for more effective protection of indigenous knowledge rights in this area. A number of new developments at the international and national levels meet the criteria of justice as transformation.

Countries such as South Africa, Australia and India are revising their current IPR regimes to accommodate the protection and promotion of indigenous knowledge (Britz & Lor, 2003). India has also successfully contested the granting of non-traditional knowledge systems patents, which has led to the

cancellation of the patents. Most of these were patented in the USA. However, it was an expensive and lengthy process. As a response to such wrongful patenting, India created a traditional knowledge digital library, making this knowledge public domain. This led to WIPO's special union for the International Patent Classification (IPC) to investigate how wrongful patenting can be prevented and to find ways to link or integrate traditional knowledge into the IPC (TKDL, 2001).

The Convention on Biological Diversity, which was agreed upon and signed by more than 150 nations at the Earth Summit (Rio de Janeiro, 1992), accepted and implemented a very important article on indigenous knowledge. Article 8 (j) states that these nations undertake to: "Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilisation of such knowledge, innovations and practices." Since the Earth Summit 182 countries have ratified the agreement (Convention on Biological Diversity, Convention text, 2002).

WIPO is also showing an increased interest in the fair protection of indigenous knowledge. Apart from fact-finding missions and organising round tables on indigenous traditional knowledge, an Intergovernmental Committee on Intellectual Property and Generic Resources, Traditional Knowledge and Folklore was established in 2000. The aim of this committee is specifically to investigate the international protection of indigenous knowledge (WIPO, 2003). Support for the international protection of indigenous knowledge has also come from the United Nations Conference on Trade and Development (UNCTAD) which held an Expert Meeting in October/November 2000 to discuss ways to protect indigenous knowledge and to prevent further improper appropriation of indigenous knowledge. According to UNCTAD the most promising option would be "…to bridge traditional collective rights with the more modern and western concept of intellectual property rights" (Capdevila, 2000).

Moral guideline	Principle of justice	Category of justice	Information-based right	Examples
Each person in the community has an equal right of access to essential information required to develop and exercise other basic rights	Principle 1	Recognition Reciprocal	1, 2, 5, 7 & 8	• South African Constitution • Egypt: National Information Policy • eEurope Initiative
Access to essential information implies the accessibility and benefit thereof	Principle 1 Principle 2 Principle 3	Distributive Contributive Enablement Reciprocity Participative	1, 2, 6, & 7	• African Journals Online Project • Open Information Movements • UNESCO – Cultural Diversity • Africa: Language initiatives • Africa: Education initiatives • Africa: Brain-gaining initiatives
The creation of a minimum information standard for society	Principle 1 Principle 2	Contributive Distributive Enablement Participative	1,2,3,4	• Netherlands: e-mail address for all • South Africa: access to telephone • Africa: ICT connectivity
The creation of a minimum physical infrastructure that will allow "information deliverability"	Principle 1 Principle 2	Contributive Distributive Enablement Participative	2, 7	• Mozambique/South Africa toll road • SSATP program • Almaty Program of Action in Africa
The creation of equal opportunities to exercise the right of access to information	Principle 1 Principle 2	Contributive Distributive Enablement Participative	1, 2, 7	• Health InterNetwork Access to Research Initiative • Global Online Research in Agriculture • Programme for the Enhancement of Research Information
The adoption of the right to communicate	Principle 1	Participative Recognition Enablement	1, 2, 3, 4, 5, 6, 7.	• WSIS declaration • WI-FI • Free communication software • Free e-mail accounts • Telecom cost in Africa
Inequality in the distribution of information is allowed if it contributes to the improvement of information-poor communities' lives	Principle 1 Principle 3	Reciprocal Contributive Distributive Enablement Recognition	1, 2, 8.	• World Trade Organisation: generic medicine • SA IP legislation • Mobile phone contract • HIV/Aids information
Ensure the fair punishment of those who inflicted harm on the information poor and the transformation of society to enable reconciliation	Principle 1 Principle 2	Retribution Recognition	1, 5, 6, 8.	Indigenous knowledge • World Intellectual Property Organisation. • South Africa • India

Information rights

1	Freedom of the flow of information
2	Access to information allowing participation
3	Freedom of opinion and freedom of expression
4	Freedom of the Press
5	The right to privacy
6	Right to participate in one's own culture
7	right to be educated
8	Right to own and control information

Table 4: Moral guidelines for information poverty

6.5 Conclusion

In this chapter I have applied social justice and human rights as a moral tool in terms of practical guidelines that can be used to address the moral concerns raised by information poverty. I illustrated the complexity of this application by referring to the economic realities and to the multifaceted notion of information. Eight guidelines reflecting the different categories of justice have been identified and I used examples from mostly developing countries to illustrate the practical application of these guidelines.

CHAPTER 7

CONCLUSION AND TOPICS FOR FURTHER RESEARCH

7.1 Conclusion

Information poverty is one of the main forms of poverty today that affects the lives of billions of people on a daily basis and as such I argued that this form of poverty should be on the world's moral agenda – not merely as a discussion item but as an action item. One cannot shape and build an information and knowledge society without taking into consideration the moral challenges associated with this form of poverty.

What is information poverty and why is it a serious moral issue that needs to be addressed today? This is research question that has guided this thesis. To get an answer to this question I have addressed five key issues. They are as follows:

- I analysed, unpacked and understood the different dimensions and moral implications of poverty through the use of social sciences (Chapter 1).
- I investigated and analysed the notion of information, specifically in terms of its relationship to poverty. This is done from an information science's perspective (Chapters 2 & 3).
- I also analysed, unpacked and understood information poverty, both in terms of its complexity as well as social, political, personal and moral dimensions (Chapter 4).
- I then reflected, from a social justice perspective, on the moral concerns associated with information poverty. This was done through the use of philosophy and social sciences (Chapter 5).
- Lastly I developed, based on social justice and human rights, moral guidelines that can be used to address the different moral concerns associated with information poverty (Chapter 6).

A more detailed description of these five issues I addressed in thesis is as follows:

7.1.1 Poverty

In Chapter 2 I defined poverty as that condition of life where the majority of people lack sufficient resources to supply their basic needs for survival. Poverty furthermore does not only refer to the presence or absence of resources; it is also expressed in the inability to produce these resources. I therefore made the case that poverty is primarily linked to people's inability to provide for their basic needs. In other words, it indicates the socio-economic status of people and communities, together with its impact on just about every aspect of their lives.

Poverty is a complex phenomenon; many forms of poverty can be distinguished and the causes of poverty are multidimensional, for example, economic and political systems, gender and geographical distribution. There are also different ways to measure poverty – both qualitative and quantitative. I came to the conclusion that there is no single or just a few solutions for the problem.

I also argued that poverty is not primarily an individual phenomenon. Different levels of poverty must be distinguished and it should be understood and interpreted within an economic-political and socio-cultural framework. The "blame" for poverty can rarely be placed on individuals alone. Poverty is also no respecter of persons.

In my deliberation on poverty I also pointed out that the impact of poverty on people and the environment is enormous. It affects the quality of life of billions of people. I strongly argued in Chapter 2 that for this reason poverty, and its implications, have a strong moral claim on society.

7.1.2 Information

In Chapter 3 I approached information from a diachronic approach and defined information as a process which includes the following elements:

- it is an action;
- it has content that is transferred/communicated;
- it is communicated by means of a specific medium;
- it has the purpose of giving meaning.

I refer to the product of this informational action as "information".

I deliberate on different approaches towards and understanding and applying of information. I preferred the knowledge approach and based on this approach I developed my own integrated approach to information. I used the philosopher Popper's three worlds to explain the relationship between information, reality and humans (1972).

Within the context of these three worlds I identified three unique characteristics of information which I referred to as the:

- object - connectedness of information;
- carrier - connectedness of information;
- human - connectedness of information.

In the last part of Chapter 3 I asked the important question: What are the implications of all these characteristics of information for a study on information poverty? In answering this question I came to the following conclusions:

- Information is an essential and instrumental resource that we as humans need to satisfy our needs. I argued, for example, that without access to information people (rich and poor) cannot meet and satisfy their basic needs and cannot develop.
- It is possible to have access to objects in reality without the objects themselves having to be perceptible to our senses. This characteristic of information allows us to be more informed, to make better decisions and to have access to resources that we previously did not have. I pointed out that this characteristic of information allows, for example, experts to communicate their knowledge and share their expertise in real time the rest with of the world without having to be physically present.
- Access to information alone can create unmet expectations which can have a significant impact on poor people. I used the following example to illustrate this important aspect. Access to information on how to purify water has little or no meaning if a person or a community does not also have access to the tablets needed to purify the water.
- Access to information does not necessarily guarantee the correctness thereof or the correct application of the accessed information.

- Information is a category word. Based on this feature of information I distinguish between the two following categories of information that have a bearing on information poverty: essential and non-essential information. I explained the difference between these two categories of information as follows: certain essential information is indispensable for poor people and is required daily to provide their basic needs for survival and development. Information about where to obtain food or medical services is an example of essential information. Non-essential information, on the other hand, is information which does not relate directly to providing in poor people's daily basic subsistence needs. It may even be important information in some cases, but is not necessarily essential for survival.
- Access to information does not necessarily imply accessibility thereof. A person might, for example, have access to a computer disc (carrier) containing essential information, but without having access to a computer to open the file, access to the content itself is impossible.

I have furthermore argued that the three characteristics of information (content, carrier, human) can be used to measure information poverty.

7.1.3 Information poverty

In Chapter 4 I argued that information poverty is not a new concept and the experience of being information-poor is as old as human history. The notion of information poverty was first coined in the 1950s and I pointed out that the notion gained popularity in the information era, which was accompanied by the phenomenal growth of modern ICT.

Based on a thorough literature overview I came to the conclusion that, although the notion of information poverty is used widely, there is little agreement on what exactly it means. I identified three major interrelated approaches to information poverty in the literature. These are:

- An information connectivity approach focusing on the connectivity to ICT;
- The content approach where the focus is on the effect of the unavailability of essential information to people; and
- The human approach which I defined as the knowledge or hermeneutical approach where the emphasis is on the ability of people to apply meaning to information and to benefit from it.

I also discussed and elaborated on a few related perspectives to information poverty based on the literature study.

Following from the literature study I proposed my own approach to information poverty. I found the most suitable way was to start with the description of a hypothetical ideal information-rich society. I based this on the main characteristics of information which were described in Chapter 3. This approach offers many advantages:

- It allows the identification of the main causes of information poverty;
- One can get a better understanding of the different degrees of information poverty ;
- The moral concerns associated with information poverty can be identified; and
- It is also possible to use this ideal situation to develop strategies to address information poverty.

Based on this ideal information-rich situation I then defined information poverty and highlighted the information capital of an information poor society which I described as:

- A lack of access to essential information, including access to information which has a bearing on those resources needed to satisfy needs;
- A lack of a well-developed, familiar and well-maintained information infrastructure;
- A lack of financial capital to pay for information;
- A lack of the technical and other abilities to access information; and
- A lack of an intellectual capacity to filter, evaluate and benefit from information.

Based on this information capital I made a strong case that information poverty has an overall impact on the development of people in nearly all spheres of life.

In my further deliberations on information poverty I illustrated that different degrees and levels of information poverty can be distinguished and that it is possible to measure these qualitatively as well as quantitatively. I discussed

the main causes of information poverty in more detail because I used these arguments in Chapter 5 to illustrate that information poverty is a serious moral issue.

7.1.4 Information poverty as a serious moral issue

In Chapter 5 I analysed information poverty from a social justice and human rights perspective. I illustrated, based on three core arguments, namely access to information, asymmetric power relationships and the usability of information (relevance and accuracy), that information poverty is indeed a serious matter of social justice.

Following from this I analysed social justice in terms of its scope, application and functions. Based on the value statement that the alleviation of information poverty serves a common good purpose, I argued that there are two moral principles that meet the requirement of universal validity and that can be used to guide moral decision-making regarding information poverty. These are justice and human rights. Based on these premises I argued that justice is a normative instrument that can be use to evaluate societies, and that it, as a social virtue, sets out important principles for the fair and equitable treatment of both the information rich and the information poor. I also illustrated the important relationships between justice and human - well being as well as human freedom. In these deliberations I pointed out the specific bearing on information poverty.

I identified three core principles of justice that I used in my deliberation on information poverty. These are:

- All people (information-rich and information-poor) must be treated equitably and be judged according to the same norms;
- A person ought to get that which is due to her/him. According to this principle of justice everyone should get what they deserve – be it good or bad;
- The recognition that inequality between people, for example, income, must be recognised and respected.

Based on the identified three principles of justice, I discussed the fact that justice must ensure that people (the information rich as well as the information poor) must get what is due to them. I argued that what is "due to them" can differ from one context to another and also from one individual to

another on condition that it is based on fair and appropriate values shared by all.

The fact that justice seeks to recognise the human dignity and human well-being of all – irrespective of who they are – was shown to be fundamental to the understanding of justice. I further illustrated that our human dignity and search for well-being is closely associated with our understanding of freedom.

In my deliberations on social justice I identified seven different categories of justice that can be distinguished to deal appropriately with the different and complex moral issues pertaining to information poverty. These are:

- Justice as recognition, which I defined as the finding of ways to appropriately recognise and respect the humanity and autonomy of fellow beings. I illustrated that as a category of justice it insists on a pursuit of equitable treatment of all people, the information poor as well as the information rich, because they are of equal moral dignity.
- Justice as reciprocity, which deals with the "nature and scope and content of fair terms of cooperation in the personal, social and institutional levels" (Lötter, 2000, 224). I emphasized the fact that as a category of justice it entails that the same rules and norms will apply in all similar situations. I argued that this category of justice will eliminate any arbitrariness in exchange relations affecting the information poor.
- Justice as participation, which refers to the creation of equal opportunities. As a category of justice it implies the elimination of negative inequality, plus the elimination of the marginalisation of the information poor in society. I furthermore argued that participatory justice positively emphasises the equality of all people in respect of access to equal opportunities. Based on Sen's capabilities approach towards justice I also made an argument that the purpose of participatory justice is to ensure that the information poor and the information rich in society must have an equal opportunity to fulfill their lives.
- Justice as enablement which is concerned with the extent to which society enables or constrains the self-determination and self-development of individuals. I pointed out that this form of justice oversees the process whereby societies, based on their moral obligation and responsibility, must allow human development to such

an extent that both the information rich and the information poor are enabled to make their own choices in order to fulfill their human well-being.

- Justice as distribution which can be described as the fair distribution of income, wealth and power in society with specific reference to the satisfaction of basic needs. I distinguished three different criteria for distribution that are of specific relevance to information poverty and the equal distribution of and access to information. These are merit, need and equality.

- Justice as contribution which is closely linked to distributive justice and relates to the manner in which society is organised in order to enable people to make a productive contribution to the general well-being of society. I argued that contributive justice must be concerned with the production and dissemination processes of information, particularly essential information, to address the information needs of all.

- Justice as retribution which is also known as punishable or transformation justice. I make a case that this category of justice is based on the principle that any normative mechanisms that are responsible for the application of justice would be hollow without an enforcement/punishment component. It does not only refer to the fair and just punishment of the guilty, but also to how to transform and change existing practices and institutions as well as human behaviour. I illustrated how this form of justice is applicable to information poverty. Issues that I address include free riders, intellectual property theft and the question of responsibility.

I also explained the relationship between these categories of justice as well as the three principles of justice that I identified.

7.1.5 Social justice and moral guidelines

The question then arises which guidelines, based on social justice, can be formulated to address the moral concerns raised in this thesis. I addressed this issue in Chapter 6.

I started this chapter by emphasizing the fact that social justice and human rights are the two fundamental tools that have universal validity and that can be used to address the moral concerns associated with information poverty. I furthermore illustrated the complexity of addressing these moral concerns by

deliberating on two issues. The first issues relates to the existing tension between economic realities and moral idealism. I argued that, when considering the manner in which social justice can be applied in information-poor communities, it must be kept in mind that market forces mainly control the economic processes in the information era, and that ethics primarily play a normative role to ensure fairness in these processes. The second issue pertains to the complex notion of information in terms of its economic understanding and application.

I then identified eight guidelines reflecting the different categories of justice and I used mostly examples from developing countries to illustrate the practical application of these guidelines. The identified guidelines are phrased as follows:

- Each person in the community has an equal right of access to essential information required to develop and exercise other basic rights.
- Access to essential information implies the accessibility and benefit thereof.
- The creation of a minimum information standard for society that will ensure a gateway to access essential information
- The creation of a minimum physical infrastructure that will allow "information deliverability" in the dematerialised economy.
- The creation of equal opportunities to exercise the right of access to information.
- The adoption of the right to communicate to ensure global dialogue.
- The allowing of the inequality in the distribution of information if it contributes to the improvement of information-poor communities' lives.
- Ensure the fair protection and promotion of indigenous information property and the transformation of society to enable reconciliation

7.2 Topics for further research

Based on the findings of my research on information poverty and social justice I suggest the following topics for further research:

7.2.1 Understanding the role that modern ICT can play to enhance social inclusion

As I was writing this thesis I came across a number of growing concerns regarding the "shrinking of the Internet" and the impact that it has on socio-economic development as well as political participation. This is against the current belief that modern ICT is contributing to socio-economic and political inclusion. It seems that current international intellectual property regimes tend to protect information in such a manner that people are increasingly excluded from the socio-economic and political benefits offered by ICT. This is apparently not only a "legal exclusion", but also a geographic exclusion. Web - based companies require in most cases credit card addresses from the country where they do business and most often do not deliver products outside of a particular country. This excludes most of the African countries from effective economic participation on the Internet.

7.2.2 Development of an information poverty index

In designing and implementing of policies pertaining to information poverty is it a necessity to "know what you are talking about" and the measure of information poverty.

Based on my description of an information - rich society and consequently an information - poor society, it is possible to develop an index to measure both qualitatively as well as quantitatively information poverty. This can be done within a community, region or country. The index can be based on the following broad criteria:

- Information infrastructure.
- Quality of available information.
- Physical infrastructure.
- Human capacity.

The development of such an information poverty index will amongst other assist and inform the appropriate stakeholders, policy makers and ordinary people on decisions they make regarding the lives of the information poor.

7.2.3 Understanding of the relationship between libraries and information poverty

There are multiple approaches and many stakeholders that can play a role to address and successfully alleviate information poverty. One of the possible ways to at least address some of the causes of information poverty, is to look at the role that libraries can play. This is particularly relevant to Africa and other developing regions of the world. It is my opinion that, although the history of libraries in Africa, due to a variety of reasons, did not proceed on a smooth path, libraries can and should play a leading role to address information poverty. Possible research topics can include:

- An understanding why libraries, or the lack of libraries, can be seen as a manifestation of information poverty.
- The investigation of the role that libraries can play in the dissemination of relevant and essential information to local communities.
- An investigation into the role that libraries can play as community information centers that serve the need of the community.
- An investigation into the role that the library can play in education. Such a study should not only be limited to information literacy. The findings of such a study can contribute to empower people to benefit from the use of information.

7.2.4 A final word

In doing this thesis over the last 5 years, I came deeply under the impression of the darker – side of the global information society. Modern communication technologies have changed for ever the way in which we live, work play, and think. It brings with it not only new socio – economic and political opportunities, but also a new information based reality that can be manipulated and even be recreated. A new form of discrimination is also introduced: information discrimination between those who have access to information and have the ability to use it versus those who are excluded from the main stream of essential information. A new and chronically form of poverty has evolved of the last decade namely information poverty and I am convinced, in the words of Sir William Arthur Lewis, that the cure to this poverty will not be money, but knowledge.