

THE UNIVERSITY OF CALGARY

Networking Technologies, NGOs and Development:  
Exploring New Tools for Change

by

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## **ABSTRACT**

This thesis explores the potential and constraints surrounding electronic networking technologies as tools for social development. It combines a review of the historical articulations of development theory; an explication of the current development context in which civil society organizations and new information and communication technologies (ICTs) are emerging as potent forces in development processes; and a participatory exploration of the issues, the risks and opportunities surrounding networking technologies as tools for Zambian NGOs. This thesis reveals ways in which the technologies have the potential to enable more authentic participation by micro and meso level actors in development processes. However, it also argues that the contextual socio-economic, political and technological dimensions of the technology must be sufficiently addressed if this potential is to be realized. Ultimately, this thesis suggests that extensive collaboration between actors across the development spectrum is essential for the equitable use of the technologies in facing contemporary development challenges.

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The right to free expression of ideas and access to information is a basic human right, and in principle it is available to all, though in practice, only to the extent that one has the special privilege, power, training and facilities to exercise these rights in a meaningful way.

Noam Chomsky (1981)



## INTRODUCTION

Many theorists and practitioners of international development claim that the field, both theoretically and practically, is currently at a crossroads (Marchand & Parpart 1995, Escobar 1992, Smillie 1995). They argue that its basic tenets need to be re-thought in light of a number of contemporary challenges. Moreover, this process of rethinking, in order to be productive, requires the consideration of a number of pertinent factors that have marked the field and the broader global context over the past four decades.

Some of the leading theorists argue that our arrival at this crossroads is a reflection of a history steeped in failed 'experiments' in development. The past forty years have seen an increase in the disparity of wealth between the North and South and further deterioration of conditions in the South (Sachs 1992, Braidotti 1994, Sen & Grown 1987). The four 'Development Decades' have made it clear that the "trickle down", macro-level and predominantly government to government strategies to provide assistance, transfer technology and expertise, and pursue rigid ideals of economic growth are ineffective. Indeed, they are often destructive to the communities upon which they are imposed. The rapid growth of problems such as economic stagnation, hyper-urbanization, food shortages, increasingly poor living conditions, high unemployment, political corruption and a larger gap between the rich and the poor, have all been associated with attempts to modernize and industrialize, attempts to "develop", across the South.

Additionally, the issues which surround the effects of the end of the Cold War, increasing globalization, the prominence of open market economies, ethnic tensions, migratory populations and environmental degradation are creating a more polycentric world; blurring the lines which once distinguished the "North" from the "South", the

“First World” from the “Third World”<sup>1</sup>. Civil society and non-governmental organizations (NGOs) are currently rising in importance as the bodies which attempt to balance the forces of the market and the state. They are attempting to give a voice to marginalized communities and increasingly provide services to those in need, thereby changing the ways in which we conceive of and engage in development processes. These changes require new strategies for effective cooperation and communication to address both global and local problems.

It is at this crossroads, within this context of significant change and increasing challenges, that we see the emergence of new information and communication technologies (hereafter ICTs) as an important and contentious factor within development thinking at global and local levels. Networking technologies, particularly the Internet and its applications, are currently being hailed by many as the means by which communities in the Third World are going to break into the modern era and become full participants in global decision-making (IDRC 1996). Many consider these technologies to fundamentally differ from their predecessors and provide unique opportunities because of their capacity for two-way transmission, their interactive, diverse and *relatively* accessible nature. As such, there is much discussion about countries across the South “leapfrogging” the industrial age to join the rest of the world in the information age. “It is here [in international telecommunications networks] that the technological advances offer Africa more cost-effective and appropriate technologies to leapfrog over several generations of intermediate technologies still in use in the industrial world” (Amoeka 1996). It is argued

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<sup>1</sup> Throughout this paper I will use the terms North and South, Third World and First World interchangeably. The North and First World will refer to industrialized countries of Europe, North America, Japan, Australia and New Zealand. Third World and the South will refer to selected countries of Africa, Asia, South America and the Caribbean. These terms were initially coined after the second World War to distinguish “underdeveloped” countries from “developed” countries and established an ideological framework which has persistently dictated relationships between the North and South and shaped conventional understandings of the South. I realize the reductionism of such terms and recognize that the polarity they indicate is fundamentally shifting. There exist multiple centers of power and peripheries of powerlessness both within and across *all* nations and we see evidence of extreme wealth in the South and extreme poverty in North. However, for the sake of a more efficient discussion I will utilize these terms as a means to investigate the specific issues of interest within this thesis.

that access to “the information society” via global electronic networks will enable social groups previously excluded from information resources, collaborative initiatives and decision-making forums to become their active participants. These groups will not only receive information from the North, but will become equal contributors to the emerging “global information era” (Amoeka 1996). In this way, ICTs are being perceived as a socially transformative tool, as authentically participatory and as a means to equalize power relations across the globe.

Other development theorists and practitioners view the potential of ICTs to enable authentic participation, challenge contemporary development practices and ultimately transform North-South relations with critical skepticism and are demanding more serious consideration of their implications (Panos 1996, Third World Network 1996, Uimonen 1997). They suggest that contemporary expectations surrounding these technologies need to be considered in relation to a number of significant social, financial and technological constraints. “In theory the means to handle information are increasingly available and democratic. In practice there is a danger of a new information elitism which further disenfranchises the majority of the world’s population” (Panos 1996, p.2). The extent of the constraints was made vivid by South Africa’s Deputy President Thabo Mbeki when he pointed out to the 1995 G7 conference that “half of humanity has never made a telephone call” (UNECA 1996). Access to the Internet requires a telephone line, yet 49 countries have fewer than one telephone per 100 people. Thirty-five of these countries are in Africa. At a global level at least 80% of the world’s population still lacks basic telecommunications infrastructure (Panos 1996). To purchase a modem in India costs four times what it does in the United States, without considering the enormous differences in per capita earnings and standards of living. Furthermore, it is important to distinguish between a technological revolution and a social revolution. New ICTs, although having great potential to be an equalizing force, continue to exist within social power structures in which there are deep divides between haves and have nots. The

advent of these technologies by no means guarantees equitable access and utilization of them.

Thus, on one hand, application of and access to ICTs has great potential for expanding the capacity of community and non-governmental organizations to determine and pursue their own development agenda. The technologies may enable these organizations to more effectively participate in global communication and information networks, thus contributing to and benefiting from local and global problem solving. On the other hand, the socio-economic, political, cultural and technological requirements to access these technologies may prohibit these organizations from accessing, let alone effectively utilizing, the technologies to achieve their own goals. Enormous economic and human resource constraints, lack of effective policy and regulatory bodies, and transnational monopolies of control over the technologies may result in the expansion rather than the reduction of the economic and information gap between the North and the South.

These issues provide the impetus and framework for this thesis. What follows is an exploration of networking technologies as tools to enable civil society organizations, particularly development NGOs in the South, to more effectively participate in initiatives at the micro (local/rural), meso(national/regional) and macro (international) levels of development processes. What role can these technologies play as these organizations become increasingly prominent within development processes, negotiating a space and a voice for marginalized communities between government and corporate forces? The specific questions this study seeks to address are:

**At the micro/local level, do the technologies have the potential to enable Southern NGOs to more effectively work with marginalized communities to define and address their development needs? At the meso-level, do they enhance the capacity of these organizations to influence government policy and participate in regional networks to develop South-South alliances? At the macro/international level, do**

**they enable the NGOs to more effectively contribute to and gain from development debates and negotiations with United Nations agencies, international donors and global alliances? Ultimately, are these technologies an effective tool to enable organizations in the South to function more effectively across the development spectrum; enabling increased participation by marginalized communities, and thus working to bridge the gap between micro, meso and macro; policy and practice; haves and have nots?**

These questions are significant in that they contribute to current debates surrounding the technologies' potential as transformative and participatory tools. The exploration of these issues will provide insight, from a grounded and practical context, to other researchers, practitioners and organizations engaged in or pursuing ICT initiatives with development ends. By looking at the capacity of networking technologies to enable Southern NGOs to be effective at these three levels this study will augment development theory and practice as it attempts to incorporate new ICTs at the micro, meso and macro-levels of development processes. Ultimately, this discussion is intended to contribute to the debates and challenges that face development as we enter the 21<sup>st</sup> Century. These debates include the questions of how the utilization of ICTs impact upon the field; whether they can be used to transform relations between the North and South, the privileged and the poor, to be more equitable, or whether they will persist as elite technologies, further excluding those without access from decision-making, resource allocation and divisions of power. These broad debates shape current development theory and will be instrumental in its future practice. Although definitive answers lay beyond the scope of this investigation, these debates constitute a broader context that should be kept in mind throughout the following discussion.

This study is undertaken as a three-fold process. First, it is a review of the theoretical articulations of communications and development since the 1950s. Second, it is an examination of the current development context with specific consideration given to the

increasing prominence of civil society and the emergence of new ICTs as potent factors shaping relations between and within the North and South. Finally, it is a participatory exploration of networking technologies as they are being considered as potential tools for Zambian NGOs working to address a variety of development challenges. These parts combine to provide a theoretically framed and pragmatically informed investigation of new ICTs as tools to be engaged in the various levels of development processes. What follows is an explication of this three part process as it advances in four chapters.

### **Where We Have Come From: The Evolution of Development Communications**

In order to more clearly understand the ways development, and communications within development, have come to shape the context of this investigation the second chapter will briefly review the evolution of the field. It will broadly outline the historical frameworks which have shaped theory, policy and practice over the past forty years. Development's origins in modernization theory and the rise of the dependency critique will be reviewed before examining the emergence of the participatory framework and its basic tenets of people-centered, contextually appropriate and locally defined development. It was the shortcomings of modernization and dependency; the failures of macro-level, top down initiatives; the popularization of participatory methodologies and the increasing importance attributed to civil society that gave rise to Southern based NGOs as important actors in development practice. As these organizations become increasingly involved in the planning, implementation and evaluation of development initiatives, ICTs have emerged and are being considered as potential tools for the NGOs to be more effective in their work at local, regional, and international levels. Thus it is important to consider the implications of the new technologies within a broader historical framework before moving into the more specific investigation of these issues in the African context, which will take place in Chapter Three.

### **ICTs in Africa: Computers and Mud Huts?**

Chapter Three involves a detailed explication of the current issues, both political and practical, which surround access to and utilization of new ICTs across the African continent. In an attempt to more fully understand these issues and to explore e-mail and the Internet as potentially useful tools for NGOs, we need to explore the context on many levels. First, I will outline the major obstacles that inhibit full use of these technologies in many African countries. I then briefly outline the current status of connectivity across the continent. I will also look at some of the major conferences and policy statements emerging in relation to Africa's place in the "information society". Much of this discourse is establishing the framework within which Africa will seek a role in this emerging society. It is also important in shaping many of the multi and bi-lateral initiatives intended to redress Africa's information poverty at the same time that they seek to bring the continent into global markets. In the context of these macro-level initiatives, I will review a number of meso and micro-level projects that focus on expanded participation and social development as goals which can be realized through the utilization of the technologies. Most of these projects rely on community groups and local NGOs as their central actors, and perceive access to and use of the technology as a means to further participation and equitable development.

By looking at the initiatives in these various contexts I intend to illustrate differences in motivation, intentions and ultimate goals which surround the use of these technologies at the different levels of the development process. I hope to reveal some of the issues which surround the relationship between these two levels in the context of ICT access, use and control. In what ways do macro-level policy decisions effect micro-level initiatives? How can NGOs and local communities participate in and contribute to the macro-level policy debates and decisions? Ultimately, this discussion and these questions are intended to frame the case study. They are intended to provide a clearer understanding of the forces which shape NGO expectations, perceptions and utilization of the technology in their development work across Zambia and the Sub-Saharan region.

### **Welcome to Zambia Where Theory Meets Practice**

The fourth chapter is a presentation of the context which surrounds the Zambian case study. It begins with a brief outline of the political, socio-economic and information context within which the participating NGOs work. I will describe the research methodologies, the participants and provide rationale for the qualitative tools which were employed. Qualitative interviews with NGO staff were the primary method of data collection, although group interviews in rural communities, interviews with key informants, participant observation, document analysis and participant verification were combined with these interviews to create a broad understanding of the roles and perceptions which currently surround the technology as a development tool for Zambian NGOs.

Chapter Five presents the findings that emerged from the case study data without extensive interpretation to enable the reader to hear the voices of the participants directly. These voices and the diversity of perspectives they express are organized around central themes. These include current types of ICT utilization; the potential and constraints which surround e-mail and the Internet as tools for Zambian NGOs in their development work; and perceptions of the relevance of the technology in addressing basic development issues. The importance of this final theme is crucial because it forces us to consider the potential of the technology as authentically participatory. How can ICTs be useful to the majority of Zambians working to address the most pressing development issues but who continue to be without access to the technology? Of what relevance is e-mail and the Internet in the lives of people who continue to struggle to acquire adequate food, safe water, sufficient health care and education?

These questions lead to a presentation of the findings which emerged from the research conducted within two rural communities. Having examined the views of the NGO community, I felt it was important to explore the perspectives of the communities with



which these NGOs are trying to work: Communities living in marginal conditions in remote rural areas; communities which some assume are the central participants and beneficiaries of development work. Is information a priority in these communities? Could the technologies be effective in providing the information that they need? How could the information and the technology enable them to more effectively participate in development, both defining it locally and influencing it internationally? Again, by exploring perspectives in these two contexts, I hoped to provide insight into the potential and constraints that surround the technology at the many levels of the development process and to reveal the ways in which these levels interact. Ultimately in relation to the central questions of this discussion, if these technologies are to achieve their proclaimed participatory potential, do they not need to be relevant to meeting the basic needs of the marginalized majority of communities in the South? Can they provide a link between the micro, meso and macro-levels, ultimately enabling those disadvantaged to more fully participate in development processes?

### **Bringing It Home**

These fundamental questions preoccupy the final chapter. It is here that I will bring the discussion full circle by engaging in a fuller interpretation of the findings and relating them to the broader discussions of ICTs as participatory tools in the development process. I will outline their perceived effectiveness for Zambian NGOs working at the regional and international level, while persistent infrastructure, socio-cultural and organizational factors often inhibit their effective use at the national and local level. Does this current ineffectiveness at the one level indicate that they lack in significant potential? Or, is the apparent effectiveness internationally relevant enough to the local context to render their use meaningful to marginalized communities? How do these varying levels of effectiveness influence development processes as a whole? The limitations of this research make it impossible to provide definitive answers to these questions. However, this study does provide insight and have implications for current development initiatives and donor agencies that are engaging in ICT projects across Africa. It has implications for

African governments as they struggle to develop their national information infrastructure (NII) and participate in international markets. This discussion can provide insight to African NGOs as they attempt to acquire and utilize the technologies in their work across the region. Finally, this study also suggests potential areas for further research that could build upon what has been presented here to enrich theory, policy and practice currently engaged in exploring ICTs as effective tools for more equitable, sustainable and humane development.

Although this work represents a formal academic investigation into a number of pertinent questions which surround development, participation and the potential of ICTs within these processes it also, in many ways, represents a very personal and intellectual transformation for the researcher. The time I spent in Zambia had a significant impact upon the ways in which I understand development both in theory and practice; the people involved, their struggles and priorities; and their attempts to overcome their marginalization, ensure that their voices are heard and their priorities are considered. When I left for Zambia, steeped in the theory and literature and abstract debates which surround the field and the technologies I was cynical, a skeptic and a borderline technophobe. I had difficulty imagining how the new technologies could be appropriate as tools in a context in which many people do not have enough to eat or safe water to drink. What place did the Internet have in addressing issues that face people living without electricity, without access to proper health facilities or education or civic rights, let alone newspapers or telephones or televisions?

Yet after seven months of questioning, listening, working and living with these people and those who work with them I have become a tentative optimist. I debated, discussed and considered the vast diversity of perspectives and opinions held by the people for whom development issues are not abstract and distant but exceedingly present and urgent. As a result, I emerged neither a technophobe nor a technophile, but instead situated on a sort of middle ground; a place where I recognize the technologies as neither a panacea nor

an elitist plot for further exploitation. I have come to understand them as important and powerful tools, whose potential and limitations are only realized within socio-economic, political and cultural contexts across the globe.

It is this combination of intellectual endeavor, grounded experience and personal transformation that explicitly reveals the connection between theory and practice, between individual action and international institutions. It is the connections between the multiple layers of the development process which ultimately determine the extent to which the new ICTs can be used as participatory tools, to bridge the gap between the haves and have nots. The technology's usefulness is largely shaped by existing power structures at the same time that their use may work to re-shape these structures, and the theory and practice which currently defines development and relations between the North and the South.

## **CHAPTER TWO**

### **Understanding the Past: The Evolution of Development Theory and Practice**

The concept and practice of development, and communications in development, emerged in the post W.W. II period and has shaped relations between the North and South over the past four decades in significant ways. The original ideas of modernization, the dependency critique and the subsequent emergence of notions of participation and people-centered development provide the context in which Southern based NGOs are gaining prominence and new ICTs are emerging as potential tools within development processes. Thus, networking technologies, although having significant potential to enable Southern NGOs to participate more effectively in development initiatives, continue to be framed by a tenacious history in which structures of power and practice have created deep divides between haves and have nots, between the North and the South.

The following discussion will review the evolution of development and communications within development. It will begin with a review of the dominant, historical frameworks which have combined to shape development communications theory, policy and practice since the 1950s. This will include an explication of modernization theory and its corresponding perspective of one-way transmission, diffusion and effects oriented models of communication. As a Marxist critique of modernization, dependency theory and its notions of cultural imperialism will also be reviewed. Various critiques of these two bodies of thought are briefly outlined before initiating a discussion of participatory development as this concept has emerged and been widely appropriated by various players across the field.

In response to the vivid shortcomings of both modernization and dependency theory, a number of thinkers proposed an alternative framework in which participation is viewed as central to the development process. The participatory development framework has predominantly neo-Marxist roots and emerged in the 1970s from the work of Latin

American theorist Paulo Freire. As a critique of the Western ethnocentrism and macro-economic analysis inherent in modernization and dependency perspectives, it attempted to promote development as a process that is fundamentally contextual and locally determined rather than universal and externally controlled. Despite these radical shifts in thinking and practice, many theorists/activists feel that the concept of participation never fundamentally challenged the dominant frameworks or that it has subsequently been co-opted by these frameworks (Escobar 1992, Rahmena 1992, Parpart 1995). Critiques of this framework are briefly outlined before engaging in a discussion of the re-emergence of the ideas of civil society and the growing prominence of the role of NGOs in development processes.

It was in concurrence with many of the ideas of participatory development and the recognition of the many failures of government-to-government initiatives that notions of a strong civil society as essential to sustained and equitable development and democracy began to emerge in force throughout the 1980s (Smillie 1995). Implicit in the increased focus on this “third sector” was the assumption that progressive non-governmental organizations were its primary representatives within the development process. These organizations are now broadly accepted as the most effective agents to engage with both marginalized communities at the micro-level and state and donor agencies at the macro-level. It is this increasingly prominent role as middleman and assumptions that Southern NGOs have the capacity to be more participatory in their ideology and methods that established the rationale for these organizations as central to the Zambian case study in this thesis.

Finally, I will look at the implications of the foregoing analysis in relation to the utilization of new information and communication technologies (ICTs) by non-governmental organizations across the South. Can ICTs provide a democratic forum, perhaps a more level playing field, where community organizations and popular movements can engage in more equitable dialogue with international donor agencies and

national governments? Do they open a space in which previously marginalized communities can form alliances to substantially impact upon global decision-making and prevailing power structures? Do these technologies have the potential to be authentically participatory in that they will enable these communities to more effectively define and determine their own development process? Or, will ICTs persist as exclusive technologies, further marginalizing those without the resources or the technical skills for access and utilization? Will they simply become another tool by which those at the center (multi-national corporations, international donor agencies and Northern governments) can dictate the development process more efficiently and effectively to meet their own ends. Although these questions are extremely broad, they do provide a context for the more specific investigation of these issues in the African context in Chapter Two. In pursuing this discussion I do not intend to provide a comprehensive review of development communications theory and practice. Rather, I will provide an historical foundation to explore new ICTs as they shape and are shaped by contemporary issues in the development field.

### **Development Frameworks: The Dominance of Modernization and Dependency**

The modernization theory of development emerged in the 1950s as an ideology and practice which perceived development as a linear process by which traditional or 'backward' societies are transformed into modern nation-states through the replication of Western models of political, economic, social and technological change (Hettne 1990). According to this theory, the goal of development is industrialization, the establishment of capitalist markets, and mass production and consumption. Quantifiable indicators such as per capita income, gross national product and the production and consumption of material goods could supposedly measure progress towards development (Braidotti et al 1994). Modernization theory is rooted in Enlightenment thinking. It assumes the universality of the Western modernizing experience and relies almost entirely on the rationality of economic and technological progress, assuming that economic growth and

participation in global markets on a national level will eventually trickle down to benefit all members of a society (Marchand & Parpart 1995).

In correspondence with the evolution of modernization theory, there has been a focus on communications as a central factor in the development process. In the 1950s, the establishment of advanced communications systems and the use of the mass media to motivate change were understood as central components of the development process. The ability to send “modernizing messages” to developing communities so as to transform traditional social attitudes into modern ones was believed essential if development was to effectively occur (Servaes 1989). Daniel Lerner’s (1958) communications analysis of modernization largely corresponded with Walt Rostow’s notion of development as a series of linear stages and became central to development communications thinking in the West. According to Lerner, “the change from traditional to transitional and then to modern society was always accompanied by a change from oral communication systems to mass communication systems” (in Mowlana 1990, p.52). It was only through mass communications and the broad transmission capacity of radio, television and the print media that individuals could be sufficiently influenced to adopt attitudinal changes that would promote the modernization of entire societies.

In the 1960s, Wilbur Schramm built on Lerner’s model by incorporating Paul Lazarsfeld’s ideas of the two-step flow of communications (Servaes 1989). He argued that developing societies needed to combine the forces of the mass media with interpersonal communications in which community leaders would learn about technological innovations and then persuade others to use them. These ideas contributed to the development of a diffusion and adoption model of development communications as proposed by Rogers and Shoemaker in 1973 (Servaes 1989). According to this model, development is defined as the adoption of innovative technologies that takes place in four stages. Through these stages a developing society would progressively acquire Western

technologies, transform their socio-political and economic structures, and thus engage in the process of catching up to the West to achieve status as a modern society.

Many scholars of the period were critical of the modernization paradigm and its corresponding perception and utilization of communications for development. In the early 1960s, dependency theory emerged as a Marxist critique of modernization theory as purely capitalistic neo-imperialism. Scholars such as Andre Gunder Frank argued that development and underdevelopment are two sides of the same coin; that international capitalism worked to increase the resources of the “center” (Northern capitalist economies and transnational corporations) while perpetuating and benefiting from the underdevelopment of the “periphery” (the un-industrialized or semi-industrialized countries of the South) (Marchand & Parpart 1995). The development strategies implicit in modernization theory create a dependence by peripheral countries on the industrialized centers of the West by linking their economies to global markets. Dependency theorists argued that foreign penetration through technological and capital transfers actually create rather than alleviate underdevelopment. Unlike modernization theory, which attributes underdevelopment to the ‘backwardness’ of Third World societies, dependency theorists explained underdevelopment as inequitable divisions of international labor and distribution of resources under the system of global capitalism.

In addition to this critique of modernization based on an analysis of global economic relations, the dependency theorists argued that the political and military imperialism of the colonial era had been augmented by cultural imperialism within the post-war era. Scholars such as Luis Beltran, Armand Mattelart and Herbert Schiller were critical of the unequal flow of information and media products from the North to the South (Waters 1992). They argued that these unequal information and cultural flows reinforce a relationship of dependence and establish a capitalist ideological presence in the communities of the periphery. “In general most of the *dependistas* immediately accept that, together with the high volume of Western media products, a conservative and



capitalistic ideology and a consumption culture is transmitted and established” (Servaes 1989, p.219). In this sense, dependency theorists perceived the communications component of modernization theory as a powerful ideological tool to ensure the growth of capitalist based, American allied nation-states in the South.

Despite the importance of its critique of modernization in broadening the analytical dimensions of development, communications and social change, dependency theory remained largely within a macro-level, modernist framework. Like modernization theory, it continued to see the problems and solutions of underdevelopment in structural economic terms, applying equally reductionist and universalistic analysis to relations between the Third and First Worlds. Dependency theory “remains within an economistic framework and the notion of primacy in the agency of the state and elites in the South to counter the process of capitalist accumulation in the North” (Braidotti et al. 1994, p.107). Although the communications model associated with dependency theory did focus on issues of cultural imperialism and included a systemic structural analysis of communications and information flows, it did not fundamentally question conventional understandings of progress and simply replaced the modernist notion of the development expert with the “enlightened vanguard” as the agent who will bring societies of the periphery into the modern age (Fals-Borda & Rahman 1991). Many argue that, like modernization, it insufficiently addressed the complexity of relations between the North and South, and within countries in the South. It did not acknowledge the presence of indigenous knowledge or divergent value systems and local priorities. Neither did it take into account the complex histories and diversity of situations which contribute to underdevelopment, thus enabling little in the way of pragmatic solutions (Marchand & Parpart 1995).

As is clear in this brief overview, both modernization and dependency theories of development are decidedly ethnocentric and economistic. They rely largely on positivistic, scientific knowledge, which in turn relies on conceptual schemes that are

unable to incorporate the range, scope and complexity of factors which shape experiences in the South and relations between the North and South. Both assume that the transfer of expertise and technologies from the developed to the developing countries, in either liberal or Marxist forms, is the way to ‘develop’ the South, and neither challenge the notions of progress as defined in the North (Marchand & Parpart 1995, p.226). Although dependency theorists incorporated a more sophisticated analysis of communications, both frameworks perceived communications as largely a tool for development rather than as the central feature of social and cultural systems and the means by which these systems may be created and changed.

As a response to this emphasis on top down, macro-economic, Eurocentric models of development as articulated in both modernization and dependency theories, ideas of alternative development based on the participation of populations in the South began to flourish. Proponents of this notion of alternative development claimed that the voices of grassroots people must be brought into the development process and thus the idea of participatory development emerged (Esteva 1992).

### **Looking for Alternatives: The Emergence of Participatory Development**

Participatory development, sometimes referred to as “alternative development” or “another development”, emerged in the 1970s. It can be understood as an attempt to fundamentally alter development theory and practice to be bottom up, contextual, emancipatory and authentically transformative of existing power structures by bringing ‘the people’ into the process and enabling them to control the path of their own development.

Many of the foundational ideas of participatory development and the concept of participation of “grassroots people” are rooted in the works of Paulo Freire. In the course of his work and studies in the Third World, particularly Latin America, he developed ideas about the centrality of dialogue in working with the oppressed to enable them to

recognize the condition of their oppression and work to change it. For Freire, communication, if it is to involve “the act of authentic knowing and thinking” must be defined by mutual and reciprocal dialogue:

Communication is characterized by the fact that it is dialogue. It is not the transference of knowledge, but the encounter of subjects in dialogue in search of the significance of the object of knowing and thinking (in Christians 1991, p.273).

It is upon this premise that he develops a dialogic theory of communication in which he argues that, “every being, no matter how ‘ignorant’ or submerged in the ‘culture of silence’, he [sic] may be, is capable of looking critically at the world in a dialogical encounter with others” (Shaul in Introduction to Freire, 1984, p.13). This “dialogical encounter”, or perhaps more simply, critical discussion, becomes the praxis by which local people engage with each other to be empowered to perceive social, political and economic contradictions and become agents in their own social transformation, a process Freire refers to as “conscientization” (Freire 1984, p.19).

Freire links dialogue, empowerment and conscientization to development, which he argues must result in radical structural change if it is to be authentic. He argues that this authentic social change is not simply a transfer of power from oppressors to oppressed, but rather, it involves a complete re-conceptualization of power; a “reinvention of power”:

I use the phrase “to reinvent power” because for me the principal, real transformation, the radical transformation of society in this part of the century demands not taking power from those who have it today, or merely to make some reforms...The question, from my point of view, is not just to take power but to reinvent power. That is, to create a different kind of power, to deny the need power has as if it were metaphysics, bureaucratized, anti-democratic. (in Christians 1991, p.275).

Freire argues that it is only through dialogic communication and this reinvention of power that people are able to act for radical social change. Thus, development cannot be a

process by which externally defined initiatives are implemented by ‘the people’ to further the goals of those in power. It must instead be about social transformation through authentic, equitable discourse and critical awareness by which marginalized groups are empowered to name the world so as to change it, and in doing so to liberate both themselves and their “oppressors” (Christians 1991).

These ideas of empowerment, dialogue, participation and social transformation have been taken up by development theorists and social activists to formulate the broader ideas of participatory development, participatory action research (PAR) and participatory communications theory and practice.<sup>2</sup> Throughout this work there is an emphasis on local initiatives that are derived from, and ultimately work to satisfy, locally defined needs. Development is understood as the improvement of the quality of life in communities through a process of increasing self-reliance and local empowerment (Jacobson 1985).

It is this notion of empowerment that distinguishes participation as means from participation as ends. In his work with PAR, Orlando Fals Borda (1991) defines participation as *means* as essentially a process of co-optation in which people are mobilized to cooperate in the execution of an externally defined development project. Alternatively, participation as *ends* involves a process by which communities are empowered to define and determine the conditions of their own development. These important distinctions and the corresponding concept of empowerment are central to PAR which Fals Borda defines as a “philosophy or style of working with people to promote people’s empowerment to change their immediate environment... The people’s own initiatives seek to promote their authentic self-development, which takes off from their traditional culture and seeks to preserve the physical environment with which they have an organic association” (1991, p.16).

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<sup>2</sup> See: Jacobson 1985, Sen & Grown 1987, Fals-Borda & Rahman 1991, Wright & Nelson 1995.

As within Freire's theories of social transformation through dialogue, communications is similarly central to broader frameworks of participatory development. Within these frameworks centralized communication programs, planned and executed by 'experts' from outside, are replaced with projects emphasizing local communication programs. These contextually based and locally initiated projects are intended to account for the multiple and diverse domains of development communications, and are carried out by 'the people' towards empowerment and popular education. A UNESCO commissioned study makes the basic tenets of this approach explicit:

[P]articipatory communication must operate from a praxis: first a reflection about the reality of the communication process that exists today, its ideological, cultural, socio-economic aspects, as a starting point for trying to resist the current process of cultural penetration, and secondly, a series of actions forming part of a popular pedagogy that will help promote group solidarity, and concerted action for social change (in Jacobson 1985, p.90).

Implicit in this description is Beltran's notion of horizontal rather than vertical flows of communication in which Third World communities are not perceived as the passive receivers of information or ideology from the active sources in the North. Participatory communications sees these communities as engaged in active and equitable dialogue by which they generate knowledge and strategies to identify their social realities and work towards their transformation (Jacobson 1985). This approach emphasizes the use of *appropriate technologies* that are perceived to be more effective in local contexts. This includes a substantial growth of projects which utilize community broadcasting and print technologies in local languages; popular education in the form of endogenous drama; and role playing and puppetry as a central transmission strategy in AIDS education, health care and agricultural innovation. In all cases the emphasis is on 'the people' having access to, and control of, the media.

Although the ideas of participatory development grew out of grassroots movements in Latin America and as a critique of the dominant paradigms, they have become the

centerpieces of more recent mainstream development discourse. The “Development Establishment” has realized that they are unable to effectively realize their development goals without the cooperation of the people who are affected (Rahnema 1992). In the 1980s, “[d]onor and recipient national governments were witnessing the fact that the billions spent on development projects had failed to produce the expected results, often even adding new problems to the old” (Rahnema 1992, p.117). Thus, we hear a “strange echo” of participation in the rhetoric and policy documentation of major international aid organizations as they recognize that development projects had floundered because the local people affected had been left out (Wright & Nelson 1995). Groups such as the Intermediate Technology Development Group (ITDG) is defining participation as, “active involvement of people in making decisions about the implementation of processes, programmes and projects which affect them” (Slocum et al. 1995, p.3). At the same time, the World Bank is defining it as, “a process through which stakeholders influence and share control over development initiatives, decisions and resources which affect them” (in Wright & Nelson 1995, p.5). These definitions reveal the ways in which participation can be similarly defined by groups from divergent perspectives, who utilize contrary methods and who ultimately have very different goals.

### **Considering Critiques: Recognizing the Limits of Participation**

Critiques of participatory development have emerged from a variety of fronts and with increasing aggression since the early 1980s. Although much of this work is targeted at the co-optation of the concept by mainstream, macro-level institutions, there are also important critiques of participation as it is employed as a method for organizations working with communities on the ground.

In his critique of participatory development at the macro-level, Majid Rahnema argues that “[w]ithout ever being admitted openly, the scale and content of foreign assistance agreements reflect the degree to which recipient countries are prepared to ‘participate’ in the global efforts and needs of their developed partners” (1992, p.118). According to this

argument, lending agencies (the IMF and the World Bank) require that recipient national governments can insure the cooperation of their populations to implement development projects which benefit the donor countries in the North. In this way participation is not a method for social transformation but rather ensures the maintenance of the status quo, benefiting the developed world at the expense of those struggling to develop.

Concurrently, participation has become an economically appealing, if not necessary, component of many of the neo-liberal development goals which have emerged since the early 1980s. At this time, NGOs and community groups working towards 'empowerment' in terms of people having control over their own development, argued that development projects should promote greater self sufficiency and reliance rather than dependence on top-down state controlled provision of services. The idea of self-reliance was quickly adopted by the World Bank and others in the 1980s as an important part of structural adjustment programs (SAPs) (Wright & Nelson 1995). SAPs require Third World nations to 'adjust' their economies to fit global market needs usually with the effect of shifting social services and responsibilities to the private sector, communities and families. In relation to SAPs, participation has been understood as a means to relieve pressures for social services and subsidies, thus reducing state involvement and expenditure. Thus, the self-reliance language of NGOs was appropriated by macro-level agencies and became double edged, with these agencies arguing:

the state should not be omnipresent and 'clients' should be involved in the production of their own services. Structural adjustment policies were accompanied by an emphasis on 'community' and 'family' (i.e. principally women) taking on welfare and service responsibility formerly ascribed to the state (Wright & Nelson 1995, p.3).

The ideas of self-reliance and self-help which were sources of empowerment in community based theory and practice, were given a neo-liberal slant to become ones of responsibility and obligation for these communities. This interpretation of participation relieves the state of many of its social service responsibilities and places the burden of

providing housing, health care and education upon community based NGOs who must meet these needs without resources from the state.

These explanations of the vigorous adoption, or perhaps more accurately co-optation, of notions of participation are evident throughout the rhetoric, documentation and practice of international agencies. From the World Bank to the Organization for Economic Cooperation and Development, to CIDA and USAID, policy and project guidelines consistently emphasize the centrality of participation to successful ‘development’ of the Third World. Most examples reveal that participation is conceived as a *means* to achieve externally defined project goals rather than an *end* that empowers the community. Community involvement in these projects is predominantly aimed at maintaining existing power structures rather than transforming them (Steifel & Wolfe 1994).

Beyond these critiques based on the idea of co-optation at the broader, macro-level, the theory and practice of participation has also been critiqued as it is applied “on the ground” by endogenous NGOs and community-based development projects. These critiques are leveled on a number of fronts. First, it is important to recognize that much of the work in participatory development speaks about working with “the community” and “empowering the people” without seriously considering who *the people* are. It is argued that this conception of communities and people within Third World countries is reductionist, and often idealized (Parpart 1995, Rahmena 1992). It assumes homogeneity and common interests within local groups. It fails to recognize the differentiated status of groups and individuals within the community in which powerful divisions according to class, caste, gender, ethnicity, education and accumulated wealth delineate very different needs, interests and power (Braidotti et al. 1994). This notion of community tends to idealize traditional or local societies while “glossing over indigenous structures of exploitation and domination...” (Braidotti et al. 1994, p.112). The caste system in India and tribal structures in Africa are examples of inherently hierarchical and patriarchal systems which perpetuate the subordination of many groups, most notably, women.



Eyben and Ladbury argue that “these idealized notions of community [are] a real barrier to understanding the dynamics of participation and explaining the circumstances in which participation does, and does not occur” (in Wright & Nelson 1995, p.194). As a result of these assumptions, NGOs working with these communities are sometimes unable to identify the hierarchies and take effective action to redress the various levels of oppression which exist within these communities.

Furthermore, the concept of empowerment, in trying to enable people to see their oppression so as to change it, underestimates the abilities of these people to be quite aware of their situation. It often fails to recognize “the thousands of centres and informal networks of resistance which ordinary people put up, often quietly, against the prevailing power apparatus” (Rahnema 1992, p.123). In some cases the ideas of empowerment work to perpetuate perceptions of the communities and individuals in the Third World as powerless against, and ignorant of, oppressive forces without the assistance of a “cooperant”, or a “change agent” or an “enlightened vanguard” to make them aware and mobile.

Participatory development is also intended to break down dependence on expert knowledge and replace subject/object relationships with collaboration on the part of a “facilitator” or “change agent” who will act as a catalyst in the process of awakening self awareness and mobilizing for change (Fals Borda & Rahman 1991). Yet, many question if there is any substantial difference between the “change agent” of participatory development and the “expert” of conventional top-down development. “[T]he cooperant can be just as much the development expert, who knows the answers to people’s problems as the mainstream expert” (Parpart 1995, p.234). It is argued that these change agents cannot help entering into the development context without bringing their own ideas and values about appropriate change, progress and the needs of the community. In many cases participatory development projects designed to increase self-reliance have created greater dependence on the change agents or the government bodies and agencies

of which they are apart.<sup>3</sup> Thus, how does one reconcile indigenous with outside knowledge even in specific development contexts? Who has final say when conflicts arise over perspectives, objectives and methods?

These questions lead to a final critique based on the contradictions that arise when participatory development initiatives in the South continue to rely predominantly on resources from agencies and institutions which reside in the North. Many argue that we cannot sincerely speak about local empowerment to determine local development when funding and evaluatory requirements are determined outside of the communities' control (Wright & Nelson 1995, Parpart 1995). Within the many different levels of the development process, the acquisition of power by local communities is often dependent on the benevolence of development workers or bureaucrats and their sincere commitment to promote real shifts in power despite the hierarchical structures to which they may be responsible. Equitable participation and Third World control of development cannot be meaningfully referred to when resources, technology and final decision-making authorities continue to reside in the North.

It is important to recognize that none of the historical theoretical frameworks replaced their predecessors. All persist and combine today to shape the context in which we can explore if new ICTs have the capacity to enhance and authenticate NGO and community participation in development processes. Do the technologies have the potential to enable more equitable development relations between the expert and the local, the "Development Establishment" and marginalized communities? Can they be utilized to redress some of the shortcomings which are currently being revealed within the participatory framework?

Despite these critiques, there continues to be broad acceptance, if divergent interpretations, of participation across the spectrum of groups and institutions involved in

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<sup>3</sup> See Braidotti et al., 1994, pp.113-114 and Marchand & Parpart 1995, pp.233-235 for examples of these types of projects.

development. It is in this context that we have seen the emergence of the concept that a strong civil society is critical to any attempts at sustainable and more participatory development. Although this concept has a history stretching back to Roman times it has been resurrected in contemporary thinking and has helped to precipitate the growth and proliferation of non-governmental organizations as important agents of development across the North and South (Van Rooy 1997).

### **Enter Civil Society: The Mediating “Third Sector”**

Inherent in the critiques of modernization and dependency theory and the proliferation of participatory frameworks across mainstream development is the recognition of the failings of the many government to government and state-centric attempts to develop nations across the Third World. Many of the multi- and bilateral aid agencies are acknowledging the limitations of governments in the South to effectively assess development needs, provide the training and services required for their populations to contribute to and benefit from economic growth (Van Rooy 1997). At the same time there has been growing recognition that long term economic development is inextricably linked to good governance in the form of democratic institutions, accountability, the rule of law and the protection of human rights, and that good governance requires a strong civil society (INTRAC 1997). This civil society, or the “third sector”, can be very broadly understood to constitute a sphere separate from both market and state forces through which the priorities of a community can be expressed. It is made up of organizations “that exist between the level of the family and the state which enjoy a degree of autonomy from the state and the market and which provide counter-balance to the forces of the state and the market” (INTRAC 1997, p.1).

It is argued that civil society, and the organizations understood to represent it, needs to be independent of both market and government forces and must have the capacity to hold both accountable in their actions (Smillie 1995). Beyond this role as mediator and watchdog, much of the donor community has come to perceive civil society organizations

(CSOs) and NGOs (these terms are increasingly interchangeable), as essential to a participatory development process. These organizations are assumed capable of fulfilling four broad functions: “civil society organizations can help to generate economic growth; they can improve equity; they can function as replacements for waning state services; and they can glue communities together with social capital” (Van Rooy 1997, p.5).

The importance of civil society in development cannot be disputed. There are broader debates which surround adequate definitions of civil society, the exact relationship between civil society and democracy, and whether the entire concept is emancipatory or neo-liberal, but these remain beyond the scope of this paper.<sup>4</sup> What is important for the discussion here is the centrality of NGOs within these debates, their assumed role as representative of civil society and their rising prominence as actors within processes of development.

### **The Rise of NGOs: New Agents for Development**

Throughout the 1980s the international donor community began to enthusiastically acknowledge the work of Northern, and then Southern, non-governmental organizations. This term has come to refer to a range of organizations that are actively involved in all aspects of a country's overall development (Van Rooy 1997). International NGOs such as ‘Oxfam’, ‘CARE’ and ‘Save the Children’ and Southern-based organizations as large as ‘SEWA’ (Self Employed Women's Association) in India and ‘ORAP’ (Organization of Rural associations for Progress) in Zimbabwe and as small as ‘Women for Change’ in Zambia, are often perceived as more innovative, inexpensive and effective than official donors and indigenous governments in implementing participatory development projects.

The wide recognition of their capacity, particularly to reach the poorest and most marginalized populations, is indicated by a consistent increase in donor dollars being

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<sup>4</sup> See Chandhoke 1995, Clayton 1996, Van Rooy 1997 for a full discussion of the issues which surround supporting civil societies as intrinsic to democracy and development.

channeled through NGOs over the past 10 years. Although figures for NGO spending are difficult to determine with great accuracy, it is estimated that at least U.S. \$1 billion in bilateral aid went through both Northern and Southern based organizations in 1996 (Van Rooy 1997). Between 1985 and 1993, government to government, or bilateral, aid disbursements increased by 68%, while in the same period funds disbursed through NGOs rose by 103% (Smillie 1995). Even some of the multilateral agencies such as the World Bank are showing interest in the NGOs with 40-50% of their projects in 1994-96 having some sort of NGO involvement (Van Rooy 1997).

This rise in prominence of NGOs as central actors in the development process is concurrent with bi- and multi-lateral agencies' attempts to put participation into action in their development initiatives. Many of the ideas about people's participation in the development process emerged from grassroots and community organizations and thus many NGOs, particularly those based in the South, are assumed to have a natural affiliation for participatory ideologies and methods. It is argued that their position within developing communities enables these organizations to more effectively assess and address immediate development needs. Development issues are not as abstract and distant for the endogenous NGOs as they are for their Northern counterparts and the international donors. Community needs for sufficient food, health care, education, safe water, housing and civic rights are immediate, concrete and vividly evident on a daily basis. Their position within the communities also provides a degree of legitimacy and authentic representation and allows for a certain level of accountability for the activities they engage in (Smillie 1995). As such, these organizations are increasingly understood as the link between the macro-level donor agencies and the micro-level communities who are the recipients of aid, and ideally, the primary participants in development projects.

Because these organizations are perceived as more effective on the ground, there is increasing pressure that they, as representatives of civil society, play a significant role in development at the macro, international level. A World Bank report argues that NGOs

serve a number of essential functions in attaining “sustainable human development”. These organizations are expected to motivate citizens to participate in national and international affairs; to promote accountability of both governments and the market; to participate in negotiating “trade off” development strategies between government, market interests and the communities; and to participate in designing and implementing national social policy (in Van Rooy 1997). Ultimately they are expected to motivate and pursue significant changes in national and international policy and practice. John Allwood makes the extent of these expectations explicit:

The challenge facing NGOs is to redefine the principles of development, democracy and sovereignty in the light of mounting poverty, growing inequalities, looming environmental threats and the ever clearer interdependence of nations. Their suggestions and ideas must be well grounded in economic reality and on the experiences, both negative and positive, within on the ground programmes. NGOs should challenge official development thinking and advocate a new order based on human values and sustainable development (in Macdonald 1997).

These expectations seem exceedingly high, particularly when considering that the majority of NGOs operating in the South continue to be dependent on donor funds, are restricted by the stipulations of this funding and suffer from significant human resource, technological and infrastructure limitations. Yet, the new thoughts about development, the role of participation in the process and the increasing prominence of NGOs at both macro and micro-levels does provide these organizations with opportunities to explore new kinds of relationships and innovative alliances to pursue their goals. They are provided the opportunity to work with a variety of groups ranging from local sports associations and trade unions to multi-national corporations. Although plagued with persistent constraints, these NGOs do have enormous opportunities to participate in significant ways in local, national and international contexts with the potential to change both the theory and practice of development (MacDonald 1997). It is with these opportunities in mind and in attempting to overcome the constraints that many of these organizations are looking to the new ICTs as a potentially innovative and effective tool.

### **The New ICTs: Considering the Optimists and the Skeptics**

As conventional notions of development are being challenged and NGOs are gaining prominence, new information and communication technologies (ICTs) are spreading to become an unprecedented force within social and political relations at local, regional, national and international levels. Groups and organizations from across the development spectrum are increasingly focused on the ways in which these technologies may reshape relations between and across the North and South. Both international donor agencies and international NGOs have become involved in ICT initiatives, most of which focus upon Internet connectivity and access, to support and/or develop indigenous electronic communication systems across the developing world. On one hand, among the international agencies and multinational organizations, ICTs are being touted as the means by which developing nations will be brought into the Global Information Society and enabled to participate in international markets (Amoeka 1998, Mihyo 1997). On the other, international NGOs, human rights and environmental groups supportive of the technologies believe they will enable marginalized communities to form effective alliances and establish a voice in national, regional and international forums thus contributing to and benefiting from decision-making bodies previously beyond their reach. In these diverse, perhaps oppositional, ways, the transformative potential of these technologies is being proclaimed across development discourse.

There are a number of examples of initiatives being undertaken by international aid agencies aimed at developing, supporting and coordinating ICT implementation across the Third World. The United Nations Economic Commission for Africa (ECA) created PADIS in 1980 as a cooperative regional development information system to serve Africa (PADIS 1996). Since then, PADIS has linked more than 18 African organizations to a FIDOnet-based network. PADIS is currently working with the International Development Research Center (IDRC) to install electronic networks in an additional 24 African countries through the Capacity Building for Electronic Communication in Africa

(CABECA) project (CABECA 1997). These projects laid the foundation for more recent initiatives seeking to more effectively bring the South into the information age.

The World Bank is currently managing the Information for Development Program (infoDev) which is a multi-lateral donor project to assist the economies in countries across Africa and Latin American to benefit more fully from modern ICTs. The African Networking Initiative (ANI) and the African Information Society Initiative (AISII) are being led by the Economic Commission for Africa (ECA), UNESCO, the World Bank and the International Telecommunications Union (ITU), and are intended to establish broad guidelines for the implementation of, and access to, ICTs across the African continent. The AISII guiding principles which were established by an “expert working group”, envision the establishment of an “African information society” by the year 2010 in which:

- Every man and woman, school child, village, government office and business can access information through computers and telecommunications;
- Information and decision support systems are used to support decision-making in all the major sectors of each nation’s economy;
- Access is available throughout the region to international, regional and national information highways;
- A vibrant private sector exhibits strong leadership in growing information-based economies;
- African information resources are accessible globally reflecting content on tourism, trade, education, culture, energy, health, transport and natural resource management;
- Information and knowledge empower all sectors of society (Amoeka 1996).

These goals reflect the enormous expectations being placed upon ICTs to revolutionize African society, obliterate exclusionary practices and structures, and ensure that all African nations are active participants in global decision-making processes.

The *AISII Action Framework* for ICTs in Africa is depicted by the ECA and the World Bank as authentically participatory in that it is, “...Africa’s own initiative. It was



prepared by a high level working group of African experts in information and communication technologies at the request of African ministers responsible for economic development and planning” (Amoeka 1996). But who represents Africa and how do these experts account for the plethora of needs and interests which need to be considered when constructing such a framework? With the exclusion of South Africa, only one in ten thousand Africans currently have access to the Internet (Amoeka 1998). How will such a framework and the initiatives that emerge from it include the vast majority of Africans who continue to exist in marginal conditions?

Parallel these macro-level initiatives, there has been a corresponding interest in ICTs among local, national and international NGOs and civic organizations. Civil society networks such as the South African NGO Network (SANGONeT), the South Asian Network for Alternative Media (SANAM), the APC Women’s Net, and One World On Line have been established and are intended to ‘empower’ local organizations and communities through access to ICTs. In this context, “the purpose and end of electronic networking is to make popular initiative and popular interventions more effective, i.e., it is not efficiency but an agenda of social transformation and a pro-people developmental paradigm which must be the driving force of the networking system”(CERAS Documentation 1995). ICTs are perceived as a central component in the building of stronger civil societies; as a tool “to empower the disempowered” by providing links to regional, national and international networks pursuing radical social change (SANGONet Documentation 1996). The new ICTs may have the potential to be an information equalizer; their relative accessibility and two-way nature may render them as effective tools to bring marginalized groups into decision-making processes; and perhaps they can enable fundamental social change. But it is important to be aware that this potential is mediated and constrained by existing structures of power, knowledge and resource distribution.

Some theorists and activists speaking from a Third World perspective are leery of the concentration of ownership and control of ICT infrastructure in the hands of a few transnational corporations (Third World Network 1996). They express concern that the monopoly of ICT development, implementation and service provision by companies in the North will lead to the further dependence of groups attempting to utilize these technologies in the South. Most of the existing communication networks runs throughout the North and link the South to the North (i.e., via FidoNet systems) rather than connecting Southern communities to one another. They argue that these networks do little to promote self-sufficiency or independent alliances between communities across the South. Furthermore, much of the information disseminated via new ICTs, particularly the Internet, has been defined to meet the needs of individuals in industrialized or newly industrializing countries, individuals with particular informational needs and wants. Information that is thus defined may be of little relevance to “the three billion people who are on the margins of societies. The challenge is to adapt information and technology to sustainable development goals” (Gilbert et al. 1994).

Finally, there is a persistent and related fear that these technologies will perpetuate and strengthen the trend of cultural imperialism that they argue is currently executed through conventional communication technologies such as television, radio and international publications. They perceive these technologies as merely a more efficient means by which Northern entertainment, news and advertising will be transmitted to the South, further asserting the Northern cultural and political values and expanding the market for Northern goods (Third World Network 1996, Panos 1996).

This skepticism reminds us that in assessing these technologies we must acknowledge that they are social tools, whose potential and limitations are realized within, at the same time that they may change, local and global contexts. It reminds us to carefully distinguish between a technological revolution and a social revolution when we are exploring the potential of ICTs to benefit organizations in the Third World. The potential

of new ICTs as tools for more authentic participation by Southern NGOs as they work at the micro, meso and macro-levels of development depends on our ability to realistically determine both the risks and opportunities presented by these technologies and the historical contexts which shape their use. The theoretical frames of modernization, dependency and participation have evolved and adapted to shape the current context in which NGOs are a prominent actor and new ICTs are a potent force in contemporary development processes. In a context of rapid global change, a history of failings in development, a blurring of the lines which divide First World from Third World and the complexity of issues which we currently face, it is essential that we recognize that the potential of the new technologies to provide solutions and support equitable change is limited by the tenacity of systemic inequities between and across the North and South. Without such consideration, the prominence of new ICTs in global relations incurs the risk of simply replicating and widening the power disparities which currently exist. It is with the great expectations and the skepticism in mind that we can turn to the next chapter and a more specific investigation of networking technologies as these are being considered in the African context.

### **CHAPTER 3**

#### **Connectivity in Africa:**

#### **Prospects, Constraints and Current Initiatives for Wiring the Continent.**

The preceding section discussed the ways in which the current development context is framed by a history of theory and practice and shaped by radically changing social, political, economic and cultural relations across the globe. It suggested that in exploring the potential of new ICTs, particularly electronic mail and the Internet, as tools for organizations in the South, we must consider this context and the paradox of opportunities and constraints that it implies. Chapter Two identified the emergence of opposing perspectives among development theorists and practitioners; one optimistic, the other skeptical of the potential for the new ICTs to change North/South relations and enable communities in the South to control local development processes and influence international development policies. Some in the field are turning to these technologies as a viable solution to the many problems within current development theory and practice. Others perceive new ICTs as only further complicating and deepening one of the central problems: an increasing gap between those communities which 'have' (money, power, information) and those which 'have not' across the globe. While many claim that we are building an all-inclusive "Global Information Society", others fear a stratified world in which the information poor are increasingly separated from the information rich and their global decision-making power and influence (Amoeka 1998, Gilbert et al. 1994). Many are asking: Is the global electronic information network a "superhighway or a dirt track" when considered in the Southern context? (Panos 1996, Third World Network 1996, Uimonen 1997). Furthermore, what is the connection between the technologies and meeting basic development needs? How can we balance the priorities for access to information with needs for sufficient food, safe water, basic education and access to health care?

In order to more adequately explore the potential of networking technologies as tools for development and to outline the broader issues which frame the Zambian case study in this thesis, this chapter will look at new ICTs in Africa from various angles. It will begin by outlining some of the major risks, obstacles and opportunities surrounding implementation and access to the new technologies in most African countries. Secondly, it will provide a brief overview of the current levels of Internet connectivity as these vary between nations across the continent. Third, a review of some of the major conferences and policy statements recently emerging in relation to Africa's place as part of the expanding information society will be presented. I will identify the multi- and bi-lateral initiatives currently being undertaken with the intent to redress Africa's information poverty, bring the continent into global markets and pursue economic development. Fourth, a survey of civil society and NGO centered initiatives will be presented as these intend to utilize the technologies in the pursuit of equity and social development. I will look at a number of contemporary initiatives attempting to use ICTs to empower community organizations and marginalized communities through the provision of relevant information, efficient communication and opportunities to build civil society alliances across the continent.

Finally, I will briefly recap the primary prospects and constraints that circumscribe the use of the new technologies by progressive non-governmental and civil society organizations in sub-Saharan Africa. Ultimately, this overview is intended to enable a more lucid understanding of the context in which I worked with NGOs in Zambia to explore their current use of e-mail and the Internet; their perceptions of the potential and constraints which surround their use of the technology; and its degree of relevance in attaining their various development goals as they work with marginalized groups across the country.

### **Surfing the Net in the Sub-Sahara: The Current Reality**

If we look at global statistics surrounding telecommunications and use of the Internet, those with high expectations seem to have reason for concern. Although comprising more than 80% of the world's population, developing countries account for less than 2% of global informatics expenditure. Tokyo alone has more telephones than the entire African continent (Sirimanne 1996). Over three-quarters of computers across the globe linked to the Internet reside in the United States. Internet users in developing countries constitute only a small percentage of total users. While 3.1% of the populations in high income countries are accessing the technologies, only 0.0002% of populations in low income countries (central and sub-Saharan Africa, India, and much of Latin America) can do the same (ITU 1995). When reviewing these indicators of capacities to participate in global networks, Africa recurs as the least connected and poorest continent in infrastructure, technological hardware and information resources. These statistics suggest that Africa risks further exclusion as nations worldwide are increasingly reliant on electronic telecommunications networks to effectively participate in global markets and decision-making. Will the proliferation of new ICTs further disadvantage marginalized communities in this already marginalized continent? Or, is there potential for the Internet, the networks and information it provides, to enable African organizations to more broadly participate in global decision-making and more effectively address local development issues?

Although there has been a prolific growth in literature surrounding the "information revolution" and the building of the "global information society", there is relatively little which focuses specifically on networking in Africa, and even less on utilization among civil society organizations. What literature there is has emerged quite recently and tends to be both speculative and sometimes overly optimistic. This literature is generated predominantly by international organizations implementing networking initiatives across Africa. Most of these organizations have a vested interest in the success of their projects and in the prospects of information networking on the continent, and are thus inclined to

overlook or inadequately address some of the major constraints. By way of initiating a sober analysis of the potential of new ICTs in Africa, it is important to look specifically at the historical policy context and current infrastructure needs to identify some of the important barriers as well as the possibilities which surround the technology.

### **Understanding the Constraints: Policy, Infrastructure and Socio-Cultural Factors**

In sub-Saharan Africa, there have been a number of policy initiatives developed over the past 20 years intended to satisfy the region's telecommunications infrastructure needs. As early as 1975, the World Telecommunications Forum was putting together plans for the Pan African Telecommunication Network (PANAFTTEL). This network was the first continent-wide effort to develop a pan-African telecommunications network to redress the fragmentation of the continent because of inadequate and colonial structures of communications. Although African governments were aware of the inadequacies of the infrastructure and had made communications networking among their priorities to accelerate overall socio-economic development, most of the promising resolutions within PANAFTTEL remained on paper (Mukasa 1995, p.258). This stagnation and the lack of financial investment to support the PANAFTTEL resolutions may be the result of an inadequate conceptual understanding by African policy-makers of the importance of communications and information for national development (Mukasa 1995). Information and communication technologies were largely viewed in technical terms with little by way of socio-economic, cultural or educational inputs into policy and implementation discourse. It was not clear how these technologies could contribute to meeting basic needs such as clean water, adequate health care, education and housing. Thus, across the continent we saw calls for the quantitative acquisition of more communication infrastructure without the qualitative consideration of their social potential or impact. Without an explicit connection between communications, information and the pressing daily needs of communities, many African governments lacked the political will to allocate sufficient funds to establish a coordinated communications infrastructure.

Thus, three important problems became evident from the PANAFTEL initiative. It became clear that there was: One, a lack of qualitative input in planning processes of the ways in which ICTs could specifically facilitate national development; two, there was a lack of significant consideration for the issues which surround access and service provision to the rural majority; and three, there was no explicit articulation of the ways in which the technologies were relevant in meeting the most pressing issues of basic needs. In an attempt to redress this lack of qualitative input in new ICT initiatives and to take steps towards a more comprehensive networking policy, the Regional African Satellite Communication (RASCOM) study was undertaken in the late 1980s. Its mandate was a comprehensive study of the potential of an integrated telecommunications network for Africa which provides adequate service, “particularly to rural areas in order to enhance the *socioeconomic development* of participating countries” (Mukasa 1995, p.255, emphasis added). This study marked the beginning of a more integrated approach to telecommunications development. Policy-makers began to recognize the socio-cultural dimensions of the technologies. Concurrent with the RASCOM study and this recognition was the emergence of the New World Information and Communication Order (NWICO) debate within UNESCO. The combination of these events precipitated unprecedented interest in ICTs across developing nations.

It was in this context that Third World leaders came to share the enormous expectations held in the industrialized world for information and communication to improve industrial performance and increase economic productivity (Hamelink 1997). At the same time, many of these leaders voiced significant concerns about the potential for increased cultural colonialism, the displacement of jobs and further dependence on the North as a result of implementing these new technologies. For many African nations the new information technologies were perceived as a double-edged sword. On one hand, nations of the developing world recognized the significant potential advantages that these technologies contributed to their efforts to become modern industrialized countries. On the other hand, acceptance of these technologies and their implementation and use were



seen to open up yet another avenue for cultural domination by Western values and socio-cultural priorities. Many of the newly independent nations were passionate about protecting their national sovereignty and cultural integrity, and demanded greater control of the information and media products consumed by their populations (McPhail 1987).

With the double-edged potential of the technologies being pivotal, the main objectives of NWICO were outlined within UNESCO to include:

- i) elimination of the imbalances and inequities which characterize the present situation;
- ii) elimination of the negative effects of certain monopolies, public or private, and excessive concentrations;
- iii) removal of internal and external obstacles to a free flow and wider and better balanced dissemination of information and ideas;
- iv) plurality of sources and channels of information;
- v) the capacity of developing countries to achieve improvement of their own situations, notably by providing their own equipment, by training their personnel, by improving their infrastructure and by making their information and communication media suitable for their needs and aspirations;
- vi) the sincere will of developed countries to help them attain these objectives;
- vii) respect for each people's cultural identity and for the right of each nation to inform the world public about its interests, its aspirations and its social and cultural values;
- viii) respect the right of all peoples to participate in international exchanges of information on the basis of equality, justice and mutual benefit;
- ix) respect the right of the public, of ethnic and social groups and of individuals to have access to information sources and to participate actively in the communication process (in Allenye 1995).

The issues of equity, control and cultural integrity were largely silenced by the U.S. and U.K. withdrawal from UNESCO and the widespread objections to the NWICO principles in the Western press. The subsequent Maitland Commission further diverted discussion away from the socio-political and cultural issues and focused on the technical and economic issues. Ultimately, the commission proposed that all that was needed to rectify global information inequities was to ensure that "all mankind [sic] is in easy reach of a telephone by the early part of the next century" (ITU 1985). In this way, discussions that were focusing on the broader socio-cultural issues surrounding the new ICTs were

neutralized and the focus reverted to issues of technical transfers and economic assistance to wire the Third World without sufficient attention to the implications.

As a result of this narrow focus, we see more recent attempts at telecommunications development reverting to pre-NWICO strategies, thus facing similar obstacles to those faced in the 70s. Many African governments are scrambling to acquire the technologies without coordinated plans for efficiency, control, equitable implementation and access. Although there have been increases in financial expenditure in telecommunications infrastructure, this increase is driven more by a fear of being left behind on the global information highway than on a clear understanding of how participation on this highway may be beneficial to attaining national goals (Hamelink 1997).

The lack of policy coordination and the important and unresolved issues raised within the NWICO debates have been accompanied by relatively dismal levels of infrastructure and limited access to information and communication facilities across the continent.

According to United Nations Economic Commission for Africa (UNECA) figures, the average telephone density in Sub-Saharan Africa per 100 people is 0.5 compared to 53.16 in the high income countries of Western Europe and North America (Mansell & Wehn 1998). In many of these countries urban penetration of telephones per 100 people is 10, while in rural areas in the same countries penetration can be as low as 0.1. Even in South Africa, the country which can account for nearly 60% of all telephone lines installed in Sub-Saharan Africa, there are huge disparities among different sectors of the population. Some parts of the Eastern Cape, for example, have teledensities similar to those of other, less fortunate, sub-Saharan African countries while Cape Town has rates equivalent to most North American cities.

There has been an increase in telecommunications infrastructure in the South: The annual growth rate of telephones in these countries is 9.8% compared to 4.6% in North America and 8 percent in Europe. Yet, the average investment in terms of percentage of GNP

continues to be much lower in developing countries (0.35%) as compared to developed countries (0.95%) and the cost of installing infrastructure is much higher (Mukasa 1995). Protectionism, state ownership and lack of regional coordination to share initial infrastructure costs all combine to raise the costs of implementation significantly above global telecommunication industry norms. For example, it is estimated that US\$28 billion will be required to achieve the goal of installing a telephone line for every 100 people in sub-Saharan Africa (UNESCO 1996).

Beyond insufficient national communications infrastructure and the costs of improving these, there are significant barriers to access to the computer hardware and software needed to utilize the Internet. The number of personal computers per inhabitants is nearly 130 times greater in North America and Europe than it is across the developing world, and when we look at the African context specifically, the disparity is far greater (Uimonen 1997). The average cost of a modem and a PC, US \$2500, is clearly beyond the means of the majority of Africans where the average GNP per capita hovers around US\$ 375 (Mansell & Wehn 1998). The cost of producing and marketing software applications and information content creates another hurdle for African countries, as all are forced to buy from the industrialized countries. Tariff rates on information technology products are over 40% in many African countries, which further restricts access to a continent poor in infrastructure and equipment (Panos 1996). In fact, of the leading sixty companies in the ICT industry world wide, none are controlled by organizations in the developing world (Hamelink 1997). The software market today is dominated by the United States, Japan and Germany. There are very few examples of countries in the African sub-continent which produce their own software, thus most must first acquire and then expend large amounts of foreign capital to meet their application needs. This lack of indigenous production within Africa contributes to issues of appropriateness and relevance of software which is utilized across culturally and socio-economically diverse user-groups.

This leads to the constraints encountered as a result of insufficient human resources and technical skills. The fact that half of the adult population of most of sub-Saharan Africa is illiterate presents a significant obstacle that will take considerable time, money and commitment to overcome if utilization is to spread beyond the elite. Beyond basic literacy, end-users will be required to have a minimum level of “digital literacy” in order to be able to access, utilize and contribute to computer information networks. There is also a tremendous lack of technically trained personnel who are needed to support and maintain both local and national information infrastructures. Africa needs specialists who can design and implement information systems to meet the variety of information needs which will emerge across different contexts and within different user-groups. Yet, there is only an average 18 graduates in engineering, mathematics and computer science for every one million people across sub-Saharan Africa (Mansell & When 1998). Zambia, the fifth country on the continent to establish full Internet access, continues to be without a university degree programme in computer programming or communications networking. African countries need to develop training programmes suitable to the needs of least developed countries if it is to overcome its dependency on Northern expertise and applications and build information and communication networks appropriate to specific contexts.

Finally, there is a plethora of socio-cultural constraints which must be identified and addressed when considering the use of ICTs for development in African communities. Across sub-Saharan Africa there are complex forms of discrimination and marginalization that may prevent certain groups from accessing various ICTs. Urban poor and those living in rural areas must struggle to overcome significantly more barriers to information than urban professionals. Women tend to have more limited access than men to information across all socio-economic groups. They have less available time, financial resources and are often inhibited by cultural norms surrounding women’s roles within their societies. Different conceptions of information and its uses; prolific technological phobias; language; the lack of explicit relevance for the technology in meeting daily

needs; and significantly more pressing priorities such as education, health care and sufficient income are all culturally specific and diverse barriers to access and effective utilization of the technologies in African countries. Overcoming these socio-cultural constraints and addressing the issues that face disadvantaged groups will require specific actions that are developed and implemented in collaboration with African communities and organizations.

Regardless of these formidable obstacles, it is generally agreed that communities across sub-Saharan Africa, and in the developing world at large, must consider the ways in which they will participate in information and communication networks if they are to avoid global exclusion. Thus, it is important to investigate the potential of these technologies as they may counter some of the constraints.

### **Exploring the Potential**

Those optimistic about the capacity of the technologies to be a tool for development, social change, and greater equity and control, identify many ways they may benefit marginalized African communities. First, it is argued that the two-way, decentralized and diverse nature of information on the Internet renders it fundamentally different from conventional mass media such as television and print. The cost of access (although beyond the average African, is becoming reasonable for many African civil society organizations), the efficiency of transmission, the breadth of audience and the capacity to build networks via the technology provide unprecedented opportunities. “[M]essages can be sent across the world in the time it takes to post an airmail letter..., that information can be sent to one or one thousand people for the same low cost, this means radically new patterns of communication”(Panos 1996, p.2). It is argued that, “[e]veryone from journalists to indigenous peoples can access a store of information - some reliable, some not so - in a short time. Many Southern organizations are at the forefront of electronic communication. A publication in Bombay keeps tabs on World Bank funded projects through a worldwide network of contacts. In Zambia, doctors in rural hospitals can seek

specialist advice from Lusaka, and the capital's only independent newspaper, the Post, is available on the Internet"(Panos 1996.).

Furthermore, smaller, financially restricted organizations previously excluded from national and international project and policy debates are now provided with an opportunity to participate. New networking technologies have enabled many of these organizations to participate electronically in international conferences and regional meetings such as the U.N. conferences in Beijing and Copenhagen, when excessive costs made physical presence impossible. There is also an abundance of examples of marginalized resistance and human rights movements utilizing the technology to voice their perspective internationally. The Zapatistas in Mexico, the Tamil Tigers in Sri Lanka, the East Timor resistance movement in Indonesia, and the campaign against the execution of Ken Sarawewa in Nigeria have all used the Internet and websites to attract broader attention, stimulate debate and seek support for their causes. Although there are fewer examples of this type of networking in Africa, some argue that as the technologies become more established on the continent, African organizations will use them in similar ways (SAHRINGON 1998).

For remote and rural communities, networking technologies have the potential to bring new information resources and open up innovative communication channels. The Internet "offers a means for bridging the gap between development professionals and rural people through initiating interaction and dialogue, new alliances, interpersonal networks, and cross-sectoral links across organizations. It can create mechanisms that enable bottom up articulation and sharing of local knowledge. Benefits include increased efficiency in the use of development resources, less duplication of activities, reduced communication costs and global access to information and human resources" (Richards 1996).

Ultimately, the advocates claim that the new technologies, if made universally accessible, provide an opportunity for collaboration among progressive organizations across sub-

Saharan Africa. Local, regional and international networks can be established to address human rights, environmental and gender issues, refugee and indigenous rights and health epidemics such as AIDS, as these problems transcend national boundaries. Through access and utilization of these technologies, marginalized communities and civil society organizations can participate more effectively in global debate, international campaigns and local problem solving. In this way, many argue that the technologies have the potential to change global divisions of resources, relations between the privileged and the poor and establish more equitable exchanges between the North and South (Richards 1996, Panos 1996, IDRC 1997).

Despite these important arguments for the ways in which these technologies will enable broader participation and innovative collaboration, the limitations of a “technological fix” are overwhelming. The diverse issues that face African communities have underlying histories and are deeply complex. They cannot be addressed by simply having access to information and the capacity to communicate. The technologies cannot be perceived as some sort of panacea. The potential for African organizations to utilize ICTs for social change and development only exists within certain historical, socio-economic and cultural contexts. It is these contexts, and the power dynamics implicit within them, which will shape, at the same time they are shaped by, the opportunities and obstacles that ICTs present. These technologies provide unique opportunities for communities seeking to change the status quo at the same time that the status quo can significantly limit these opportunities. Keeping in mind the constraints, the opportunities and the interactive dynamic between the technology and the contexts, we can briefly survey the current status of Internet connection and utilization across the continent.

### **Connectivity Across the Continent: The Current Status**

Despite the inadequacy and inequity of existing telecommunications infrastructure and the many economic, political and socio-cultural barriers, many African nations are pursuing the acquisition of the new technologies and setting up functioning, albeit

limited, electronic mail gateways and Internet Service Providers (ISP). By 1996, over half of the countries on the continent (33 of the 54 nations) had developed some form of low cost, local 'dial-up store and forward' e-mail service with a gateway to the Internet (Jensen 1996). By early 1998, 47 African countries had full Internet connectivity to their capital cities, regional guidelines had been established for national information and communication infrastructure plans and currently, many countries are attempting to put together regulatory frameworks for national telecommunications development (Amoeka 1998). It is important to note that most of these communications advances are concentrated in Southern Africa and almost exclusively in the urban centers. With the exception of HealthNet, a project to connect rural health clinics to medical expertise and information, and some specific pilot projects aimed at rural communities, those who fall outside of the urban, academic or international NGO circles have limited access to these services. If South Africa is excluded from statistical calculations, only one African in 10,000 currently has access to the Internet (Amoeka 1998). Furthermore, while more than 15 African nations remain without any form of connection to the 'information highway', South Africa is among the top twenty in the world when ranked for number of active Internet nodes (Jensen 1996). Thus, despite significant development, vast disparities continue to persist within the continent. The following table summarizes the type of electronic networks that existed in some countries across the continent as of 1997. It is important to note that although this table identifies the countries with networks, it does not illustrate the extent and type of access or utilization of these services.

**Table 1: Types of Electronic Networks on the African Continent**

Country	Internet	Electronic Mail	Telex	Radio
Algeria	x	x	x	
Botswana	x	x	x	
Central African Republic	x			
Egypt			x	x



	Fidonet	UUCP	Co.IP	Comm.IP
Eritrea	x	x		
Ethiopia	x	x		
Ghana	x			x
Kenya	x		x	
Malawi	x			
Mozambique	x	x	x	
Namibia		x	x	
Nigeria	x	x		
Senegal	x	x	x	
South Africa	x	x	x	x
Swaziland		x	x	
Tanzania	x	x	x	
Uganda	x	x	x	
Namibia				
Zambia	x		x	x
Zimbabwe	x	x	x	

Note: Fidonet = public store and forward network, the largest user base in Africa with projects such as HealthNet being connected through a fido network; UUCP = is slightly more sophisticated than fidonet in that it is a store and forward system which can send information to private mail boxes via a number of different channels; Co.IP = Cooperative TCP/IP for universities and other cooperative institutions provides direct Internet access to these institutions; Comm.IP = full Internet Protocol connections for profit which can provide services to individual users.

Source: Mansell and Wehn, p.105, 1998.

Although there are some Internet circuits in Africa which connect to the United Kingdom and France, (as well as one to Italy), the majority connect to the USA where suppliers include AT&T, Global One, UUNET/AlterNet, MCI, NSN, Sprint and BBN (Jensen 1996). This indicates an important lack of indigenous suppliers who can provide Internet services from within the continent and supports critics who argue that the new technologies are reinforcing Africa's dependence on the North.

Yet, the establishment of a number of national cross-sectoral Internet working groups may be a step towards combating this dependence. These groups are comprised of actual or potential Internet access providers, users, telecommunications operators and

government ministries working to identify issues and more effectively meet information needs on a national level (Jensen 1996). These groups have been formed in Angola, Ethiopia, Gabon, Gambia, Namibia, Sierra Leone, South Africa and Tanzania. Steps are also being taken to foster collaboration on a regional level. In East Africa, the East African Internet Association (EAIA) has been formally established as the first regional grouping of Internet Service Providers (ISPs), working together to improve their service, share resources and ultimately to set up an international hub to share leased-line costs (Jensen 1996). It is this type of collaboration which may have the potential to provide many African nations with more affordable and efficient Internet service, at the same time promoting South-South rather than North-South connections.

With this brief overview of variable levels of connectivity across the continent, it is important to outline some of the pivotal conferences and policy statements which intend to guide the establishment and expansion of the 'African Information Society'. The resolutions that emerge from these conferences are important in that they will have significant impact on the extent to which African NGOs will be able to access and use the technologies to meet their goals.

### **Dialogue, Debate and Resolutions: Recent Conferences for ICTs in Africa**

A series of important conferences focusing upon new ICTs in Africa began in 1995 with the *Regional Symposium on Telematics for Development in Africa* held at the Economic Commission for Africa (ECA) in Addis Ababa. This symposium represented Africa's largest-ever gathering of computer and telecom experts. It brought together over 250 people comprising representatives from 38 African countries, 31 different African post and telecommunications ministries, and almost all of the major organizations involved in international computer networking development projects (Jensen 1996). Its recommendations resulted in the UNECA establishing a 'High-level Working Group' to outline a framework for Africa to participate in the 'global information society'. This "expert" group developed the white paper entitled the "African Information Society

Initiative” (AISI), which was adopted at the subsequent meeting of the Conference of African Ministers responsible for Economic Planning and Development in 1996. The basic tenets of AISI, which were outlined in Chapter Two of this paper, are described as an “action-oriented partnership framework to build connectivity and develop national information infrastructures in [the sub-Saharan] region” (Amoeka 1998). These guiding principles have been adopted and expanded upon in subsequent conferences and policy debate such as the *Global Knowledge 97* conference in Toronto; the *Cairo Conference of African Ministers of Transport and Communications*; and the ITU-organized *African Telecom 98* in South Africa in May, 1998.

Most recently the *Global Connectivity for Africa* conference was held in an attempt to synthesize information from the previous meetings and outline measures to move forward with ICT development (Amoeka 1998). At this conference the U.N. General Secretary, Kofi Annan, outlined seven central challenges for establishing a policy environment conducive to creating and sustaining an African information society. The articulation of these challenges, although somewhat vague, focuses on increased liberalization, promoting foreign investment and technology transfers. There seems to be a lack of explicit attention to issues of equitable access for communities and organizations beyond government and the private sector<sup>5</sup>. Furthermore, most of these conferences have been elite-based, with participants drawn from ministries, private corporations and multi/bi-lateral agencies. There has been less than adequate participation by smaller, indigenous, non-governmental organizations who have not been invited to contribute to the development of these policy guidelines.

### **Major Initiatives in Africa: High Hopes, Persistent Obstacles and Small Successes**

In addition to these conferences, resolutions and subsequent guidelines there have been a number of important projects, both multi/bi-lateral and NGO driven, taking place across

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<sup>5</sup> Please see the Global Connectivity Opening Statement by K.Y. Amoeka for a detailed explication of these policy challenges, Amoeka 1998.

the region. At the multi-lateral level, many of the initiatives are intended to expand infrastructure and establish regional communications networks for economic development. Projects driven by non-governmental and civic organizations are predominantly striving to redress some of the issues of equitable access and cultural appropriateness to utilize the technologies for social development goals. Although the projects at these two levels overlap, collaborate and are not mutually exclusive, they can be understood to represent differing perspectives of how these technologies could be harnessed to meet potentially divergent objectives.

### **Building Infrastructure: Multi-Lateral and Private ICT Initiatives**

A number of major infrastructure initiatives continue to be pursued by multi and bi-lateral organizations. As early as 1980 the UNECA created PADIS as a co-operative regional development information system to serve Africa (PADIS 1996). Its central objective has been to “assist African states, subregional and regional organizations in building capacity for collection, storage and utilization of data on development [and]... to promote the improvement of the information infrastructure in African member States, especially through the adoption of information technology ...” (PADIS 1996). Since its inception, PADIS has linked more than 18 African organizations to a FIDOnet-based network. The International Development Research Center (IDRC) is currently working with the PADIS to install electronic networks in an additional 24 African countries through the Capacity Building for Electronic Communication in Africa (CABECA) project. CABECA is intended to expand and complement PADIS by providing technical assistance to train a corps of systems operators who will manage and maintain national, regional and international networks on the continent (CABECA 1997).

More recently, Mike Jensen, in his comprehensive report of Internet development in Africa, identified 12 major multi-lateral supported projects. These include the Africa Internet Forum (AIF) comprised of the World Bank, U.S. Agency for International Development (USAID), U.S. State Department, NASA and the UNDP’s Sustainable

Development Networking Programme; the African Networking Initiative (ANI); the U.N. Secretary General's Special Initiative on Africa; and the InfoDev fund established by the World Bank (Jensen 1996).

As part of AIF, the U.S. Agency for International Development (U.S. AID) Leland Initiative is currently working to establish sufficient infrastructure and an "enabling policy environment" for information networking in Africa. It intends to bring the benefits of the information revolution through its development strategy proposal, "Empowering Africans in the Information Age" (USAID 1996). Leland is a five-year \$15M effort to extend full Internet connectivity to approximately twenty African countries in order to promote sustainable development. It aims to provide 0.5\$M to each country to assist in developing Internet connectivity, "in return for agreements to liberalize the market to 3rd party Internet service providers" (Jensen 1996). Assistance will be provided in the form of equipment, training, technical expertise and free circuits for the first year.

In the private sector, the AT&T Africa One project has plans to establish a fully operational undersea fiber optic cable system that will ring the continent of Africa by 1999 (Hamelink 1997). This project is intended to provide connections to all of the major coastal cities on the continent and will be based on the most advanced communications technology available in the world. William Carter, president of AT&T Submarine Systems, Inc., claims that, "[p]roviding these resource-rich developing economies with access to the most sophisticated communications capability creates an unprecedented set of circumstances that promise exponential growth for Africa" (AT&T press release 1995). Additionally, Alcatel and Siemens have plans to provide telecommunications connections to West Africa through the Afri Link Project, at the same time that the International Satellite Organization (IntelSat) is promoting the expansion of electronic mail services across the continent (Hamelink 1997). An important exception to these predominantly Northern-controlled initiatives is the launching of the South African

Telkom satellite SAFE. This is a fiber optic satellite that will link other African countries to Asia and Western Europe via South Africa (Mihyo 1997).

Although these projects promise to expand and improve Africa's information and telecommunication infrastructure they also raise many questions about, "the appropriateness of the technologies being transferred and the capacity of recipient countries to gain control over them" (Hamelink 1997, p.19). These projects are largely driven by a corporate-capitalist desire to see the Global Information Infrastructure (GII) constructed according to the free-market forces and there is the risk that these profit driven institutional arrangements will not concern themselves with universal access or significantly change the relationship between technologically rich and technologically poor nations in terms of production, distribution and ownership of the technologies. Despite the proliferation of infrastructure projects across Africa<sup>6</sup> and the exceptional SAFE project, the majority of information and messages about Africa on the Internet continues to originate from host computers and ISP in the United States, the United Kingdom and France. As an indication of the time it will take for sub-Saharan Africa to "catch up" to the industrialized countries in basic infrastructure and convergence, ITU statistics predict a period between 50 and 100 years (Mansell & Wehn 1998). Information continues to follow traditional and predominantly unidirectional flows from the North to the South without much opportunity for Africans to share their information with one another or with communities in the North. Furthermore, the cost of connectivity remains relatively high and availability is mostly limited to academic, private sector and state organizations or larger NGOs with international affiliates. Many indigenous African NGOs and urban individuals continue to lack the human, technical and financial resources to effectively access and utilize the technology at the same time that people living in rural areas strive to access electricity and "plain old telephones". Thus, "an

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<sup>6</sup> See Mike Jensen (1996) for a comprehensive review of the top 16 infrastructure projects currently underway across Africa.

overwhelming majority of Africans remain at the very margins of the information age... [They] remain to all intents and purposes invisible” (Amoeka 1998).

**Seeking Equity, Control and Social Development:  
The Civil Society Initiatives**

There are a number of projects currently attempting to address the persistent problems of equitable access to and African control of ICTs, and to promote the use of the technology to achieve social development ends. These initiatives, although funded by international and multi-lateral donor agencies, are largely driven by local, national, and international NGO's, civic and rural organizations. Important examples include the IDRC's Acacia Initiative; the Southern African NGO Network (SANGONET) which connects South Africa NGOs; the Southern African Human Rights NGO Network (SAHRINGON) which links human rights organizations in SADC via electronic mail; the Swedish International Development Agency MISANET project to link independent newspapers in Southern Africa; and training and capacity building projects such as the ABANTU for Development regional workshops and the Association of Progressive Communicators (APC) Women's Networking Programme. Although many of these projects are nascent and it would be premature to attempt to assess their effectiveness at this point, they do provide an opportunity to explore the ways in which ICTs are being used on the ground to address local and regional social development issues in Africa.

The Acacia Initiative seeks to demonstrate how ICTs can enable communities in Africa "to solve development problems in ways that build upon local goals, cultures, strengths and processes to promote equitable and sustainable development; and build a body of knowledge identifying the policies, technologies, approaches, and methodologies most instrumental in promoting affordable and effective use of ICT's by marginalized communities" (IDRC 1997). In addition to creating awareness of the uses of ICTs for development and building capacity within local communities, a main objective of Acacia is actual connectivity within marginalized communities through the establishment of

community ‘telecentres’ in communities across the region. These telecentres would be local facilities that provide a wide variety of public and private information services considered relevant to local economic and social activities. These services might include basic communication such as voice, fax, e-mail and Internet access; as well as public and quasi-public sector services such as tele-medicine, distance education, municipal governance services and some private sector services such as news distribution, tele-commuting services, training and information on markets, crops and weather conditions. It is argued that these telecentres will circumvent many of the financial, social and cultural barriers to the utilization of ICTs by smaller, and particularly rural, communities (IDRC 1997). Although the Acacia initiative is a collaboration between government, private industry and NGOs, it differs from many of the macro-level multi-lateral and private initiatives in its focus on local contexts and community needs, and its attempts to enhance community control of the technologies.

Other initiatives such as SANGONet, SAHRINGON and MISANET are similarly intended to empower local communities and civil society organizations through access to electronic mail and the Internet. SANGONet, as a non-profit Internet Service Provider, is intended to establish and maintain a regional electronic information and communications network for Southern African development NGOs at a reasonable cost. It has set up a world wide web page which contains relevant content and connections for and between progressive civil organizations working in a diversity of areas across the region. There are links to homepages on the environment, housing, human rights, government, cultural issues and women’s issues (SANGONet 1997).

As a part of the SANGONet network there are groups working to establish a women’s network across the region. The South African “Women’sNet” is attempting to connect people working on women’s issues in NGOs, local, provincial and national governments, in educational institutions and at the community level. Once the network is sufficiently established, women in communities would have direct access to the network through their



relationships with NGOs, resource centers, training centers, health centers and micro enterprise support groups. Women'sNet intends to establish a website that would contain information relevant to women's activism across the region and internationally.

Ultimately, the network intends to contribute to the development of a coordinated and strategic Southern African women's movement through "the continual flow of information to facilitate lobbying, information sharing, policy formulation, planning and strategizing" (Esterhuysen 1996, p.5). The network would link organizations horizontally for information exchange and to bring about a more critical mass in the efforts to represent women's interests across the region. The project hopes to ensure that these technologies are developed and implemented across the region with a gender perspective and the inclusion of formerly marginalized groups (Esterhuysen 1996).

The SAHRINGON and MISANET projects are similarly nascent, and intend to utilize e-mail and the Internet to promote human rights and support independent press agencies in SADC countries. SAHRINGON currently consists of 12 national NGOs which represent 72 organizations concerned with and working to protect human rights within the Southern African Development Community (SADC) member states. It has established a web page and intends to utilize electronic mail to communicate and work collaboratively to address national, regional and international human rights issues. The Interim Secretariat believes that the technology provides enormous opportunities for participating organizations to be more effective advocates through the efficient dissemination and acquisition of information (SAHRINGON 1998). MISANET was established based upon similar perspectives and intends to enable journalists and independent news agencies to be more effective through training for and access to the Internet. Through the utilization of the technologies these agencies will be able to share information of regional relevance at the same time that they can disseminate African issues and perspectives world-wide.

In relation to training needs across the region there have been a number of important initiatives. The ABANTU for Development *Strengthening Electronic Communication*

*Capacities of Women's Organizations* regional training workshops and the APC *Women's Networking Support Programme* represent ways in which international NGOs are working with African NGOs to provide training and facilitate access to ICTs on the continent. The ABANTU workshops held in East and Southern Africa which I recently attended, have brought together NGO representatives for basic technical training in navigation, website design and e-mail utilization. The workshops also identified many of the national and international policy debates and developed strategies for ways in which African NGOs could participate in these debates and influence the subsequent policies.

The APC Women's Programme is a global initiative which began as a part of the Beijing NGO forum and worked to enable women with technological competence to share their skills with other women so that they could participate in the forum electronically. Although this was an international programme, it has continued to provide training workshops in sub-Saharan Africa in conjunction with SANGONet. Many of these workshops involve training of trainers and attempt to build the capacity of participants to use ICTs and then share these skills with other NGOs in their communities.

All of the aforementioned projects, although in their preliminary stages, represent important and innovative initiatives seeking to expand access to information and communication beyond macro-level, government, private sector and multi-national institutions which tend to focus on establishing the necessary technological framework. These civil society initiatives are attempting to build skills, provide training and establish networks that address some of the social dimensions that stem from the expansion of the new technologies. They are attempting to strengthen civil society organizations' capacity to use the technology and to minimize the gap between those presently accessing the technology and those who, for political, soci-cultural and economic reasons, have been excluded. It is these types of initiatives that are essential to NGOs in Zambia if they are to utilize e-mail and the Internet in their work to address local and regional development issues and participate in national and international policy formulation.

### **Assessing the African Landscape**

This chapter has situated the debate surrounding new ICTs and social transformation more specifically within the African context. It has outlined telecommunications policy and debate as they have emerged and evolved since the mid-70s to frame current initiatives for connectivity across the continent. This chapter has presented examples of these initiatives as they are being designed and managed by multi-lateral organizations and the private sector and by organizations within civil society. Among many of the multi-lateral/private sector projects, economic development and participation in the expanding global market are the primary goals of improved connectivity and access. Within the civil society projects social development, local capacity building and greater equity in access and control of the technologies by African communities are central objectives. Although these objectives are not mutually exclusive, they do represent ways in which the technologies can be used for different, and perhaps at times contradictory, ends. Thus, having reviewed the important conferences, policy statements, major multi-lateral and private sector initiatives and provided examples of projects, networks and training programmes to promote NGO and community participation in the 'information society', the primary prospects and constraints surrounding the new technologies can be summarized as follows:

New ICTs have the potential to provide African NGOs and marginalized communities with unique and unprecedented opportunities to access information and contribute to debates which are relevant to them at local, national and regional levels. As interactive, multi-directional, global and relatively decentralized technologies they may enable these groups to more effectively address local concerns, contribute to global debates and build alliances across issue areas and geographies.

Despite considerable advances in connectivity, enormous expectations, and examples of progressive utilization, there continue to be considerable constraints that limit, and in

some cases may prohibit, the realization of the technologies potential as tools for NGOs.

The barriers to equitable access and effective utilization include:

- a. lack of coordinated telecommunications policy in many African nations;
- b. significant infrastructure barriers; weak telecommunications structures, inconsistent electrical supplies. Although there is the potential for 'leapfrogging' some of the barriers the capital expenditure required to do so may be prohibitive;
- c. enormous capital investment and expenditure required on behalf of nations in both the North and the South;
- d. acquisition and implementation of necessary software and hardware which are relevant to the information and communication needs of a diversity of social contexts;
- e. currently insufficient human resources. Extensive training of technicians and end-users is needed for the effective utilization and maintenance of the new technologies;
- f. cultural and socio-economic barriers. Language, illiteracy, technological phobias, poverty, time constraints and ascribed social roles, particularly among women, rural communities and the urban poor, present additional barriers in accessing and utilizing these technologies.
- g. relevance in addressing local priorities. The connection between the daily needs of the vast majority of Africans and their need to access and participate within ICT networks remains unclear in many contexts. Although new ICTs represent an important opportunity to address basic development issues, it continues to be difficult to make a direct connection between this opportunity and improving the immediate condition of most African's lives.

Although many of the African initiatives are currently in their preliminary stages and long term impacts cannot be determined, a number of trends can be identified when we look broadly at the private sector/multilateral and CSO projects across the continent. The multilateral and bi-lateral initiatives such AISI and Leyland are predominantly preoccupied with creating an enabling policy environment, through tariff reductions and privatization of telecommunications sectors, and building the national information infrastructure. They seek to build awareness among African governments of the connections between effective ICTs, national development and fuller participation in global markets. These initiatives focus on implementation at national and regional levels

to put in place the technological infrastructure, or “front-end” requirements, necessary to utilize the technology for economic development.

The civil society initiatives are largely focused upon “end-user” issues, attempting to address the needs of popular organizations and communities as they attempt to access the technology. Many of these are the result of popular demands for universal access; the development of relevant content; promoting African control of the technology; and establishing a more direct connection between utilization of the technology and meeting the basic development needs of the majority of Africans. They are attempting to build the technological, financial and human resource capacity of civil society organizations and local communities so that they are not further marginalized because of inadequate access to the new technologies. Although these initiatives are interconnected, they do represent ways in which the technologies are being used by different actors for different purposes with the development process. The experiences of these initiatives suggest that increased collaboration between front-end and end-user projects could facilitate more comprehensive and effective adoption of the technologies across sectors of African communities.

In closing and by way of introduction to the case study, it is perhaps critical to again emphasize that the new technologies, and their potential to be tools for development exist within tenacious conditions of socio-economic, political and cultural inequities. The capacity for African NGOs, and the communities they work with, to utilize these technologies to address local development priorities and participate in national and international decision-making is circumscribed by existing structures of financial, technological and political power. At the same time an increase in the participation of these organizations and communities within these structures may work to alter them. In the sub-Saharan context in which 45.3% of the population is illiterate; 51% of the population continues to be without access to safe drinking water; 113 of every 1000 children born dies in infancy; and the average annual income is US\$375.00, it is

exceedingly important to remember that a technological revolution does not equal a social revolution (Mansell & When 1998). Any discussion of the new ICTs potential to impact upon social development and change must remember that society and technology are interactive, each influencing the potential and constraints of the other.

## **Chapter Four**

### **Explorations in Zambia: Study Context and Research Methodology**

#### **Introduction**

Before moving forward into an exploration of the potential of these technologies to be tools for NGOs in Zambia it is important to briefly reiterate the central points of the foregoing sections. Chapter Two of this thesis outlined the theoretical and practical frameworks, and radically changing global relations, which are shaping current development processes. I outlined the ways in which new ICTs, particularly networking technologies such as the Internet and its applications, have become an increasingly prominent factor in these processes, presenting both opportunities and risks for Third World countries to more effectively participate in local and global development initiatives.

Chapter Three situated the discussion more precisely in the African context by presenting the central prospects and constraints which surround the utilization of these technologies in countries where basic development issues, such as safe water, sufficient food, primary education, adequate health care and fundamental human rights, continue to be pressing priorities. It reviewed the pivotal conferences and policy statements addressing new ICTs in Africa and explored examples of multi-lateral/private sector and NGO driven initiatives intended to enable access to the technologies across the continent. Chapter Three also presented the broader context and the central paradox which surrounds Zambian NGOs as they consider the costs and benefits, risks and opportunities of accessing networking technologies as tools to achieve their development goals. On one hand, application and access to ICTs has great potential for expanding the capacity of NGOs and the disadvantaged communities they work with, to determine and pursue their own development agenda at the same time that they may be able to more effectively participate in global communication and information networks thus contributing to and benefiting from local and global problem solving. On the other hand, the socio-economic,

political, cultural and technological requirements to access these technologies and the tenacious structures of global power and resource distribution may result in the expansion rather than the reduction of the economic and information gap which currently exists between the industrialized and developing nations.

It is this paradox which precipitates countless issues specifically confronting African NGOs attempting to utilize the technologies to more effectively participate in the development process. These issues include the following:

1. What are the potential costs and benefits of implementation of, and access to, ICTs for NGOs? How will access to ICTs enhance/inhibit their ability to effectively address the development issues which face the communities they may work with? How are ICTs currently being used by these organizations to support their development goals?
2. Will ICTs provide viable opportunities for these organizations to communicate with one another and internationally to meet their needs and develop their resources? How could access to ICTs promote and support African organizations' ability to pursue more self reliant development and effectively contribute to the participatory goals of the development process at the multi-national level? How could ICTs enable an environment in which organizations across the North and South can communicate more equitably and effectively to address both local and global issues?
3. What are the information and communication needs of communities living in remote rural areas? How are these needs currently being met? What is the connection between access to information, via these technologies, and the capacity of communities to meet their development needs? Is there potential that the new ICTs could become viable as relevant tools in meeting these needs?

In the context of this thesis these broader issues have been narrowed to a set of specific questions which this study seeks to address. Although these have been outlined in the preceding sections, I will restate them here: Do new ICTs, particularly the Internet, have the potential to be effective tools for NGOs in attaining their development goals? At the micro/local level, do the technologies have the potential to enable these organizations to more effectively work with marginalized communities to define and address their



development needs? At the meso/national/regional level, do they enhance the capacity of these organizations to influence government policy and participate in regional networks to develop South-South alliances? At the macro/international level, do they enable the NGOs to more effectively contribute to and gain from development debates and negotiations with United Nations agencies, international donors and global alliances? It is the broader issues and these particular questions which provide the framework for a more in-depth and contextualized investigation, and which establish the central objectives of the Zambian case study.

These objectives and the central findings will be presented in Chapter Five. This chapter will provide a brief description of the Zambian context in which I, with funding from the Canadian Bureau of International Education and extensive support from Women for Change (WFC), a local Zambian NGO, was privileged to spend six months conducting this research by working with local NGOs to explore their perspectives of new ICTs and development. It will include a presentation of relevant political, demographic, social and historical factors, and a review of the emergence of the Internet in Zambia. It will also explicate the strengths and limitations of the methodological tools which I employed to conduct the research in Zambia. A combination of qualitative interviews, group interviews, participant observation and document analysis were utilized to explore the issues and perspective surrounding networking technologies as tools for development in Zambia.

## **The Zambian Context: Framing the Case Study**

### **Politics and Demographics**

Zambia is a landlocked country in Southern Africa. It is a former British colony which borders Angola, Tanzania, Malawi, Mozambique, Zimbabwe and the Democratic Republic of the Congo (formerly Zaire). Between its independence in 1964 and 1991, Zambia was ruled as a single-party state under Kenneth Kaunda and the United National Independence Party (UNIP). In 1990, Kaunda legalized opposition parties and in 1991

UNIP was defeated by the Movement for Multiparty Democracy (MMD) party, whose leader Fredrick Chiluba became president. Throughout much of the time in which I conducted this research, the country was subject to a presidentially-declared state of emergency. A failed coup attempt on October 28, 1997 precipitated this state, which was maintained until March 17, 1998. Although the state of emergency had no direct impact on my ability to conduct the research, it did have a significant impact on some of the participating organizations. Many of these NGOs were active in identifying the human and civil rights abuses which were perpetrated under the state of emergency and as such, feared repercussions from the government. Furthermore the government was able to ban public gatherings, intimidate the independent press and infringe upon other civil liberties without remaining accountable to its citizens.

Today, despite having substantial foreign reserves at independence and being identified as a potential model for African democracy since its first multi-party elections in 1991, Zambia is considered one of the poorest countries in the world. Its debt burden is among the highest internationally, hovering around US\$ 700.00/capita compared to an average annual income of \$325.00/capita (Chipimo-Mbizule 1997). Annual debt servicing in 1993 represented more than half of the country's total export income (Government of Zambia 1996). Since the early 1980s, the Zambian government has experimented with variations of structural adjustment programmes designed by the IMF and the World Bank. When MMD came to power in 1991 these programmes began to be aggressively implemented and include the liberalization of foreign trade and exchange rates, phasing out of government subsidies and the privatization of maize and agricultural input marketing. Since 1993, the government has begun to reform the social sectors, beginning with the decentralization of the health sector (Chipimo-Mbizule 1997). Unemployment and retrenchment are increasing as a result of public sector privatization and a weakening national economy.

In addition to these economic and social policy changes, there are a number of health and demographic issues that contribute to Zambian poverty. The AIDS pandemic is devastating all sectors of society with increasing mortality rates, particularly amongst the most productive household members (those aged 18-35). In 1994, overall adult prevalence of HIV infection was estimated at between 22-25% and these rates are expected to continue to increase before dropping off early in the next century (World Bank 1994). In 1993, 47% of the population was below the age of 15, at the same time that 33% of the total population was illiterate. This rate increases to 57% amongst women living in rural areas. Sixty-four percent of all Zambians live in absolute poverty, while 47% do not have access to sufficient potable water (World Bank 1994). All of these political, economic and demographic factors combine to create a situation in which the NGOs are being called upon to take an increasing role in social service provision, the implementation of poverty eradication schemes and the promotion of a more self reliant population. It is in this context and with these increasing responsibilities that many of these organizations are seeking to use ICTs to be more effective and efficient in undertaking their development work.

### **Information and Communication**

According to the Zambia Demographic and Health Survey of 1992, radio is the most widely used medium in both rural and urban contexts and across all age groups. Approximately 75% of urban dwellers listen to the radio weekly, while 33% do so in rural areas. In urban areas, 59% of the population read newspapers on a regular basis, with 23% in the rural areas. Of all urban households, 32% have a television while in rural areas the frequency drops to 6%.

Until 1990, radio, television and post and telecommunications were entirely controlled by the state. Since the MMD came to power there have been some moves towards liberalization and privatization. There are now three independent radio stations; one commercial and two church-based, but these are prohibited from re-broadcasting external

material by the Ministry of Information. There is one independent national newspaper, 'The Post', and two state-owned dailies, 'Times of Zambia' and the 'Zambia Daily Mail'. All three of these papers are posted on a website. The government continues to control the Zambia National Broadcasting Corporation as a parastatal with one television station and three radio frequencies. There are currently two pay-television satellite operators who are able to broadcast foreign material due to their limited subscribers and a Christian satellite station is expected to be broadcasting soon. The post and telecommunications sector is in the process of being privatized. Cellular phone usage is increasing dramatically, with two private companies currently providing service. Telephone, fax, telegraphic and postal services continue to be run as parastatals although there have been promises by the government to privatize these services as well. Currently ZAMNET is the only Internet Service Provider in the country.

### **Introducing the Internet to Zambia: The Story of ZAMNET**

In relation to networking technologies and service provision, Zambia has an interesting history. Despite its relative level of poverty, poor infrastructure and limited computer literacy, Zambia was the fifth country in Africa to have full Internet access and the first in the region after South Africa. In 1991, the University of Zambia (UNZA) computer center initiated a project funded by the IDRC to bring electronic mail to the Zambian academic and NGO community in the form of UNZANET. This project was part of a larger ICT project to set up a network across Southern Africa. The center was provided with a PC and a modem and became a FidoNet node that was connected to Rhodes University of Grahamstown in South Africa.

The original users of UNZANET were the schools and departments of the University, with utilization rapidly growing among NGOs, international development organizations and health institutions. In 1993, the HealthNet project, with funding from SateLife, utilized the university node to connect hospitals and clinics in Southern Province with the main health-care centers in Lusaka. Although these projects opened the door to electronic

communication in Zambia, they were largely restricted to organizational and academic use and dependent upon donor funding to be sustained.

Concurrent with these projects was the beginning of privatization of the Posts and Telecommunications Corporation (PTC) and an increasing demand among academics and businesses to have full Internet access. A proposal to establish an Internet Service Provider (ISP) was developed within the university and presented to the donor community, but was unsuccessful in attracting financial support. In 1994, the university decided to establish a private corporation and acquired the seed money from a World Bank small enterprise development fund to establish a for-profit ISP. Thus, ZAMNET Communications Systems Ltd., the Zambian Internet Service Provider, was formed with US\$ 125,000.00 initial investment and the stipulation that it be self-sufficient within 12 months (Robinson 1996).

When service provision began in March 1995, ZAMNET had a total of 30 customers, comprised mostly of academics and international NGOs. The demand grew exponentially and within six months the corporation was self-sufficient. Currently ZAMNET has 3000 active accounts ranging from major banks, to hospitals, to private businesses, to government and local NGOs (Robinson 1996). Key informants participating in this study claim that despite their inability to be independently sustainable, the initial university projects were essential in stimulating an awareness of networking technology and its potential as a tool within the Zambian development context. This growing awareness and demand combined with a liberalizing economic policy environment to create an enabling situation for the establishment of an independent ISP. ZAMNET is currently looking to expand its service provision capacity and although it continues to have an almost de facto monopoly on the market, (ZAMTEL, the national PTC offers limited e-mail service), there are expressions of interest by other private sector groups to set up competing ISPs.

Despite the exponential growth in subscribers and expanding provision of services, utilization of e-mail and the Internet continues to be predominantly among the Zambian elite. There is very little individual subscription, with most users only having access through their places of employment. Access beyond the capital city and the Copperbelt remains limited, as telephone infrastructure is weak and inadequate in the rural areas. Of the total 80,000 national telephone lines, 20,000 are strung within the Lusaka city limits. Furthermore, teledensity continues to hover at approximately 0.82 telephones per 100 people at the national level and individuals can wait as long as one year to receive a telephone connection (Mansell 1998). Thus, at the same time that utilization is growing amongst the urban, educated elite, the vast majority of Zambians continue to live in marginal conditions without electricity, safe drinking water, sufficient education or health care facilities and in the absence of adequate information and the capacity to communicate.

It is within this broader socio-economic, political and information context that the following study was conducted. It is this context which partially determined my choice of methodological tools, frames the daily operations of the organizations I worked with and shaped my experiences as a researcher in Zambia.

### **Methodology**

In order to effectively meet the objectives of this case study and address the primary questions of this thesis, a variety of research methodologies were employed. Although qualitative interviews were the primary tool, group interviews, interviews with key informants, participant observation and document analysis were also utilized. This combination of tools enabled me to examine the specific issues from a number of perspectives at the same time providing me with the opportunity to work with a number of organizations and individuals to engage in a participatory research process.

The research methods listed above enabled an investigation of the current utilization of new networking technologies (specifically e-mail and the Internet) among NGOs working Zambia; the potential and constraints of these technologies in this context; and their relevance in addressing basic development issues. The methodologies were also used to investigate the current access to and information needs of communities living in a remote and rural part of the country. By looking at perspectives among members of local NGOs and key informants, and within rural communities, the case study intends to shed light on the relationship between ICT use and addressing the development needs of the majority and marginalized members of the Zambian population. It provides insight into the ways in which NGOs may be able to utilize the technologies to more effectively participate in development processes at the micro, meso and macro-levels.

### **Methodological Tools**

#### **Qualitative Individual Interviews**

The nature of the issues which surround utilization of e-mail and the Internet in the Zambian NGO context are both emergent and complex. As such, in-depth, open ended interviews were the primary methodological tool. A total of 18 interviews were conducted, 14 with members of endogenous NGOs, 4 among international NGOs. Using this type of interview, I was able to adapt to different organizational contexts and priorities, to remain open to new data and to explore particular areas of knowledge that each interviewee may possess. The individual interviews allowed participants to have greater independence of opinion and to express authentic perspectives because they were not inhibited by the presence of other participants and they were assured of the confidentiality of their responses. Whereas closed interviews or surveys may have enabled the acquisition of data from a larger sample of organizations and individuals, they would have significantly limited the depth of information gathered.

In addition to its attributes, the use of in-depth interviews as an investigative tool has some inherent problems and limitations. In some cases, the interviewees were inclined to

provide responses they thought were desirable or considered ‘correct’ by the researcher. This tendency was more prevalent among participants from local NGOs and could perhaps be attributed to confusion as to the researcher’s status. There is fierce competition among local NGOs for international donor funding and despite clear explanations of my status as an independent researcher, some participants may have persisted in perceiving me as a representative of an aid organization. Thus, it was important that I ask questions in a variety of ways and cross check the responses with these possible misconceptions in mind.

Secondly, it became evident through verification measures that some of the responses refer to *potential* rather than *actual* uses of the technologies by the NGOs. Although many of the respondents were enthusiastic about the opportunities networking technology present, the degree to which they are actually able to exploit these opportunities continues to be limited.

A third problem existed in the lack of rigorous consistency in the questioning. While the open-ended interviews allow for flexibility, they also result in variations in the way the questions are asked and the responses they elicit. In order to reduce this inconsistency, before closing each interview the original interview guideline was reviewed to ensure that all of the questions were covered in each of the interviews. A set of questions was developed in collaboration with WFC staff to act as a framework for the interviews. This covered a number of relevant areas (please see Appendix A for a complete list of the questions):

1. Organizational focus/mandate and background information
2. History of acquisition of e-mail/Internet and sources of training
3. Effects of the technology on the organizations’ capacity to work at the micro and macro-levels.
4. Sources and types of information which are communicated via the technology (ie., North vs. South, best practices vs. logistical matters)
5. Central prospects/central constraints of e-mail/Internet utilization for the organization.



6. Central issues which surround the technology in Zambia and across the region (ie., equitable access, freedom of information, government censorship, cost, infrastructure).
7. The relationship/connection between access to and utilization of e-mail/Internet and addressing basic development issues which affect the majority of Zambians who do not have access. Is there a strong/weak/no connection between using the technology and meeting basic needs?

At the NGO level, participants were intentionally selected from organizations which were representative of the broad and diverse development community which exists in Zambia. Interviews were successfully conducted with representatives from organizations engaged in activities from civic education to gender analysis to AIDS awareness to human rights and advocacy. In this way, the information gathered was intended to be indicative of both the breadth and depth of NGO activities in Zambia. All of the participating NGOs were non-profit, Zambian-based organizations. Most of the participating organizations were indigenous to Zambia, with CARE Zambia, the Panos Institute and Oxfam being the internationally-based NGOs. The following is a list of the NGOs who participated in the interview process and a brief description of their areas of development focus:

**Table 2: NGO Participants**

ORGANIZATION	Number of individuals interviewed	Area of Development focus
Women for Change (WFC)	2	Works nationally and internationally as an advocacy body and with rural communities using participatory methodologies and gender analysis as a foundation for social change.
Zambian Association for Research and Development (ZARD)	2	Research association with a focus on gender issues and improving the status of women through publishing, networking and advocacy.
NGOs' Coordinating Committee (NGOCC)	1	Umbrella organization for Zambian NGOs focused on gender and development issues intended to facilitate information sharing and networking to improve the status of women.

ORGANIZATION	NUMBER OF PROJECTS IMPLEMENTED	DESCRIPTION OF Development Focus
AfroNet (Inter-Africa Network for Human Rights and Development)	3	A Zambian based network for human rights organizations in 22 African countries. Its goal is to establish a multi-country online communication system for the dissemination of human rights information.
Kara Counseling & Training Trust	2	HIV/AIDS counseling and training center. Offers private counseling, HIV testing, AIDS awareness building and therapeutic care for people affected by HIV/AIDS in Lusaka.
Zambian Independent Monitoring Team (ZIMT)	1	Works in rural communities across Zambia promoting civic and human rights education. Active in advocacy work surrounding electoral and constitutional reforms.
Zambian Institute of Mass Communication Educational Trust (ZamCom)	1	Originally a training institute for the Ministry of Information and Broadcasting, now an independent body providing media and communication training. Currently provides some of the Internet training to local NGOs.
Micro Bankers Trust (MBT)	1	A European Union and Government supported project to provide micro credit, savings mobilization and training. MBT does not provide loans directly but rather works through local NGOs and business associations to reach vulnerable groups in Zambia.
Catholic Commission for Peace and Justice (CCJP)	1	Technically not a development NGO but very active working in rural areas around issues of human rights, poverty, social justice and SAP monitoring. Nationally, CCJP is an important advocate for vulnerable groups across the country.
Oxfam Zambia	1	Focuses on specific geographical areas and works in partnership with indigenous NGOs in areas of income generation, food security and drought relief to address a variety of development needs
The Panos Institute: Center for Public and Policy Debate for Southern Africa	1	Works to stimulate debate on global environment and development issues. In Zambia, Panos has been active in providing training and sensitization workshops for government and non-government groups using the new information technologies.

CARE Zambia	2	Works in partnership with indigenous NGOs to implement projects which focus on peri-urban needs, livelihood improvement, emergency relief, reproductive health and HIV/AIDS.
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### Group Interviews in the Rural Context

In conducting the rural group interviews I had the privilege of working as a team with three 'animators' from WFC. These animators are WFC staff trained in participatory methodologies who live and work for extended periods of time in specific rural communities. The gist of their work is to facilitate the identification of the primary development needs of a community and initiate a process by which these can be effectively addressed by community members. The animators provided extensive background information that was essential to ensuring that the methods and information gathered took into account the issues which face these people in their daily lives. Beyond acting as interpreters, the field animators were central in the process of developing and adapting the questions and in facilitating the group interviews. They enabled the discussions and data collection with an otherwise inaccessible sample group, and without their insight, patience and interpretative and analytical skills, this portion of the research would have been impossible. The groups were selected by a process of convenience sampling. For example, a group of people from a village were gathered outside of church on a Sunday morning and we asked if they would be willing to participate. The groups were generally balanced according to gender with equal representation of men and women. The ages of the participants ranged from 17-45.

The group interviews were utilized to gather data among the rural participants in the case study for a number of reasons. First and perhaps foremost, it was decided in collaboration with the WFC animators that this was the most culturally appropriate approach. It is

common in the village context for residents to gather in a communal spot to discuss issues of relevance to the entire village. Issues are discussed, communal problems are resolved, news is shared and plans are developed on a regular basis through this form of communal information sharing and decision-making. In such a context, singling out particular individuals and engaging in a private discussion, particularly with a foreigner, could generate suspicion and resentment, thus putting the interviewee in an compromised position.

Second, group interviews provided all of the participants with an opportunity to contribute and respond. Members of these rural communities did not hesitate to express their views publicly, even those ideas which were in contradiction to others. In fact, when engaging with a foreigner, community members were more likely to be forthcoming in a public setting than in a private conversation. In an attempt at individual interviews it became clear that the participants were prohibitively shy and much less willing to elaborate upon their answers than when speaking out in a group.

Third, the issues raised by one individual would often stimulate ideas and responses from others. This stimulation of ideas was very important considering the complex and abstract nature of the issues being explored. Open discussion and explanation among the participants and the research team enabled those who did not fully understand the questions to understand more clearly and as such contribute more effectively to the discussion.

Finally, group interviews were selected for basic logistical reasons. Factors such as limited human resources, time constraints, a variety of different local languages and a complex and time consuming translation process all combined to render group interviews the most effective and efficient methodology to use.

As with all methodologies, group interviews have their limitations. In the rural context, as in others, there was the issue of unequal participation. Although speaking in a group generally increased the quantity and quality of participation, it also presented the possibility for unequal participation. For both personality and cultural reasons, some of the participants had a tendency to be more vocal and thus dominated the discussion and perhaps inhibited others from contributing. Furthermore, there is a hierarchy in the village communities in which women were less inclined than men to contribute to discussions. Although this situation may be slowly changing, with women becoming more vocal, it continued to be important to specifically address many women in order for them to respond. With more time and resources it would have been preferable to supplement the mixed group interviews with women-only group interviews to ensure that women had ample opportunity to express their opinions. Third, the participants are influenced by each other's answers. Although this was beneficial in promoting a clearer understanding of the issues, it occasionally posed the problem in reducing the variety of responses. Lastly, the diversity of local languages was a significant obstacle in the rural research. Although the field animators were skilled translators, it is difficult to be certain that this process did not affect the accuracy of the data.

Two group interviews were conducted. One, in Kalundu village, consisted of 15 participants. The other, in Sakahyata village, consisted of 18 participants. Prior to engaging in the discussions, the team formulated research strategies and a set of questions which were appropriate within the rural contexts. In a setting in which many people are illiterate, there is no electricity, the nearest phone is 45kms (a day's travel) away, the majority of the participants had never made a phone call and none had utilized a computer, it would have been inappropriate to attempt discussions about e-mail and the Internet directly. As such, the questions were formulated to explore current information sources, current information needs and uses of information before presenting a 'what if' scenario in which a hypothetical community information center (CIC) was described. This center would be a place in which people, with the assistance of a facilitator, could

access information on a variety of topics ranging from politics, weather, agricultural techniques, markets, agricultural pricing, health and other development issues. Based on this description a discussion would proceed about the ways in which it may be utilized, who should control it and how it should be paid for. It is important to emphasize that the responses provided in the rural context are based upon ways in which people *expected* to access, utilize and pay for the technology. The difference between these predictions and their sustainable capacity to meet these expectations is difficult to predict. The gap between expectations and actual capacity is important to remember as one proceeds through the findings.

### Participant Observation

In addition to the interviews and group interviews, participant observation techniques were used to gather research data. During my time in Africa, I was privileged with the opportunity to be a participant observer in two important and informative events. The first was the ABANTU for Development *Strengthening Electronic Communication Capacities of Women's Organizations* Regional Training Workshop January 18-24, 1998 in Nairobi, Kenya; and the second was the Southern African Human Rights NGO Network (SAHRINGON) annual general meeting held in Lusaka, Zambia from February 22-25, 1998. These two meetings brought together representatives of CSOs from across sub-Saharan Africa providing access to a broader regional perspective on the issues which surround ICT use in the region.

As a participant observer, I was able to become more fully involved in exploring and articulating the issues which face the participating NGOs and work to develop solutions from their perspective. Participation worked to dismantle many of my assumptions as an individual coming from a context where access is easily attained, infrastructure is sufficient, cost is not an issue and the technologies are relatively prolific. It enabled a lucid understanding of how many African organizations are grappling with practical issues at the same time that some recognize the importance of the emerging policy issues.

Perhaps most importantly, participant observation enabled a clearer understanding of the politics and the power struggles that shape the relationships among African NGOs, and between these NGOs, governments, the donor community and the private sector. It became apparent that the nature of these relationships is central to the ways development is evolving and the ways in which ICTs may have a role in this evolution.

The limitations of this methodology include the risk of getting too close to the participants and acquiring a biased perspective. It was important that I be aware of this risk and retain some distance and relative objectivity. There was also the risk that in some instances I may have projected my own meaning or interpretation onto a situation without fully understanding the context. As a result, there were occasional misinterpretations of events or discussions, and the subsequent formulation of incorrect assumptions. The most effective means of preventing these misconceptions was to engage in informal discussions with other participants about the event, to explore their perspectives, opinions and insights before developing any independent conclusions (see Appendix B for a complete list of participants in these regional meetings).

### Key Informant Interviews

Interviews were also conducted with individuals identified as ‘key informants’. These were participants drawn from within Zambia and across the region who had expertise in a variety of areas surrounding ICT use in the African context. They provided important information in areas of service provision; policy frameworks and issues; socio-cultural issues; and broader national and regional projects that are currently being implemented. This information was essential for understanding the broader context in which the NGOs were working to utilize networking technologies to achieve specific development goals. The interviews were conducted in an informal manner with a flexible framework of questions designed to address each participant’s area of interest and experience. The key informants who contributed to the case study were:

**Table 3: Key Informant Participants**

Key Informant	Organization/Institution of Affiliation
Shiller Habeenza	Managing Director: ZAMNET, the independent Zambian Internet Service Provider
Victor Chinyama	University of Zambia: Lecturer in the Department of Mass Communications
Nidhi Tandon	Consultant for networked intelligence for development based in Toronto Canada.
John Baraza	IDRC Acacia Project: African Regional Coordinator
François Huppé	Canadian consultant with the Environmental Council of Zambia (ECZ).
Muthoni Muriu	Researcher and system operator at EDNA Tier Monde; history of experience with the APC Women's Programme and working with ICTs for development across Southern and central Africa.
Jackie Peace	British Council Zambia: Deputy Director; coordinator of ICT training programmes for Zambian NGOs
Miles Toder	USAid: Leyland Initiative in Zambia. Experience with ICT and development initiatives in Eastern Europe.

### Review of Draft by Select Participants

Upon completion of a draft of the case study findings, a report was distributed to some of the participants and a workshop was held to solicit comments, questions, additions, corrections and verification of its contents. Beyond being a professional courtesy and as an essential part of any participatory research process, this type of review was important as a way of corroborating the data and evidence presented throughout the study. Allowing participants to review and discuss the draft enabled me to make corrections and additions enhancing the completeness of the data, the accuracy of the interpretation, and thus increasing the construct validity of the entire study.



### **Assuring Confidentiality**

The issues of confidentiality and anonymity are extremely important in this context where many of the NGOs and key informants work together and depend upon donor funding for their operations. As such, all participants were explicitly guaranteed anonymity prior to their interview. As a participant observer, I ensured that my field notes did not include references to specific individuals or organizations when noting ideas, opinions or criticisms. In the rural group interviews, none of the participants were requested to identify themselves prior to participation. As a result of these guarantees of anonymity I am unable to explicitly identify individuals or organizations in the presentation of the findings. However, in order to fully understand the implications of some of the data it is sometimes important that they be contextualized by broadly identifying their source. As such, when relevant, I make reference to an individual's organizational affiliation or an organization's focus to ensure that the reader fully understands the context in which comments have been made. This compromise between the complete anonymity of the participants and a deeper understanding of their perspectives intends to render the findings more fully comprehensible.

### **An Experience in Participatory Research**

The methodological process utilized in this case study is in many ways an expression of participatory research. Being situated in Zambia and engaging with these organizations, individuals and communities over a period of six months, I was provided with an opportunity to more clearly understand the broader issues that surround their work and lives. I was able to explore my specific research questions relating to new ICTs and development in a context in which the reality of constraints, opportunities and competing priorities are experienced and vividly apparent on a daily basis. As a participant observer in the regional meetings, I was privileged to learn from individuals on relatively equal terms as we worked together to explore my questions, at the same time that we identified their needs and revealed their perspectives. Having studied the literature and considered the critiques which surround participatory development, my experiences in Zambia

concretized the issues which surround participation theoretically. Ultimately, these ‘participatory’ experiences enable me to consider new ICTs, the role of NGOs, ideas of participation and the processes of development with more clarity, pragmatism and insight.

## **Conclusion**

This chapter has described the socio-economic, political and technological context in which the Zambian case study was situated. A variety of methodological tools were employed to explore the issues that surround the use of networking technologies among Zambian NGOs. These methodologies were selected in part because of the contextual factors and in part because they were the most effective means of investigating the issues specific to this thesis. The combination of tools, although sometimes producing contradictory findings, enabled me to gather information from a variety of sources in different contexts giving the study a depth and comprehensiveness that would be lacking otherwise. The next chapter will present the findings as they emerged from the participants without extensive interpretation. The final chapter will bring the discussion full circle, with an interpretation of the central findings, a presentation of their implications and suggestions for areas of further exploration that this study implies.

## **Chapter Five**

### **Grounding the Debates: The Zambian Case Study Findings**

Having presented relevant aspects of the Zambian context and explained the selection, utilization and limitations of the research methodology in the preceding chapter, this chapter is a presentation of the case study findings. Considering the central questions of this thesis and in consultation with research participants I developed the specific objectives of the Zambian case. These objectives are: 1) to investigate the current utilization of, and issues surrounding, networking technologies in the Zambian NGO context; 2) to explore information and communication sources, needs and current uses in the rural development context; 3) to explore the degree of relevance of these technologies in addressing ‘basic development issues’<sup>7</sup>, and ultimately; 4) to identify the opportunities and risks of the technology as they are perceived by members of Zambian NGOs and disadvantaged communities working to attain their development goals.

The findings from this context provided an opportunity to explore the perspectives, the struggles and the successes of organizations and individuals living and working in marginalized conditions. They make possible a grounded and pragmatic illustration of the central issues that surround new ICTs, particularly as they are being considered as tools to achieve greater equity for, and more effective participation by, members of disadvantaged communities across sub-Saharan Africa. Thus, this research has the potential to contribute to prevailing debates and emerging literature on ICTs as tools for development. It can provide insight to national, international, private and multi-lateral policy-makers as they develop strategies to support national information infrastructures (NII) across the developing world, while concurrently supporting other NGOs as they work to identify the opportunities and risks of new ICTs within their contexts.

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<sup>7</sup> For the purposes of this study, basic development issues are understood as those which face the majority of Zambians who live without adequate daily resources (ie., safe water, sufficient food supplies, adequate education, health care and means of transportation), to sustain an acceptable quality of life.

The following is the result of an analysis of the data that emerged from individual interviews with key informants and members of local NGOs, group interviews in rural areas and participant observation within regional meetings. This analysis will be broken into two main sections. First, the findings will be presented as they relate to the issues surrounding ICT use in the NGO context. This section is divided according to the dominant themes that emerged from the analysis. They include:

1. Current utilization of the technology
2. Potential for networking technologies for NGOs
3. Constraints for networking technologies for NGOs
4. Relevance of the technology in addressing basic development issues

The second portion of this section will present the findings as they relate to the information sources, information needs and potential of networking technologies as an appropriate tool for people living in remote, rural communities. These findings are also presented according to dominant themes that emerged:

1. Current sources and access to information
2. Current information needs and uses
3. Potential utilization of a Community Information Center (CIC)

It is important to note that none of the themes can be considered in isolation. The issues which arise under each category are related and represent an integrated description of the two situations. The findings presented are the result of an analysis of all of the data collected in the research process. They are not separated according to methodology because the themes emerged from across participant groups and contexts to be both supportive and contradictory in their perspectives. The findings represent information gathered from the key informants, participant observation and secondary document analysis with an emphasis being given to the NGO interviews and the rural group interviews. These findings are presented without significant researcher interpretation. This absence of interpretation is intended to allow the participants' voices to be presented without interference. An interpretation of the findings and preliminary implications will be presented in Chapter Six.

## **Networking Technology as a Tool in the Zambian NGO Context**

### **Current Utilization**

For all of the organizations interviewed, electronic mail was used to a much greater extent than the Internet, and although most have Internet connections the references to the technology in the following sections refer predominantly to electronic mail.

### Motivation to acquire the technology.

In order to more clearly understand why the NGOs are attempting to more fully use the technology, it is important to understand what motivated its acquisition in the first place. In all cases, the research participants explicitly identified e-mail as essential to effective and efficient communication. In most cases, the local NGOs were initially connected via various development projects. Some were connected through the fido-net, UNZANET project at the University with funding from the IDRC, others as part of a later project which worked to connect organizations working around gender. The international NGOs described the technology as an essential part of maintaining contact with their head offices and thus, initial connection was part of projects to make this communication more efficient and cost-effective. When ZAMNET became a private enterprise and began charging for its services all of the NGOs in this study were willing to pay and maintained their connection.

### Utilization of the technology in day to day operations.

The extent of utilization of the technology in an organization's daily work was largely determined by its relevance to the type of work the organization was engaged in. For regionally focused advocacy organizations the technology, and particularly e-mail, was central to their work. In its work to address human rights issues across the sub-Saharan region and internationally, one organization relied almost exclusively on its ability to gather and disseminate information via the technology to mobilize debate and action

around these issues. As one representative of a local human rights NGO claimed “we cannot work without it. It would be impossible to sustain our operations because we are involved in so much communication, both regionally and globally”.

For the organizations with greater local focus, particularly those working in the rural areas, regular utilization was much less prominent. Organizations which worked predominantly with rural constituencies to address development issues at the village level (health and agricultural practices, water supply, AIDS awareness, civic education, gender analysis) utilized the technology to a much lesser extent because this work with the communities does not require the *direct* use of the technology. Organizations with a largely urban constituency focusing on health or civic education also claimed that the technology was not central in their daily operations. Respondents from a local HIV/AIDS counseling organization claimed that, “[f]or now, a lot of the work we do is on the ground and you do not need access to do this effectively... We do not use it [e-mail/the Internet] in our training or our current counseling work. We have not used it here in Zambia at all. All of my e-mails go outside Zambia; it is still much easier inside to make a phone call or send a letter.”

However, these respondents did claim that without the ability to effectively communicate with donor agencies and international partners on a regular basis, they would be unable to financially sustain their work on the ground. A representative of a local NGO that depends on funding from international aid organizations explained the relationship between access to new ICTs and its capacity to secure funding. “Most importantly we can put proposals across it [the Internet], whether in Harare or Copenhagen or London...we can get information back from donors and put together better proposals. These proposals are then more likely to receive funding.” This connection between the technology at the international level and the local level will be discussed further in following sections.

Within Zambian research and development organizations and NGO networks, the respondents claimed that the technology is currently underutilized. Although they recognized the potential for the technology to enhance the quality of their work, they identified significant internal and external constraints inhibiting their ability to capitalize on this potential. “We [a Zambian research body] could be sending so much of our work out there [on to the Internet] so that people could know what is going on here, the work we are doing, the issues we are addressing and writing about. But it is very difficult. We are already overloaded here with out more conventional work, so to try to start adding Internet and communication responsibilities becomes too much.”

Thus, the relevance of the technology to the organizations’ operational focus was an important factor in determining the extent of regular utilization. Zambian NGOs with a regional or international focus are more likely to utilize the technology in their daily operations. While those organizations focused on local and rural issues as less likely to utilize the technology regularly for their work. As such, regular utilization continues to be relatively low among the majority of the participants although there are signs of consistent increases. It is important to recognize that organizational focus is but one of many factors which shaped why and how Zambian NGOs use the technology.

#### Types of information communicated via the technology.

As supported in much of the literature on new ICTs, the majority of the information communicated via e-mail was between the NGOs and donor organizations in the North. The information flowing between the Zambian NGOs and Northern-based organizations was primarily logistical in nature, taking the form of project proposals information, requests for funding and project reporting. Beyond this, information transmitted from Zambian NGOs to other organizations was related to up-coming workshops and training seminars or to organize evaluation trips by representatives of funding agencies. There were few examples provided in which methods, techniques or best practices were shared between organizations. “There is not a lot of programmatic depth to the communication.

That happens in other forums, at meetings and workshops. Most of the long distance stuff via e-mail is setting up things for more traditional forms of communication.”

Other types of information that flowed from Zambia to the North came from those organizations having a regional and international focus. In these cases, national information about the political, social and economic issues relevant to human and civil rights were transmitted on a regular basis to partner organizations in the region and abroad. Research organizations used the technology to transmit information about their library's data base and often responded to requests from researchers in Europe and North America who were seeking information in regards to a variety of issues in the Southern African region. These types of requests were beginning to present a problem in that they were very time consuming and the organization lacked the human resources to meet the demands. Furthermore, because of the nature of the technology, some claimed it was very difficult to get reimbursed for such work, presenting an additional problem to donor-dependent and financially struggling NGOs. “We now receive so many request for information and we feel overwhelmed. They often come from students in the North looking for information for research. It is a lot of work and we have no way of getting reimbursed for it.”

Again in concurrence with much of the literature, many of the participants claimed that the majority of the information flows from North to South, rather than South-North or South-South. This was broadly identified as a problem, with many Zambian respondents stressing the importance of getting a “Southern perspective on to the Net”. Although examples of South-South communication were noted, these continue to be infrequent. Others argued that this trend is changing as more and more African organizations get on-line and became proficient in using the technology in their work. One NGO respondent said that, “it has improved enormously in the last four years, there is more African content and more Africans to talk to.” Most respondents were adamant that it was the



central responsibility of African organizations to develop content that is both relevant to and descriptive of Africa perspectives.

It is important to note that for all of the Zambian NGO respondents, utilization of the technologies is a new endeavor and most continue to struggle with basic skills acquisition and initial trouble shooting. Thus, there is little variation in the ways in which the local organizations currently use the technology (ie., communicating with donors, report writing, logistical planning, all primarily via electronic mail). However, as these initial issues are resolved it is likely that the type of utilization between different local organizations will become more diverse and appropriate to specific organizational needs.

### **Potential for Networking Technologies as Tools for NGOs**

In exploring the organizations' perspectives of the technologies' potential to be a tool for achieving their development goals, themes emerged on three levels. The first was its potential at the international level; the second was at the regional level; and third at the national and local level. As with the divisions between macro, meso and micro-levels of the development process, these levels need to be understood as interrelated rather than mutually exclusive, at the same time that they do indicate important differences in the ways the technologies can be used.

#### **The International Level.**

Respondents from across the study identified many ways in which this technology could be used to make Zambian NGOs more effective at the international level. A central theme that emerged in relation to its potential at the international level was as a tool to enable Africans to participate in global campaigns and discourses, and contribute African perspectives to international meetings. For example, one local human rights worker claimed "yesterday we issued a statement about lack of accountability of the Zambian police force. That is part of a global campaign which is largely conducted on the Internet. We can contribute to the work of Amnesty [International] and others who are working

elsewhere.” Another Zambian respondent referred to his organization’s capacity to contribute to the *Jubilee 2000 Campaign* in which NGOs across the globe are demanding the World Bank and the IMF forgive Third World debts by the year 2000. This local organization also utilized the technology to participate in a collaborative project to monitor the impact of structural adjustment programmes (SAPs) worldwide: “We are part of a SAP monitoring project...the information that we collect in Zambia is fed into the work that they [an international development organization] do and then it is used to raise issues of policy at the UN and IMF level.”

The effectiveness of the technology as a tool for participation in international meetings was cited by a number of NGO respondents with reference to the Fourth World Conference on Women in Beijing, China, August-September 1996. They claimed that members of Zambian NGOs who could not afford to be physically present were able to participate and contribute to the proceedings via the technology. One NGO that was apart of a Beijing electronic networking project claimed: “It was as though we were at the conference site itself. We managed to get involved in the discussions and we were able to input into the process and the decisions that were made. It was like talking and so we could be fully involved in the discussions.” Although there was enthusiasm surrounding the Beijing conference and relatively extensive electronic participation and input by some Zambian NGOs, evidence of widespread utilization to participate in such forums has since then been minimal.

Related to the technology’s capacity to enable an African presence in global campaigns and meetings, ideas emerged of the ways in which it could enable more equal partnerships between organizations in the North and the South. Some of the Zambian NGO respondents claimed that the technology had helped their organizations to grow from dependent to partner in their relationships with international NGOs and aid organizations. They claimed that the technology had supported the growth of these more equal partnerships by enabling effective communication of issues and perspectives from

the Southern organizations. Rather than having decisions made on their behalf, they felt they were able to input their ideas directly. One respondent claimed that, “we needed to improve our relationships with groups in the North, to create genuine partnerships. It cannot just be the North looking after the South, but the South must contribute in a substantial and equal way.”

A third theme that emerged in relation to using the technology at the international level was as a tool for public relations, marketing and fund-raising. Those organizations with a web page perceived the page as enhancing organizational image as “sophisticated, and in this way it is a powerful marketing tool”. Other Zambian NGOs had plans to create web pages based upon the assumption that they would enable fund raising overseas.

“Everyone is Internet crazy now, so the best way, especially from Africa, is to fund raise electronically. We cannot go overseas and fund raise in person, it is too expensive.”

These respondents hoped the Internet would provide opportunities to access a market of private individuals who may be willing to contribute financially to their work, thus making them less dependent on donor agency support. Although there was much debate surrounding the technologies’ potential to this end, none of the participant organizations had yet to attempt electronic fundraising. Thus, the fruitfulness of such endeavors is undetermined. Another respondent claimed that many of the international donor agencies (CIDA, USAid, and many U.N. agencies) were now posting their project competitions on the Internet. He claimed that it was becoming essential for organizations to be connected in order to access this information and submit appropriate proposals.

### The Regional Level.

There were two important themes which emerged from the data in relation to e-mail/Internet utilization as an effective tool at the regional level. First, a number of Zambian NGO respondents identified ways in which the technology had or could make them more effective in building alliances to address issues which transcend national borders. One claimed that, “[t]he technology helps us to build alliances across the region.

There are other organizations like ours and we are building alliances to tackle cross border problems such as democratization, poverty eradication, freedom of the press. We are trying to build on common ideas and then work together to influence policy. These types of alliances or networks would be impossible with conventional technology.”

Some respondents claimed that networks could be formed to engage in effective lobbying and advocacy work across the region. As with the networks referred to above, members of Zambian NGOs presented examples of ways in which they had used the technology to contribute to campaigns to address human rights issues in the region and across the continent. They referred to regional advocacy work via e-mail to address issues of aboriginal land rights across Namibia, Botswana, Angola and South Africa; electronic networks that attempted to halt the execution of Ken Sarawewa in Nigeria; and calls for action to affect policy surrounding female circumcision in Egypt. “Female circumcision had been outlawed by an act of parliament. But due to a lot of traditional and religious pressure the minister revoked the ban. There was an alert sent out [by Egyptian women’s organizations] to many nations and organizations [requesting them] to communicate and put pressure on the minister to reinstate the ban. To be effective we [NGOs working around gender] needed to move quickly and in numbers, and the electronic communication made this possible.” Although these comments describe important examples of ways in which the technology is being used, upon reviewing the findings, many of the NGO participants emphasized that these were relatively isolated incidents and should not be interpreted as occurring with extensive regularity.

Second, some of the Zambian and international organizations participating in the research were in the process of putting together training manuals and information kits that they intended to distribute to organizations across the region via the Internet. Networks such as SAHRINGON (Southern African NGO Human Rights Network) were attempting to develop a constitution and code of conduct via e-mail. Members of different working groups, scattered in their respective countries, were trying to work collaboratively to

develop these documents with the use of the technology. The technologies were perceived as being central in making this type of regional work efficient and effective: “At a regional level electronic communication has revolutionized the way we work. We no longer have to wait six months or a year before we can afford to hold a workshop or a meeting to work as a regional network. Now we can plan programmes, have meetings, do training and share information without actually being in the same room.”

#### The National and Local Level.

A number of different themes emerged in relation to the technology as a tool for development at the national level. First, respondents referred to the ways in which they could access information on the Internet that enabled them to more effectively hold the Zambian government accountable for promises it had made. One claimed that Zambian organizations could access information about the international declaration of human rights, the Convention for the Elimination of All Forms of Discrimination Against Women (CEDAW) and international law pertaining to aboriginal rights via the technology. This information could then be used as “ammunition” to pressure the government to comply with the goals and objectives outlined therein. “We can look at examples in Canada and Australia and international law on indigenous people, at declarations in the U.N. and the OAU and use this information to assist us in our struggles with our own government.” Another member of a human rights organization claimed: “We use the technology so that we can be informed when we challenge the police or the government...what we do as advocates relies on the gathering of accurate information. We engage in consistent fact finding [both conventionally and electronically] and then use these facts as the basis of our campaigns.” A local organization focused on gender issues was able to access the CEDAW documents and then challenge the government on the extent to which they had taken action to ensure the rights of women were being protected in the Zambian constitution and legal system.

The second theme relates to utilization of the technology to access information so as to develop more effective strategies for working “on the ground” and addressing local issues. A Zambian NGO working with rural communities throughout the country explained how this might work: “We are implementing a poverty eradication program in a certain area, we have done it before but our strategies were not so effective, but [with the technology] we can look at what has happened in Tanzania and that information enables us to explore some of their options and combine them with our own to make something more effective. We take some of the Tanzania experiences and try to use them in the Zambian context.” Although the respondents admitted that this type of utilization continues to be an ideal rather than a common practice, many believed more extensive “sharing of best practices” was a potentially important way to use the technology.

A third theme emerged in relation to utilization of the technology as a tool for organizations which work across the provinces and have offices in rural communities. Although the technology is not currently utilized to this end, respondents expressed hopes and articulated the potential benefits if it were in the future. The member of a Zambian church organization explained that they “have offices all over the country, in each province, where they collect information about the status of the communities in terms of access to health care at the clinics or rural health centers, common diseases, incidence of disease, malaria, malnutrition...e-mail would be so useful in collecting and disseminating this information.” It was only the international NGOs who currently used the technology to communicate with sub-offices in the Copperbelt. The national NGOs cited insufficient national infrastructure as the primary barrier inhibiting their ability to do the same.

Finally, and again as a potential use, many respondents identified the technology as a tool for umbrella organizations working to coordinate and support NGO activities within the country. “It [the networking technology] is critical for us as an umbrella organization of 56 NGOs, we need to send so much information on a daily basis. What is unfortunate is that only five of these organizations are currently connected...if we had our way all of the

members would be connected, then we could just put it [relevant information] out there and everyone would have easy access to it.” This Zambian organization claimed to be in the process of proposal writing to acquire funds so that all members could become connected and claimed that “it is useless unless you have others to speak to, so it is something that is really important to us and it is a priority to sort out this issue [lack of connectivity amongst member NGOs]”. Although this type of national electronic networking continues to be minimal, ZANGONET, a Zambian NGO mailing list has been recently established to facilitate discussion and collaboration among Zambian NGOs.

### **Constraints for Networking Technology as Tools for NGOs.**

The findings which emerged from the data in relation to the constraints surrounding the effective utilization of the technologies by Zambian NGOs can be organized into four broad themes: 1) infrastructure and financial constraints; 2) organizational constraints; 3) political and policy constraints; 4) socio-cultural constraints. Again, it is important to recognize that these constraints do not act in isolation; they are interrelated and combine to limit fuller utilization of the technologies by NGOs.

#### **Infrastructure and Financial Constraints.**

Literature on new ICTs and development often notes that problems with insufficient and unreliable infrastructure are major barriers to effective utilization of networking technologies across the developing world (Mansell 1998; Mihyo 1997; IDRC 1997; Jensen 1996). Despite being relatively advanced in Internet service provision, Zambia is no exception. Participants throughout the research supported the findings of other studies by citing faulty and insufficient telephone lines, and inconsistent or non-existent supplies of electricity as central inhibitors to their use of the technology. One respondent claimed “[t]here is a dichotomy in that the technology has arrived but the infrastructure does not match it. It is indicative of the uneven process of development which has plagued Africa for this century.” Another stated that many organizations were hesitant to use the

technology or became frustrated when trying because “[s]imply you have lousy phone lines. It is very slow and difficult to get through, particularly to the Web.”

Cost was another major barrier identified by the Zambian NGOs trying to use the technology. The initial set up costs (purchasing a computer, a modem, establishing a ZAMNET connection and utilization fees) total more than US\$ 2400.00. These costs made it difficult for some of the smaller, local NGOs to utilize the technology, particularly the World Wide Web, more extensively. A local research organization made this clear: “We are an NGO and we do not generate funds. We rely on donor money, so I cannot sit on there [the Web] and search and get information because it takes too much time and it costs too much.” Even respondents from relatively financially secure organizations claimed that “people in the office use e-mail extensively and would use the Internet more if access was easier but the cost is prohibitive and we cannot afford to have people surfing.” These costs are an issue but many respondents argued that the money saved on long distance phone and fax charges and transport costs as a result of utilizing the technology enable organizations to recoup initial expenses within 2-4 months.

Although most of the respondents agreed that infrastructure and cost were important barriers, there was broad agreement that these were relatively easy to overcome. Many of the participants identified socio-cultural and organizational constraints as more significant barriers to effective use. “But these [poor infrastructure and cost] are not the biggest problems and can be quite easily overcome. The hardest part is getting people to appreciate what it can do for them.”

#### Organizational Constraints.

There were a number of sub-themes that emerged in relation to organizational constraints to effective, more extensive and consistent use of the technology by Zambian NGOs. Within many of the organizations there was an ‘information officer’, one individual who was responsible for the information and communication aspects of organizational work.



Training and participation in ICT forums was often isolated to this single individual who then struggled to work within an organizational culture which did not value the skills or recognize the potential of the technology to be beneficial to the organization as a whole. In this way, utilization of the technologies was often seen as an appendage to, rather than an integral part of, the organization's primary work. Furthermore, if the information officer became ill or left the organization, the skills and benefits were lost as other staff were either unwilling or unable to continue to use the technologies. "Most of our staff were trained initially but many have now left and I am the only one in the office who can access the e-mail."

Another organizational constraint referred to by some of the participants was the relationship between local NGOs working in the Zambian context. They claimed that it is often difficult to share and maintain skills between organizations because they are competing for a piece of the same donor pie. One respondent stated that "NGOs are suspicious of each other; if we get connected there are fears that we will steal information from each other. It is so competitive to get donor funds that we do not want to work together, if we get skills [to use the technologies] we do not want to share them because they are an advantage for us." Although this statement represents a misunderstanding of how the technology functions, it is representative of concerns regarding sharing skills and resources. Others, with more experience using the technology, felt these constraints to developing a community of NGO users would be redressed as utilization became more common and the users acquired a fuller understanding of how the technologies work.

A final issue that emerged in relation to constraints surrounding the technology at the organizational level related to its potential to be exclusionary. Some of the respondents expressed concern that the proliferation of the technologies would lead to the neglect of more conventional forms of communicating. The director of a Zambian NGO focusing upon civic education warned that "with the electronic communication we may begin to neglect more conventional forms of communicating, such as pamphlets, brochures, radio

shows and newspaper. The emphasis would be on the electronic form or what comes of it and some groups would be at a disadvantage because they do not have access.” Others feared that as organizations utilize the technologies more extensively, they risk becoming overly involved in abstract and academic information and debates. As a result they may begin to neglect concrete development issues which face the marginalized communities they work with every day. One respondent working within the Zambian office of an international NGO explained the technology “has the potential to draw staff in organizations such as ours *away* from the communities rather than closer to them. The more time staff spend in front of the computer, the less time they spend with the communities they work with. When the power goes off here, it is an excellent excuse for everyone to get out into the field and simply spend time with the communities.” These issues reflect prevalent concerns that the technology will deepen rather than bridge the gap between those with access and those without.

#### Political Constraints.

Political and policy constraints identified by respondents, fall within three broad areas: Constraints at the international level, constraints within the national government and insufficient NGO awareness of policy processes.

In discussions of policy issues at the international level, there were a variety of perspectives surrounding the concurrent processes of economic liberalization and multinational investment and their impact upon African control of the new ICTs. On one hand, some of the respondents identified the enormous market potential which Africa presented for multinational telecoms such as Bell Canada and AT&T. They felt that the willingness of these corporations to invest in African telecommunication infrastructure and the development of new technologies for the African context had enormous potential to benefit the continent as a whole. On the other hand, these same respondents expressed concern about who would control these services; “...how do you negotiate the [policy and investment] process so that Africans have control of it? How do you address issues of

access and equity and control.” Others, particularly those from international organizations with policy experience, identified the lack of awareness within many African governments of the relationship between economic liberalization, information based economies and the advent of the new technologies. One of the key informants with an extensive experience working with ICTs in Africa claimed that “Africans need to come to understand the connection between information and economics and power. It is the Ministers of planning and economic development not the Ministers of information who need to recognize the importance of these technologies in determining and effecting development.”

Another international NGO representative involved in policy formulation, described the situation as one in which there is a “...restructuring of telecoms across the continent [as part of SAPs] at the same time that there is this whole information revolution going on around Africa. Yet, there does not seem to be an interface between the two...policy-makers in Africa are not seeing the enormous impact the new ICTs will have on the evolution of telecoms and their entire economies.” These respondents believed that this ignorance could precipitate a situation in which Africans lose control of their communications sector and all of the economic advantages that lie therein.

At the national level, some of the participants claimed that the absence of any clear telecommunications and information policy created an enabling environment for the spread of e-mail and Internet services in Zambia. Staff at ZAMNET claimed that it was relatively easy for the company to become an independent service provider because it was, “...not really faced with any policy constraints. It was not a conscious policy decision by the government, but just part of the opening of the economy, liberalization, privatization and an opportunity for us to get into the market without going through the (national) telecom company”. Although this lack of clear or proactive policy decisions within the government may have provided an enabling environment for ZAMNET, other respondents claimed that the lack of awareness within the national government, as with

many governments across the continent, was an important constraint upon utilization of the technologies for development. Many of the key informants believed that little connection was being made within government thinking between ICTs and development. Similar to this constraint at the international level, many claimed that Zambian ministers did not see the relationship between the information technologies and addressing development issues such as health care provision, education, small business and agricultural development. As an example, one key informant referred to the current decentralization of the health care system in Zambia. There is "...full decentralization of health care and yet communications is not seen as part of the process in a formal or explicit way." Rural health centers are being set up across the country which need access to the central hospitals for the provision of drugs, medical supplies and health statistics across the country, but among the policy-makers "...the connection between addressing these issues and effective communication systems is not being made."

A final theme emerged from the concern expressed by many respondents that NGOs lacked awareness of the implications of policy processes at both the national and the international levels. Although many of the NGOs had been involved in ICT training and information programmes, some of the respondents felt that much of this training was too technically focused, failing to address the larger policy issues. They believed that it was imperative that Zambian NGOs become better informed so that they can be more proactive in ensuring that the policy formulation process includes their input. In reference to a week long Internet training workshop, one of the trainers, who has been working across sub-Saharan Africa, claimed that:

This is the problem with this type of training, it is largely technical, one off training that can be done in a day or two. It is important but it does not address any of the policy issues which surround this technology and who and how people get access. Among CSOs [civil society organizations] there persists an attitude that things are beyond our control and they always have been, that the Internet is pushing the values on us, that we cannot really influence the policies, we cannot really influence content. And yet, this is not the

case. So how do you develop the idea that this medium has unique potential for gaining control and having access to power structures and decision makers, that small NGOs can have direct connection with U.N. bodies? But we [CSOs and NGOs] need to understand the policy issues so that we can have some control.

Although many of the NGO respondents continued to grapple with the technical side of the technology, many agreed that there were broader policy issues surrounding control and universal access, that they must address if they were to more effectively access, utilize and control the technology.

#### Socio-Cultural Constraints.

The themes that emerged in relation to socio-cultural constraints to effective use of networking technologies as tools for development represented divergent perspectives about the presence of an information culture in Zambia. There were many respondents who claimed that a culture of information users did not exist in the Zambian context. They claimed that many Zambians had been making decisions and taking action for so long without adequate information that if it were to be made available, few would be motivated to use it nor would they recognize its value. One key informant claimed that “[t]he hardest part is getting people to appreciate what it can do for them. Most of the people in this country do not have access to computers, they are accustomed to working in the absence of information. They do their jobs and make decisions and they see no reason they should not continue doing things that way.” A member of an international NGO working in Zambia explained her skepticism surrounding the idea of the technology as a tool for development in the following way:

The telephones are not even there. But my hesitation [surrounding ICT projects] is more around social and cultural barriers than the technological or infrastructure barriers. ... In many ways even though Zambia is really connected, beyond an upper level of users [academics, big NGOs] it is not filtering to the larger population. There is not a culture of information sharing in Lusaka, let alone in the rural areas. That is why I am skeptical about this idea that the Internet will be this liberating, democratic tool that will enable the

rural peasantry to march forward, arm in arm. Even if they could get on the Internet, what are they going to do with it?

Others acknowledged this lack of information culture as a constraint, but believe that it must be overcome for social change to occur in Zambia. "People have been working without information for a very long time but look where it has led them. Because of this we must try to create an awareness as to what information can do for you. Nobody will be inclined to use the technology if they do not see any direct personal benefit from it. Why should they, it is time consuming and expensive. It is a matter of trying to create a critical awareness that this is your situation, this is a tool, how are you going to interface with this tool to uplift yourself in one way or another. I think creating this awareness is the responsibility of Zambian civil society."

Respondents supporting this perspective argued that these constraints are formidable but with the right combination of strategies and collaborative initiatives Zambians would come to recognize the importance of access to information and a culture of information users would emerge. One stated that the right combination of factors will "kick start the process and develop a culture of information users."

In contrast to the two preceding perspectives, there were those respondents who argued that Zambians had worked in isolation from information for a long time but that this did not imply their inability to use and value it. An executive director of a local NGO working with rural communities argued that:

People are very dissatisfied that decisions are made for them and the information they get which is already digested for them. They want to participate in creating information and in making decisions about their development based the information they have created. They want to share this information with other people and get information from these people about how they are doing this, or how they succeed at that. They want to create and consume information that reflects their daily needs and their priorities. They

want to have the information so that they can be involved in the process of decision-making.

Another claimed that “e-mail was adopted so quickly in this office there can be no question that people need and will use the information if they have access to it.” It is important to recognize a possible confusion, or conflation, that some of these responses indicate between *information* and the *technology*. Although some of the respondents cited examples of ways in which many Zambians, from health ministers to subsistent farmers, have acted in the absence of *formal* information, I would suggest that the sharing and acquisition of information exists in all communities. It is the type of formal information, i.e., demographic statistics, weather or market information, that is accessible via modern technologies that many Zambians have been excluded from accessing. Thus, it seems that it is an appreciation of this type of information which some of the respondents feel is important to foster if the technologies are to be effective as tools for development in Zambia.

A final and related theme that emerged was the prevalence of a fear of the technology among many Zambians who wanted to use it. One member of a gender NGO claimed that “[a]t the moment, the main issue is the phobia which surrounds the technology. Even as we were getting connected as part of the project with ZARD [a Zambian research and development organization] and the other NGOs to set up a network, we got a modem from ZARD which lay idle for at least a year because we did not understand how the technology worked or what it could do for us or if it might break our computers. So I think that it is the phobia which surrounds the technology which is a central issue for NGOs trying to use it more fully.” Respondents working to provide ICT training stated that “[m]any of the members who come in to do research are very intimidated by the technology. I ask to show them how to surf the net and find stuff for themselves but in most cases they would rather not and they prefer for me to find it for them. Our library

data base is totally computerized but people do not want to use it because they are a bit fearful, it is unknown. They much prefer the conventional way.”

Most respondents agreed that this fear or phobia could be largely attributed to the newness of computer technology within the Zambian NGO context and its relative sophistication in a context where many employees do not have phones or computers at home. One Zambian participant claimed that “the issue is that it is very high technology compared to where most people are coming from and they do not have the confidence to get on there. There is a split between the newness of the technology and the situations that people are currently living in.” Most of the respondents, both key informants and members of Zambian NGOs, felt that this “split” was an important factor inhibiting the broader adoption and utilization of the technology by many Zambians.

### **Relevance of the Technology for Basic Development Issues**

It has become evident in the preceding sections that most respondents believe e-mail and the Internet are, or have the potential to be, effective as a tool for Zambian NGOs in their work at the regional and international level, and in their capacity to be more efficient organizationally. The findings in this section represent perspectives which emerged from the data on the potential of the technology to be effective as a tool to address Zambia’s basic development issues at the local level. To reiterate, basic development issues can be understood in the context of this study as those which face the majority of Zambians without adequate resources (i.e., safe water, sufficient food supplies, adequate education, health care and means of transportation), to sustain an acceptable quality of life.

The data that emerged revealed a vast spectrum of perspectives. At one end of this spectrum were respondents who believed there was no connection between access to information and the utilization of the technology and enabling marginalized communities to more effectively meet their basic needs. At the other end, were those who perceived the technology as central to meeting basic needs and enabling greater participation in local



development. And in the middle, were those who identified a connection but described it as “indirect”. These differing perspectives could not be attributed to any category of NGO or area of development expertise of the respondents. In fact, they emerged quite randomly from across the different organizations, from local NGOs to international aid agencies, and from within the different research contexts. Yet, it is important to note that the respondents working within Zambian NGOs and directly with rural communities, were more inclined to perceive access to information, if not specifically the new technologies, as central to these communities’ ability to pursue their own development. Furthermore, they were less likely than those working with aid agencies or international NGOs, to underestimate the capacity of members of disadvantaged communities to effectively utilize information, and potentially the technologies, to meet their needs.

The technology as *irrelevant* in addressing basic development issues.

The perspective that the technology was entirely unrelated to the development issues facing the majority, and yet most marginalized, Zambians, was best summarized in the following response from the member of an international NGO:

Computers are getting cheaper but even for your upper-middle class Zambian computers are still out of reach, there are too many other priorities. That is an overriding theme. People everywhere in Zambia have other priorities that are overwhelming. Their own livelihood security, the security of their families, the ability to have clothing and go to school is so difficult for the majority of Zambians that to present this idea that people need Internet access is like giving them cake. In my opinion it is superfluous, it is simply not an issue. It really is not, unless you are talking about special cases of health personnel who need access to protocols or practice. It is crazy to talk about access to the Internet in the context of dire, dire poverty, not just in the rural areas, some of the worst of it is in the urban areas in Lusaka. The Internet is not going to do anything about that for these people. Even if they could understand it, know how to use it, afford it, to me it approaches the ludicrous to be putting computers out in the rural areas. There has got to be a better way to help people out if that is what you really want to do.

These ideas are supported by others: “Eighty-four percent of the people in this country live on less than a dollar a day. Their primary concern is where their next meal is coming from. So the idea of the Internet could be from the moon as far as they are concerned.” These perspectives make explicit the issue of competing priorities and suggest that in the context which most Zambians live, these technologies are inappropriate and ineffective as tools to meet their most pressing needs.

The technology as *directly relevant* in addressing basic development issues.

The following quotes are indicative of the perspective situated at the other end of the spectrum. A Zambian NGO field worker claimed that:

People must have access to the information. There are significant changes in government policies, in liberalization and developing the private sector and eliminating public ownership. These changes have a serious impact on the people in the rural areas and they must know what is going on. How will they know, this is where the technologies could make such a difference...This is the case in terms of government policies, in terms of civic rights, in terms of the entire democratic and development process...Information is power and once people have information they are empowered to make their own decisions.

Those supporting this perspective provided examples to illustrate how the technology could be used to meet basic development needs:

These people [living in rural communities] need and will use the technology. For example, the issue of maize agents, these people do not know the value of their crops and have no way of finding out, thus the traders from Lusaka come and buy very low and then sell in the city at an enormous profit. The farmers need the information so that they can sell their crops at the going rate. They also need to know about agricultural inputs and fertilizers and changes in government policies that will effect the work they do. They can no longer live in isolation from information, their lives are too connected to what is going on in the cities and in the rest of the world.

These citations represented the view that access to and utilization of the technology is central to enabling marginalized communities to participate in addressing their development needs. Although the respondents who support this perspective recognized the formidable infrastructure, political, organizational and socio-cultural barriers, most agreed that these could be overcome: “There may be issues of illiteracy and lack of skills but this is Zambia and somebody everywhere speaks English and someone could assist people to get the information. A place [where the technology is located] could be chosen and people could come and get the information they need.”

Furthermore, some of the respondents subscribing to this view argued that the process of liberalization combined with some degree of regulation will ensure that private sector investment supports initiatives for universal access to telecommunications services. They believed that rapid technological developments would address many of the other barriers to access and utilization within marginalized communities. A member of a local NGO stated that “if we look at direct access in the rural areas there is still a lot that needs to be done. Technological development, infrastructure, but I think that it is possible. Like with radios, they have developed different models which are appropriate to the remote areas, this is an indication of the possibilities for the technology.” A perspective that balances this optimism and the previously explicated skepticism also emerged from the data.

The technology as *indirectly relevant* in addressing basic development issues.

Those who identified with this perspective generally saw the relationship between the technology and meeting basic needs as indirect with Zambian NGOs acting as the intermediary. “This is where an organization like mine [a local NGO working in the rural areas] comes in. Our aim is to take the information to the people so that they can use it to be empowered. We are the translator to the grassroots level. But only in the interim, we cannot make people dependent, we cannot institutionalize ourselves as the middle person, then we are missing our point. Our goal is to facilitate the local people to be where they are supposed to be.”

Another claimed that “there is a connection in that it enables NGOs to communicate with donors who will then support us in doing the projects which directly impact upon the marginalized communities.” Finally, one Zambian NGO respondent described the capacity of the technology to provide a link between macro, meso and micro-levels of development: “We use the technologies to fight from the grassroots to the national level and then internationally. It is at this stage the technologies becomes crucial. The effects of our work will go back to the grassroots through our policy interventions.”

It was this middle perspective which represented the views of the majority of research participants. In most cases, the NGO representatives identified the connection and saw further potential for the technology as a tool for addressing basic needs, but they remained cautious. Many of the key informants with broad experience in diverse aspects of ICTs and development held similar views. They saw the potential but identified its double edge: “First of all, ICTs are but a tool and given the enormous developmental problems facing Zambia anything that can empower a community to become proactive in the development process should be considered very seriously. Having said that, one must also look at the way information flows are in Zambia. Information belongs to the rich and the powerful, the poor and the powerless have nothing. But ICTs, with the proper forces behind them, provide an opportunity for this to change.” It is in this way that many respondents described how networking technologies have the potential to reinforce, at the same time that they could breakdown, the barriers to information and decision-making between the privileged and the poor.

Concurrently, other respondents identified the risks inherent in fully embracing the technology and radically shifting priorities: “Issues of food, shelter and clothing are the priorities. This is not to say that the idea of information technology and the pursuit of basic needs are mutually exclusive but one must be very careful as to where the emphasis is being placed. The technology is seductive, basic needs are not. We must be certain that

basic needs are being sufficiently met.” Finally, one respondent summarizes these ideas succinctly: “We need to find the balance between recognizing the benefits of the technology and avoiding all of the hype which surrounds it.”

It is difficult at this time to prioritize the importance of these themes as they are inherently interrelated. For example, if the infrastructure constraints are not overcome, none of the potential of the technologies can ever be realized. At the same time, if use of the technologies persists as a marginalized component of NGO work, there will be insufficient demand for governments to provide the necessary infrastructure. However, in relation to the central questions of this thesis, the potential and constraints, and perceptions expressed around the relevance of the technology in addressing basic needs provide critical insight into the technologies’ capacity to enable greater participation by NGOs and disadvantaged communities in development processes.

### **To Briefly Recap**

Before moving to an explication of the findings in relation to the rural context, it is important to briefly recap the central themes that emerged in the NGO context. It became clear from the findings that the rate and type of current utilization of these technologies was partially dependent upon the nature of the work an organization was engaged in. First, those with a regional or international advocacy focus were more likely to use the technologies in a consistent and sophisticated way than those organizations with a local and rural focus. A human right organizations which relies on electronic networking to engage in its daily operations is more likely to utilize the technology extensively than an organization that is focused on addressing issues in a rural community that does not have access to clean water, let alone to a telephone. Overall, the level of utilization remains limited despite access to the hardware, software and training. Second, the type of information currently being exchanged was logistical and administrative in nature, with limited exchanges of information related to best practices. Finally, although exchanges of information and communication by NGOs is increasing within the region and with groups

across the developing world, the majority of the flow continues to be between Southern NGOs and organizations in the North. Most of the participants felt that this trend would continue to change as more NGOs situated in the South came to utilize the technology.

The findings also made evident that the technology did have potential as a tool in the NGO context. Most of the respondents indicated that even the relatively low levels of current use had enabled their organizations to be more effective in their work internationally, regionally and nationally. Examples were presented in which the technology had enhanced their capacity to contribute to international forums and campaigns; to create and participate in more effective regional networks; and to access information which strengthened national advocacy work and, to a lesser extent, enhanced local development practices.

In addition to revealing the potential of the technology as a tool, the data also revealed significant constraints. Respondents identified ineffective infrastructure and cost, organizational limitations and insufficient policy awareness as factors combining to create an environment that inhibits effective and more prolific utilization of the technology. Yet, it was perhaps most interesting that many respondents felt that these constraints were less significant than the socio-cultural constraints. Divergent perspectives as to the presence of an “information culture” in Zambia were explicated in relation to this culture’s impact upon use of the technology. Although some of these perspectives tended to confuse utilization of the technology with utilization of information, they do reveal many of the social dimensions of the technologies that need to be addressed if they are to be effective.

Finally, the findings revealed a variety of perspectives as to the relevance of the technology in addressing basic development issues. These perspectives ranged from understanding the technology as irrelevant, as indirectly relevant and as central in enabling marginalized communities to more effectively meet their needs. It is this

divergence of perspectives in relation to basic needs that prompted the investigation of the issues that surround information in rural communities in which these needs are inadequately met. The findings from this context will be presented in the following section.

### **Information and the Rural Context: Sources, Needs and Perspectives**

By way of introduction to a discussion of information needs and the rural context it is important that the reader understand this context more fully. The villages in which the research was conducted are situated in Western Province approximately 450 kms from Lusaka and 45 kms off of the highway to Mongu. The villages consisted of 15-20 thatched, mud huts belonging to members of an extended family. Residents of these communities are predominantly farmers growing food for their own consumption and in some cases surplus maize to be sold in urban markets. Villagers subsist on two meals a day consisting mostly of *n'shima* (the staple food made from ground maize) and local vegetables with an occasional supplement of meat or eggs. Although a few members of the communities can read and write in English the majority cannot, having been without the opportunity to attend school to a sufficient level. There is no electricity, meals are cooked on open fires and water is collected from shallow wells or springs located 2-3 kms from the villages. There is no local postal service, no distribution of local or national newspapers and the nearest phone is located 45 kms from the villages in the town of Kaoma. Lack of transport and poor roads often renders the trip to make a telephone call a full day's journey.

As was outlined in the methodology section of this study, two group interviews were conducted in Mangango area. These findings, although not generalizable, do provide insight into the issues and perspectives which surround information and communication

in a very remote and rural context<sup>8</sup>. The information generated in the NGO context outlined the risks and opportunities of the technology in their work at the meso and macro-levels of development processes. The information generated in the rural areas contributes to a more contextual understanding of the potential and constraints at the micro-level. Although largely speculative, this information indicates ways in which the technology may be useful in enabling rural people to address their development needs and participate in decision-making at the other levels. The relationship between the issues outlined in this context, those identified in the NGO context and the potential of the information technologies to enhance a community's abilities to meet their own development needs are central to this study. These issues will be more fully explored in the final section. What follows here, is an explication of the rural findings as they emerged according to three central themes:

1. Current sources of information and capacity to communicate;
2. Current information needs and potential uses;
3. Potential to utilize a community information center (CIC).

### **Current Sources of Information and Capacity to Communicate**

As an indication of the respondents' opportunity to utilize and access communication technologies, the data from the group interviews revealed that of the 32 participants, 27 had never made a telephone call. Four of those who had, had not made a call in the last 8 months and only one had utilized a telephone in the preceding week.

In Kalundu village there were two privately owned radios. Although the radios were shared in an informal way, with friends and neighbors listening to music or the news together, there was not a system of formal communal listening or a "radio club". Relevant news coming from the broadcasts was largely shared via informal conversation. The situation was very similar in Sakahyata, where there were 4 privately owned radios.

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<sup>8</sup> Direct quotes will not be presented in the findings from the rural context. Translation and my inability to accurately cite individuals in the group interviews made such quotations impossible.



Again there was not a formal structure for listening or information sharing and relevant news spread to non-owners by word of mouth.

The transmission of information about family events such as births, deaths, marriages and illness was entirely ad hoc. Written messages were sent via traveling friends or transport trucks with the hope that the messages would eventually reach their intended recipients. Respondents claimed this was the primary means of communication, also being used to share information about emergencies, to organize various meetings and sometimes to engage in business beyond the immediate area.

Information regarding agriculture was predominantly communicated via word of mouth. Sporadic visits by agricultural extension workers and representatives of development organizations was the primary source of information about new agricultural techniques, inputs, growing conditions and market prices. Respondents claimed that they were without the capacity to regularly access market prices for their produce resulting in their inability to effectively negotiate with maize agents for a fair price. One described the situation in which the agents were able to come to the villages, buy their produce at a grossly reduced price and sell it in town at the market price, thus accruing substantial profits.

Respondents claimed that information about national political issues and policy changes relevant to their communities was difficult to access. Aside from sporadic opportunities to listen to radio broadcasts or to read dated newspapers, many claimed that they relied heavily on village gossip to acquire political news. Many stated that these sources were often inaccurate and incomplete. Following the attempted coup in October, one respondent claimed that there was extensive confusion and apprehension as they were unable to access accurate and complete information about the coup and ways the subsequent state of emergency might affect them.

Furthermore, some of the respondents claimed that because of inadequate facilities for communication they were unable to engage with government bodies and development organizations to articulate, and then work to meet, local needs such as provision of clean water, acquiring teachers and school books, and receiving health care supplies. For example, many of the respondents were aware of AfriCare and UNICEF projects to sink bore holes and build wells to provide rural communities with safe water, yet they were unable to communicate with these organizations and thus could not participate in the projects.

Having presented examples of their current means of accessing information and communicating beyond their communities, there was vast consensus amongst the participants that their current capacity was entirely insufficient and in dire need of radical improvement.

### **Current Information Needs and Potential Uses**

Inextricably linked to the respondents' articulation of the insufficiency of their information sources was the expression of their outstanding information needs. Current information needs articulated by the respondents were predominantly related to agriculture. They claimed that they desperately needed information about agricultural inputs, their sources and their prices, at the same time that they claimed to need the capacity to make demands for these inputs. Some of the respondents explained that they were unable to request fertilizer and seed at the appropriate times or of the appropriate types. Without the capacity to communicate regularly and efficiently with input distributors, they were forced to accept whatever arrived in their area from these companies, often paying for seed and fertilizer that was inappropriate for local soil composition or agricultural practices.

Other community members identified access to information on the market value of their crops as an important, yet unmet, need. As was described earlier, their inability to access

this information put them at a significant disadvantage when dealing with the urban-based maize agents. One respondent further claimed that it made it difficult to diversify their products as they were unaware of market demand, and thus unable to select crops which attract a good price. Another described a need for information on agricultural techniques, crop diversification and improved methods. He claimed to have planted a crop of paprika but does not know how or when to harvest. Without this information he will lose the crop.

Many of the respondents identified current and accurate weather information as an important need. Most were aware of the El Nino phenomenon but uncertain as to its implications for their livelihood. Although most agreed that weather is highly unpredictable and that many forecasts may lack in accuracy, they were insistent that this information would enable to gauge their plowing, planting and harvesting schedule more effectively.

Beyond agriculturally related information, political information, locally, nationally and internationally, was defined as an important need by the participants. Many of the respondents explained that the capacity to send and receive information about politics was central to effective democratic participation and thus, central to citizenship. One respondent rhetorically asked “how can we be full citizens if we cannot acquire information about our country and our leaders decisions?” Others claimed to need information about specific government policies and plans. For example, the restructuring of the national health care system was having a significant impact on the participants’ lives as their local hospital is being down-graded to a rural health center. Many of the respondents claimed to need information about the changing health policy so they could effectively participate in the debate surrounding these changes. Without this information they had been unable to lobby their MP and they claim their needs have been ignored. Another respondent expressed extreme frustration due to the community’s inability to hold their MP accountable, explaining that insufficient information about parliamentary

debate made this impossible. He claimed to suspect that the MP was making promises in parliament to provide services to his community that were consistently unfulfilled.

Many of the female respondents identified the ability to consistently communicate with family members as an important information need. Many had relatives spread across the country and beyond, and they were frustrated by their inability to know if their relatives were safe and healthy, had married, given birth or died. They claimed that the extended family structure in Zambia is a very important part of their culture and that their inability to effectively communicate makes them feel isolated.

This articulation of various information needs indicated that these residents of remote communities were aware of their isolation, recognized their disadvantaged position because of unmet information and communication needs, and were frustrated by it. What follows is an explication of how rural residents might utilize a community information center (CIC), if such a facility were made available.

### **Potential Utilization of a Community Information Center (CIC)**

In relation to the description of a hypothetical CIC as described in the methodology section of this study, discussion of its utilization and appropriateness revealed information from the respondents around a number of issues.

First, there was broad consensus that such a center would be extensively utilized. Participants claimed that if the facility were located within a reasonable distance (4-7 kms) they would be likely to utilize it approximately once a week. Second, they claimed that 500 kwacha (US\$0.30) would be a reasonable and accessible fee for each time they used the facility. Although this is a seemingly minimal cost, in a context where cash is extremely limited and 500kw would buy a dozen eggs or a pound of groundnuts, it indicates relatively substantial value being attached to the service. It is important to note in relation to these responses, that they represent the said *intentions* of the participants.

As with all speculation it is difficult to determine the extent to which these intentions would be realized if a CIC were actually established in the community. Would the villagers have time to regularly walk 4-7 kms to utilize the CIC? Would they have 500 kwacha of disposable income per week? Yet, despite the potential variation between intention and capacity, their responses do indicate significant value being placed on opportunities to access information and communicate.

Third, most respondents claimed that the CIC should be situated in a central location, possibly as part of other community service facilities, i.e., an agricultural co-operative or a health clinic, and that it should be available to all local residents. Many suggested that it be combined with a shop selling local produce and goods from Lusaka. They claimed that it could become a hub for local activity and trade.

Finally, in one of the group interviews, participants felt that the CIC should be owned privately and run as a small business by a local resident. In the other, respondents claimed that a committee should be established to control the facility and to ensure that equitable access and sufficient maintenance persist. Participants in both group interviews felt that it should remain independent of government control and should not be established as part of an existing government institution.

In concurrence with the information needs that the participants identified, they claimed they would utilize the facility to obtain information about agricultural markets, weather, and local, national and international news and politics. Two respondents claimed that it would be an important means to communicate with “the donors” so as to become involved in development projects relevant to the community’s needs. It was in these ways that group interview participants believed such a facility could provide information that would enhance their capacity to meet their basic needs (i.e., to grow food and cash crops more effectively, acquire assistance in accessing safe water); to raise their awareness of and capacity to participate in political debate (i.e., health care reforms, changes in

economic and agricultural policy, parliamentary decisions, MP accountability); and enable them to communicate beyond their immediate context (i.e., with produce buyers, agricultural input suppliers, “donor” organizations, family members).

Thus, the central findings from the rural context can be briefly summarized as follows. First, and perhaps most obviously, the information and communication needs of rural Zambian communities are insufficiently met. Contemporary means of communicating are ad hoc, inefficient and unreliable, creating a situation which renders these communities extremely isolated.

Second, those who participated in this study were vividly aware of this isolation and frustrated by it. They recognized the many disadvantages and dependence their lack of access to information creates and resented their exclusion from effective participation in decision-making both within and beyond their immediate context.

Finally, the rural findings indicate that utilization of new information technologies and the idea of CICs in the rural context are perhaps more feasible than many would think. Residents of these communities made explicit that they would value such a facility and that they had the capacity to utilize the information it might provide. Furthermore, they were able to clearly articulate many examples of ways in which they felt the information provided would enable them to more effectively meet their basic needs and participate in debates and activities beyond their immediate context. Although their expression of intention does not necessarily imply actual capacity it does indicate a vivid awareness of the value of information in meeting their daily needs and the disadvantage which results from their lack of access.

### **To Briefly Conclude**

The preceding findings are interesting in a number of ways but most importantly in their explication of the opportunities and risks which surround networking technologies as

tools for NGOs at the macro/international, meso/national/regional, and micro/local/rural levels of development. They are interesting in that they reveal a number of differences and contradictions in perspectives of the uses at these three levels. It is the implications of these findings, and the differing perspectives that they represent, for the theory, policy and practice of development that are central to this thesis. As such the final chapter is intended to interpret the findings, present preliminary implications and suggest further questions which precipitate from this study for networking technologies in broader development contexts.

## **Chapter Six**

### **Coming Full Circle: Summary, Policy Implications and Further Exploration**

To summarize, this thesis has been an exploration of new ICTs, particularly networking technologies, as tools for development in a changing global context. This investigation has included a threefold review of the theoretical foundations of development; an explication of currently changing development processes and the emergence of new ICTs within this process; and a case study grounded in the practice of Zambian NGOs. This exploration has focused on the utilization of networking technologies by NGOs at the micro, meso and macro-levels of development processes. Stated explicitly, the central questions addressed were:

**At the micro/local level, do the technologies have the potential to enable these organizations to more effectively work with marginalized communities to define and address their development needs? At the meso-level, do they enhance the capacity of these organizations to influence government policy and participate in regional networks to develop South-South alliances? At the macro/international level, do they enable the NGOs to more effectively contribute to, and gain from, development debates and negotiations with United Nations agencies, international donors and global alliances? Ultimately, are these technologies an effective tool to enable organizations in the South to function more effectively across the development spectrum; enabling increased participation by marginalized communities, and thus working to bridge the gap between micro, meso and macro; policy and practice; haves and have nots?**

In addition to addressing these specific questions this study intended to provide insight into, at the same time that it has been framed by, broader challenges and debates which currently face international donors, policy-makers, practitioners and NGOs as they engage in development activities in a rapidly changing global context. These broader issues include understanding the ways in which utilization of new ICTs will impact upon



the field and affect relations across the North and South. Can they help to transform existing social, economic, political and cultural structures to equalize relations between the privileged and the poor? Or, will they persist as elite technologies, with their increasing importance, working to further exclude those without access to forums of decision-making and resource allocation? By looking at the capacity of networking technologies to enable Southern NGOs to be effective, this study perhaps helped to augment development theory and practice as it attempts to incorporate new ICTs at the micro, meso and macro-levels of development processes. These broader issues shape current development debate and will be instrumental in its future practice, and although definitive answers lay beyond the scope of this investigation, these issues represent its broader context. This final chapter will unfold in five parts with the presentation of: 1) a brief summary of the history of development and the current context; 2) a summary and interpretation of the case study findings; 3) the limitations of the study; 4) the policy implications and; 5) further areas of investigation which this study suggests.

### **Recapping History**

The review of the theoretical foundations of development explicated the historical framework from which current development processes emanate. Although not linear, the evolution of modernization, dependency and participatory models of development represent a process by which policy and practice emerged, was critiqued and subsequently superseded by alternative ideas and practices. The concept of participatory development, despite important limitations, has gained prominence among international donors, Third World governments, international and Southern based NGOs. Although it can be argued that the interpretations and manifestations of participation differ, and are even contradictory, among these different actors, the participation of Southern organizations and communities has become a central component of development policy and practice around the world.

### **The Rise of Civil Society and NGOs**

Concurrent with this broad acceptance of community participation, we have seen the emergence of civil society as an important socio-political and economic actor mediating the forces of the market and the state (INTRAC 1997, Van Rooy 1997). Despite extensive controversy surrounding definitions and the composition of 'civil society', much of current development theory and practice has come to identify NGOs as its primary representative (Smillie 1995). In attempts to make development more 'participatory', many of the multi and bi-lateral funding agencies have turned to NGOs as the more legitimate and more effective bodies to implement and assess many of their development initiatives. Furthermore, in a context in which many states are retreating from their traditional responsibilities in social service provision, NGOs are emerging as the principal providers of health, education and advocacy services to disadvantaged communities. Although the impetus behind, and the benefits of, the rising prominence of NGOs remains contentious, it is with these increasing roles at both macro and micro-levels that many Southern NGOs are exploring networking technologies as a potential tool in meeting their development responsibilities and achieving their goals.

### **Enter New ICTs**

Over the past 15 years, new information and communication technologies have spread as an unprecedented technological, socio-economic, political and cultural force across the globe. In the context of development, these technologies represent a sort of paradox which has precipitated two divergent perspectives. The optimistic stance perceives new ICTs as the vehicle by which developing nations will become full members of the 'global information society', leapfrogging various stages of the development process to fully participate in global markets. Additionally, these technologies will enable previously marginalized groups to participate in decision-making and resource allocation forums at local, national and international levels, thus becoming more capable of identifying and meeting their development needs. The other, more skeptical, perspective fears that the new technologies will further centralize the control and ownership of resources within

macro-level institutions and multinational corporations. Insufficient infrastructure, costs, socio-cultural factors and issues of control and access render the new technologies inaccessible to much of the world's population and their increasing prominence within global relations will thus reinforce, rather than alleviate, existing divides of power and marginalization. What emerges from much of the current literature is the establishment of two ideological camps. On the one hand, there are clear expectations that the development and implementation of ICTs across the developing world will create a bright, economically prosperous and equitable future. On the other, there are skeptical and pessimistic predictions that point to increasing socio-economic disparities, inequality in political power, deepening cultural colonialism and greater gaps between information elites and the "knowledge-disenfranchised" (Hamelink 1997).

Despite the dominance of these two views, neither is terribly useful when trying to design policies and implement programs intended to realize the social development potential of the new technologies. Both have an inherent technological bias in that they take the technology, the "information revolution", as a given and then try to predict its impact on socio-economic, cultural and political relations. What neither perspective fully recognizes is "the dynamic interaction between social forces that shape technological development and technological innovations that affect social relations" (Hamelink 1997 p.29). When considering these new tools in the context of development, it is important to move beyond the technological determinism of both perspectives to focus on the social forces which are likely to shape the ways in which these technologies are developed and used. The supposed technological revolution does not ensure a social revolution and "digital technologies will not *by themselves* change existing institutional settings" (Hamelink 1997 p.33, emphasis added).

The Zambian case study attempted to resolve these dominant perspectives through a grounded investigation. This study has made explicit the potential, constraints and perceived relevance of networking technologies for organizations trying to address basic

development issues and work with marginalized communities. It has helped illuminate the social, political, economic and cultural factors that interact with the new technologies to determine the risks and opportunities new ICTs present within practical development processes.

### **Summarizing the Zambian Experience**

In Chapter Four the findings from research within the Zambian NGO and rural contexts was presented without extensive interpretation. What follows is a summary of these findings and an explication of their implications for broader development policy and practice focusing on new ICTs.

#### **Potential of the technology as a tool for development**

The findings indicated that networking technologies (the Internet and its applications) have the potential, although not extensively realized, to enable African NGOs to participate in regional and international debates, forums and conferences in ways which were previously impossible. The technology enabled these NGOs to contribute to campaigns (i.e., Amnesty International human rights campaigns, action against police brutality and the *Jubilee 2000* efforts for debt forgiveness) which are occurring at a global level. Some of these organizations were able to effectively participate in international conferences such as the Beijing Conference for Women via the technology when limited resources prohibited them from being there physically. In this way, it helps to promote the proliferation of information on Zambian issues, Zambian perspectives and Zambian expertise at the international level of the development process. The findings indicated that the technology has some potential, although inhibited by a number of constraints and thus not currently realized, to enable Zambian, and perhaps other Southern-based, NGOs to more effectively participate in policy formulation and decision-making within macro-level forums.

At the regional level, the technology provided the opportunity for organizations across sub-Saharan Africa to build more effective alliances and form networks to address issues which transcend national boundaries. To date, the majority of networks formed which utilized the technology to this end, focus on issues of human rights, aboriginal rights and gender and development. If these types of alliances become more prolific, South-South collaboration may increasingly become realized, creating a more powerful base from which NGOs can address local, regional and international issues.

Although there is currently minor utilization of networking technologies at the national and local level in Zambia, there are initial indications that local advocacy work and development strategies can be strengthened through utilization of the technology. The technologies could also enable more effective communication, participation and monitoring for organizations with offices and projects throughout the country. They could also significantly enhance collaboration between NGOs by supporting the work of national umbrella organizations. Although the technology is not extensively employed by NGOs in their local work, if the infrastructure, technological and human resource constraints are redressed, it could enhance their capacity to develop strategies and acquire sufficient resources to more effectively address local and rural issues.

Despite these important examples of the technologies as effective tools at the three levels of development processes, it is important to note that much of this use persists as largely a potential, with full realization being inhibited by a number of constraints.

### **Constraints inhibiting the technology as a tool for development**

The findings clearly indicate that the technological, infrastructure and cost constraints combine to create substantial barriers to effective utilization in the Zambian NGO context, as they have elsewhere in the developing world. However, it was revealed that within this context, these barriers may be less significant than the organizational, political and socio-cultural constraints. Many respondents felt that if the technology were to be

effectively and sustainably used as a tool for development it must become an integrated part of NGO work rather a separate component of it. Skills to utilize the technology and an awareness of its capacities must spread beyond an organization's "information and communication officer" to span the breadth of an organization's activities.

Furthermore, an environment of mutual support and skills sharing needs to be fostered within the Zambian NGO community. It became evident that many NGOs were hesitant to collaborate and share their technological skills with other organizations as they fear that this may inhibit an advantage in establishing effective relations with international donor organizations and securing adequate funding. These circumstances reveal a number of issues surrounding funding structures, training programmes and developing methods of effective collaboration which, although beyond the scope of this study, require serious consideration by both the donor community and Zambian NGOs.

The lack of awareness of broader policy issues was identified as an important constraint to effective utilization and control of the technology in the Zambian context. It became clear that training for both government and non-government bodies was currently too focused upon the technical issues and needed to place greater emphasis on raising awareness of issues of telecommunication and trade policies. Many felt that an awareness of these issues was central to promoting Zambian, and broader African control, of the technology and to ensure its utilization for their benefit.

Finally, the nonexistence of a culture of *formal* information users in Zambia was identified as a central constraint by some of the participants, while being vigorously disputed by others. Although these contradictory perspectives are difficult to fully reconcile, if the findings from the NGO context are considered in conjunction with those from the rural context, there is extensive evidence that if reliable information were made accessible, it would be both valued and utilized across Zambian society. At the same time, it is important to note that overcoming some of the technological "phobias" and

promoting the growth and proliferation of information users within Zambia persist as essential social components to effective use of the technology. The ease with which current users were able to adopt the technology and the broad recognition of the value of information and communication for development, indicate that these constraints are likely to be overcome. Although the issues that stem from a history of relative isolation from formal information must not be ignored, they must also not be used as justification or an excuse for Zambians and other Africans to remain in this isolation.

### **Relevance of the technology in addressing basic development issues.**

This section of the findings explored the participants' perspectives as to the relevance of, or connection between, access to and utilization of the technology and the capacity to address Zambia's basic development issues. As stated earlier, these issues refer to those that face the majority of Zambians living in marginalized conditions. The findings made clear that the technology is predominantly utilized by an elite and limited sector of the population, yet these same technologies are being identified across development literature as a potential tool for more 'participatory' development. Thus, exploring the perceived relevance of the technology in addressing the fundamental development issues provided insight into the extent of its potential as a tool at the 'grassroots' level of the development process. In what ways is it, or is it not, an appropriate tool to assist the majority of Zambians to more effectively meet their basic needs and participate in defining and controlling their own process of development?

Due to the broad differences and blatant contradictions which emerged from this section of the findings, the limited size of the research sample, and the qualitative nature of the data, it would be inappropriate to attempt to outline any definitive or generalizable conclusions. Yet, the perspectives were drawn from organizations actively striving to utilize the technologies in practical and concrete ways. As such, they provide information from experiences with the technology as a tool to address grounded, day to day development issues under relatively marginalized conditions. In this context, all

respondents agreed that information and the capacity to communicate are central to participation in the development process. What varied were ideas about its relative importance at the different levels of this process and the most appropriate means of acquiring it.

There were those who perceived information as *directly relevant* even, and perhaps especially, at the “grassroots level”. Some of these individuals perceived the technology as a potentially ideal tool to provide information and the capacity to communicate in the rural context. Unlike the conventional technologies such as radio, television and ‘plain old telephones’, some suggested that e-mail and the Internet had the potential to enable an exchange of the diversity of relevant and immediate information needed within these communities. They could access specific information on market prices, agricultural practices, weather and politics that may enable them to more effectively meet their daily needs. The multi-directional capacities of these new technologies could enable these communities to actively contribute to, at the same time that they gain from, relevant information. In this way networking technologies have the potential to radically alter traditional and predominantly uni-directional, center to periphery, development communications.

Others agreed that *information* was important in addressing basic development issues, but felt that currently the *technology*, with all of its constraints, was inappropriate as a feasible tool at the grassroots level. They identified the technology as *indirectly relevant* in that it enabled the NGOs to engage in their work more effectively, which in turn would benefit the marginalized communities they work with. Furthermore, these respondents perceived the NGOs as fulfilling a “middle man” or conduit position between the communities and the information they required. They felt these NGOs had a responsibility to obtain relevant information and “translate” it for the communities until such a time as the communities were in a position to do this for themselves.



Finally, there were those who saw the technology as entirely unconnected and *irrelevant* in addressing the issues which face the marginalized majority of Zambians. Many felt that first, the basic issues which face these communities could be more effectively addressed via alternative development strategies. They argued that the investment of significant financial resources into the provision of these technologies in a context where people have yet to obtain safe water or sufficient food is inappropriate at best, ludicrous at worst. Second, they argued that even if the enormous barriers to rural utilization of the technologies could be overcome, the sophistication of the technology would be so incongruent with the relative simplicity of rural lifestyles that it would ultimately be ineffective in this context. At an extreme, there were subscribers to this perspective who felt that the usefulness of information was beyond rural communities and thus implementation of these technologies in this context was a waste of resources. Implicit in this extreme perspective is the basic assumption that individuals living in remote rural communities would not know what to do with information even if they had access to it. What is perhaps most interesting about this perspective in relation to the totality of this study is the ways in which it is fundamentally contradicted by the findings from the rural context.

### **The Rural Context: Exploring the Feasibility of the Technology**

It became strikingly evident from the rural context findings that people living in remote, rural communities recognize and resent their disadvantaged position because of their inability to access information. They are capable of identifying their information needs and able to articulate the ways in which they would use information if it were made accessible. The responses can be interpreted to represent a level of sophistication which is ignored or presumed absent by some individuals and organizations working for development at other levels of the process.

In the rural group interviews a scenario was presented in which community members could have access to a hypothetical community information center (CIC) where they

could access information and communicate beyond their immediate community. Based upon this scenario the findings indicated that utilization of the technology in the form of a CIC was not entirely inappropriate in the rural context. It became evident in the discussions that the type of information and communication provided by basic networking technologies may in some ways be ideal to meet information needs in the rural context. They enable access to the variety and specificity of information that the rural participants claim they need in ways which would be impossible via contemporary technologies. In considering the CIC, rural respondents claimed they would be able to access information on weather, markets, agricultural practices, development initiatives and national politics, all of which they argued, would enable them to more effectively meet their basic needs and participate more fully as Zambian citizens. Without access to this information and the capacity to communicate their needs and perspectives to decision makers they would continue to live in a marginalized context, experiencing disadvantages absent for their urban counterparts.

At the same time, the enormous infrastructure, technological, political and socio-economic barriers cannot be ignored and one must be extremely cautious not to overestimate the capacity of any one tool or technology to redress the vast complexity of issues which face marginalized, rural communities. As such, this interpretation should not be understood as an argument that these technologies are a panacea for rural development, but rather as a suggestion that their *potential* as an effective tool in the rural context should not be disregarded. It is important to note however, that the communities' actual sustainable capacity may deviate from their expressed intention. It is the risks inherent in this variation which must be considered and ultimately minimized within any rural ICT initiatives. The technologies are of a sophistication that seems inappropriate in a rural community in which basic daily needs continue to be difficult to meet. Yet, the responses provided by members of these communities made palpable that they explicitly value information and believe that they have the capacity to utilize such tools to more

effectively participate in meeting their own development needs if provided with the opportunity.

This interpretation has been descriptive of a unique context with specific cultural, socio-economic, political and technological factors. These findings indicate that the potential for these new technologies to be a potent tool for development is there; however, further fuller exploration of the specific issues which were identified must be addressed if any of this potential is to be realized. The findings make explicit that we cannot simply assume that if the technology is made available it will be an accessible and appropriate tool. The findings are sobering to the optimists, the technophiles, in their elaboration of the significant socio-cultural and organizational barriers, reinforcing the notion that ICTs are tools subject to, and substantially influenced by, the context of their use. Concurrently, these findings may convert some of the skeptics who underestimate the capacity of Southern NGOs and rural communities to recognize the value of information, to proactively seek access to new technologies and to develop innovative means to utilize these tools to their own ends. Ultimately, the findings provide further evidence to support the importance of information and communication in development processes, particularly in the context of globalization, economic liberalization, demands for self sufficiency and the increasing interconnectedness between rural/urban, North/South, privileged and poor communities. The capacity to effectively access and share information across these communities and across the globe is central to reshaping development processes, building stronger civil societies and adequately addressing the issues of poverty, unemployment, health care, education, AIDS and conflict which plague communities across the North and South. These findings contribute to broader debates by illuminating some of the specific, grounded issues which new ICTs present in a developing context, highlighting both risks and opportunities at the micro, meso and macro-levels. Yet, there are some important limitations that need to be made explicit before the policy implications of the study are presented.

### **Limitations of the Study**

A number of limitations to this case study became apparent within the process and retrospectively. The limitations of time and human and financial resources were evident here, as within any research process. Considering the significant changes in cultural context and the initial isolation that I experienced as an independent researcher in Zambia, seven months was in many ways an insufficient time period to fully explore the complexities inherent in the research questions. It took considerable time to establish initial contacts and to select participants, as well as partially adapt to aspects of Zambian culture.

Despite this adaptation and measures taken to identify misunderstandings and weaknesses in communication because of cultural differences, these persisted as limitations throughout the study. It is typical that differences in culture between the researcher and the participants exist in most case studies, and my experiences with this research are no exception. Although my position as a Canadian researcher provided access to individuals and organizations that may otherwise have been impossible, this position also created a gap between myself and the participants. As mentioned in the methodology section, this position was sometimes misunderstood as indicating an affiliation with a Canadian aid agency, prompting expectations that I may provide a window to further financial and technical support. This misunderstanding may have resulted in the presentation of altered responses; responses that were perhaps more impressive than they were fully accurate. Although, these misconceptions were rare, they may have rendered some of the findings about levels of current utilization somewhat exaggerated. Moreover, there were situations, particularly in the rural context and within the regional meetings, in which I misinterpreted discussions or responses because of differing communication styles. Ultimately, however, the extensive support and patience of the 'Women for Change' animators and other participants sufficiently minimized the differences and any subsequent misunderstandings, and enabled me to gather data that I feel is sound and reasonably valid.

Furthermore, by situating the study within the Zambian context the generalizability of these findings across sub-Saharan Africa is somewhat limited. Specific variables (cultural, political, economic, historical) which shape the Zambian context will be different in each country across the region. It is these types of differences that should not be obscured if initiatives to make new ICTs accessible for development are to be successful. Although I was able to engage in regional meetings and work with individuals from other countries in the region, the findings primarily reflect interpretations specific to Zambia.

A final limitation precipitates from the chosen method of analysis. In attempting to look at the potential of the new technologies at the three (micro, meso, macro) levels, I was unable to do fuller justice to each level individually. As a result, the findings depict a bias from the NGO perspective. It is the findings from within this context and the ways in which these relate to the other two levels which were given the most extensive consideration throughout the study. Although this three-fold method enabled me to engage in a broader, even comparative, analysis, it inhibited my ability to examine any of the three levels in greater depth.

### **Reflections on Methodology**

As stated in the opening chapter, this thesis is the consummation of a threefold process. It involved a review of the theoretical articulations of communications and development as these have emerged since the 1950s. It also involved the examination of the current development context with specific consideration given to the rising role of civil society and the emergence of new ICTs. These two parts worked together to establish the framework for a participatory study of networking technologies as tools in the Zambian context.

The case study employed a variety of methodological tools, including qualitative individual interviews, group interviews, participant observation and document analysis. Moreover, it explored the perspectives, potentials and constraints that surround the technologies at different sites, within different organizations and at different levels of development. This process enabled me to more comprehensively illuminate the Zambian context, revealing the differences and similarities that exist across this context. Although it is impossible to make definitive generalizations about opinions that emerged from representatives of aid agencies, international NGOs, Zambian NGOs and the rural communities, the methods employed had the advantage of accessing layers of information which otherwise may have been overlooked. I was able to consider the gaps and explore the bridges that exist between micro, meso and macro-levels of the development process. The combination of methods uncovered important areas of consensus and contradiction that implicate theory, policy and practice surrounding ICTs and development. It is the gaps and bridges, and the differences in perspectives, priorities, capacities and needs, that must be more fully understood and resolved if networking technologies are to be effectively utilized in the pursuit of equitable development. With these considerations in mind we can turn to an explication of the policy implications which became apparent from this study.

### **Policy Implications**

Upon review of the literature, consideration of the current development context and an interpretation of the Zambian experience a number of important implications emerge from this thesis. For consistency and ease, these will be organized in three sections: first, the implications for the international context, second, the civil society context and finally, the local/rural context. The implications relevant within these specific sections cannot be understood as unrelated, but rather as inextricably connected, interacting and affecting each other in significant ways.

### **The International Context: Macro-Level Implications**

Initiatives and policy decisions at the macro-level need to focus more explicitly upon the end-user side of technological development, at the same time promoting further collaboration with meso-level organizations to ensure that specific socio-economic and cultural factors are taken into consideration. As technological infrastructure is developed at national and regional levels, there needs to be consistent and significant regard for the diverse contexts that exist within and between African communities. Attempts to utilize a stock blueprint for implementation across Sub-Saharan Africa may lead to the development of facilities that are inappropriate to the needs of specific countries. A synergistic relationship between investment in the technology and investment in end user skills is essential if new ICTs are to be accessible and beneficial for development to diverse sectors of African societies. Although there are multiple demands on the limited resources of African governments, those who are able to take action on both the technological and human resource fronts will be better positioned to benefit from ICT applications and reduce the risk of exclusions from emergent information-based societies. Collaboration between macro-level initiatives and endogenous NGOs could imbue these initiatives with essential information about specific demographic and cultural factors necessary for their success.

Additionally, it became evident that African policy-makers need to establish a more explicit connection between the implementation of the technology and its capacity to contribute to economic and social development goals. The development of telecommunication infrastructure, pressures for privatization of services and the implementation of facilities cannot be undertaken in isolation from other development priorities. Information and the capacity to communicate must be counterbalanced with, at the same time understood as an important part of, improvements in quality of life, the provision of sufficient health care, education, shelter, transportation and opportunities for income generation. If the satisfaction of fundamental human needs is the driving force

behind the introduction of new ICTs there is a greater chance that they will be implemented in a sustainable and equitably beneficial way.

Finally, demands for liberalization and privatization of telecommunications and technological industries must be balanced with priorities for universal access. African governments need to establish an environment conducive to foreign investment and the acquisition of technological hardware at the same time that they maintain a level of control. Effective regulatory bodies, with the capacity to enforce stipulations to meet the specific needs of marginalized and disadvantaged communities, are an essential component of the development, implementation and utilization of new ICTs across the region.

### **The Civil Society Context: Meso-Level Implications**

In relation to NGO pursuits to access and utilize networking technologies for development there needs to be more explicit integration of information and communication into broader organizational activities. As within national policy-making, these organizations need to identify ways in which information and the ability to effectively communicate via the technology may enhance their capacity to achieve specific development and organizational goals. Southern-based NGOs also need to develop strategies to address the specific barriers that they confront in attempting to utilize the technologies effectively. Issues of technical capacity building, software acquisition, overcoming the technological phobias of users and minimizing language barriers need to be addressed through comprehensive assessment and strategizing.

The new technologies provide an opportunity for these organizations to build alliances and work collectively to address a diversity of development issues which face the Zambian majority. Yet, there needs to be greater collaboration among national NGOs in sharing their skills and resources in order to make these alliances effective. Despite significant competition to attract donor support, these organizations need to work more



closely across issue areas to encourage a diverse, vibrant and equally capable Zambian civil society. It is only with the establishment a strong Zambian NGO network that these organizations can seek out and participate in broader alliances across the region. If Zambian NGOs can build their skills and develop relevant content they can then contribute to the establishment of a strong Sub-Saharan African civil society network with the technical skills and competency to address issues of regional and international importance.

Finally, the Zambian NGO community needs to build its awareness of broader national and international policy issues that frame their capacity to utilize the networking technologies. They need to develop a comprehensive knowledge base of these policies and identify the ways in which decisions made within the World Trade Organization (WTO), the International Telecommunications Union (ITU) and UNECA will impact upon their capacity to access, utilize and control the new technologies. Understanding who is setting the rules of the game in national and international markets, and identifying ways to influence this process will be critical if ZambianNGOs are to proactively lobby national governments and international institutions to ensure that issues of universal access, content of African relevance and the specific socio-cultural dimensions of the technologies are sufficiently addressed within macro-level initiatives. It is only through this awareness that these NGOs can act as an effective mediator between state and market forces, participating in issues of governance and promoting the establishment of equitable and broad based “knowledge societies” (Mansell & Wehn 1998).

### **The Local/Rural Context: Micro-Level Implications**

Although the notion of computers in mud huts continues to be largely inappropriate, this study has made evident that people living in rural areas and other disadvantaged contexts need to be included in the formulation and planning of new ICT initiatives. Despite important advances in national development across the region, these communities

continue to subsist on the margins, being excluded from most social and economic decision-making processes and development initiatives.

The participants in this study could clearly identify the disadvantages they experienced as a result of their isolation and articulate ways in which access to information and the capacity to communicate would enhance their ability to meet their daily needs and participate as citizens in the broader society. If these communities are to move beyond the margins to contribute to and benefit from national development their needs and capacities must be seriously deliberated. When considering the new technologies in this context, the issues of appropriateness and competing priorities loom large, yet these communities must be included in policy decisions surrounding new ICTs initiatives from the outset to avoid their further exclusion and a widening divide between haves and have nots. The importance of information and the level of sophistication exhibited within the rural communities suggests that innovative initiatives and the concept of community information centers (CICs) merit further exploration. Although the gaps between expressed intention and realistic capacity present significant risks, these risks do not justify the omission of rural and marginalized needs, and instead demand their explicit consideration.

Considering that more than half (64%) of the population lives in conditions of absolute poverty, if the interests of this majority are excluded from policy deliberations surrounding new ICT these technologies are unlikely to ever realize their potential as tools for equitable social development. The proliferation and increasing importance of new ICTs in economic and social relations may contribute to a kind of “global apartheid” if they are designed and applied in ways inconsistent with broader development goals. In relation to addressing basic development issues, the task of policy-makers, the private sector and civil society organizations is to create conditions which promote the inclusion of disadvantaged communities in ways that maximize the benefits of ICTs and reduce the risks.

Ultimately the Zambian case study has implications for the evolution of development processes and relations between disadvantaged communities, Southern based NGOs, national governments and international aid agencies. The findings indicate that networking technologies, if effectively implemented and made broadly accessible, could enhance the capacity of NGOs to participate in, and impact upon, decision-making processes. The new technologies could strengthen NGOs as they work at the meso-level, as a sort of “middleman”, negotiating relations between communities at the micro-level and power structures at the macro-level. As strong civil societies become increasingly important within social and economic development, NGOs become increasingly active as respected and effective actors within development processes and thinkers and practitioners struggle to redefine development theory and practice more broadly, the results of this case study suggest opportunities to explore different conceptions of participatory development beyond conventional understandings. Participatory development can perhaps be thought of as more than a method for macro-level organizations to ensure local community compliance and contributions to externally defined projects. It can be conceived of as more than the utilization of locally appropriate and controlled technologies or the incorporation of indigenous knowledge, perspectives and expertise into micro-level initiatives. The information which emerged from this study presents an opportunity to rethink participation as a central component to development writ large, with the technologies potentially enabling more effective communication and information sharing between the micro, meso and macro-levels.

As issues of globalization, unemployment, AIDS, refugees, environmental degradation, war and human rights abuses confront communities across the globe, development perhaps needs to be conceived as a process by which a diversity of voices can participate in a process of mutual problem solving at local, national and international levels. It is in this way that the new networking technologies present opportunities for Southern based NGOs and representatives of Third World civil societies to participate more fully and

equally in this process. Again, these technologies are not a panacea for the complexity of development issues, but having taken into consideration the formidable socio-cultural, political, economic and technological constraints, this case study suggests that they do have the *potential* to change conventional ideas, practices and relationships in contemporary development processes to render them more authentically participatory.

### **Further Exploration**

The preceding discussion of implications and the totality of this work precipitates the need for further investigation in a number of important areas pertaining to new ICTs as tools within emerging development processes. Thus, by way of conclusion, the following is a presentation of issues which need to be addressed both practically and theoretically as macro, meso and micro institutions, organizations and communities seek to utilize these technologies to meet the challenges confronting development initiatives in a changing global context.

What strategies can be developed to promote more prolific utilization of the technologies in the ways that they have been shown to be beneficial to Zambian NGOs? What role do funding agencies have in this process of proliferation? What role do the NGOs play? How can they work more collaboratively to this end?

How can the organizational, political and socio-cultural barriers be overcome to promote more effective utilization and control of ICTs in the African development context? How can information and the technologies be made more accessible to marginalized communities? What role do local NGOs play in supporting this access? How can donor organizations most effectively support this role? What responsibilities do private sector and multi-national corporations have in the provision of access to these marginalized communities?

How can awareness be raised of the broader policy issues that surround these technologies? How can NGOs and civil society organizations mobilize themselves to be more proactive in effecting policy decisions which determine who will control these technologies? How can regulatory bodies be established and supported to ensure that specific socio-economic, cultural and political implications are addressed as markets open and foreign investment increases?

How can new partnerships be established to address the competing technological and social priorities that exist across the developing world? How can these partnerships work to reconcile these priorities and promote equitable investment in the infrastructure and the social dimensions of new ICTs? Can civil society organizations work with macro-level initiatives to establish a balance between ensuring the implementation of sufficient technological frameworks and addressing the critical social components necessary for the effective use of the technologies? Although many of the current initiatives do incorporate NGOs in their projects, how could this collaboration work more effectively to meet sometimes divergent goals? For example, how could Canadian telecommunications companies form partnerships with African NGOs to ensure that the infrastructure developed is appropriate to local needs at the same time that specific socio-cultural constraints are overcome to strengthen local capacities to access, control and effectively utilize the technologies to meet these needs?

Beyond enabling NGOs to be more effective in their work, do the new technologies have the potential to reshape development processes more broadly? How can they be designed and made accessible so as to transform relations between the North and South to be more equitable and mutually beneficial? In a context in which the nature of development in both theory and practice is being redefined, how can new ICTs contribute to a process of collective problem solving to address contemporary global issues? If development is evolving to be less about the transfer of funds, expertise and technological innovations and more about collaborating to solve the problems of poverty, unemployment, refugees, war and AIDS which span the globe, how can these technologies be harnessed to enable groups in the North and the South to work collaboratively towards more equitable and sustainable international relations?

Although these questions are vast and deeply complex, they do make explicit some of the central issues that must be addressed as we continue to explore the capacity of these new technologies in broader development contexts. It is difficult, if not impossible, to foresee the future social and economic implications of the adoption and proliferation of new information and communication technologies. Yet this should not, and cannot, immobilize policy-makers and practitioners attempting to balance the technological and social prerequisites necessary for the technologies effective and equitable use. This is one of many preeminent challenges facing development theory and practice as it enters the 21<sup>st</sup> Century.

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## **APPENDIX A**

### **Interview Questions: NGO Context**

#### **Background Information:**

Statement of purpose for the organization? Areas of concern/activity?

Constituency they work with?

How long they have been working in Zambia?

How long has the organization been using the Internet?

How was the technology implemented? Donor assistance? Government grant? Internal financing?

Would the organization have sought out the technology independent of donor assistance?

How many people within the organization currently know how to use the technology?

Where did they receive their training?

#### **Main Questions:**

How do you see access to e-mail/Internet as beneficial to your organization?

How do you currently use this technology within your organization?

Broadly speaking what are the benefits of this use?

What are the negative effects (time consuming, irrelevant, takes you away from the community)?

Currently, is e-mail/Internet an effective networking tool within your organization? Do you use it to share information with other organizations (ie., conferences, methodologies, training, advocacy/lobbying activities)?

If it is not currently does it have potential to be so in the future?

Where does the majority of the information that you use come from? (North? South? Partners?)

Do you think access to the Internet/e-mail makes you more or less self reliant as an organization?

How?

If not currently do you think it could in the future?

In what ways do these technologies support you in pursuing your development goals?

How does it enhance/inhibit your ability to work effectively at the macro-level, ie., in communicating with other organizations, with donors, participating in national international debates, as a promotional tool?

How does it enhance/inhibit your ability to work effectively at the micro-level, ie., in your work directly with communities, at the grassroots; in pursuing specific development goals; implementing specific projects?

What do you see as the major prospects/potential for using e-mail/Internet within your organization?

How do you think this potential can be realized/achieved?

What are the major barriers to the effective use of these technologies within your organization (social, political, organizational, economic)?

How do you think these barriers can be overcome?

What do you think are the major issues which currently surround the use of this technology by development organizations working in Southern Africa? (access, equity, privacy, freedom of information, government censorship?)

What role do you think your organization can/should play in the development and implementation of ICT initiatives in your area/region?

What are the barriers to playing this role?

How could they be overcome?

Ultimately, do you see a connection between access to/ use of e-mail/Internet in addressing basic development issues currently facing the majority of the Zambian population, ie., poverty eradication, basic health needs, civic education, effective participation in civil society, income generation,?

If yes, what is this connection?

If no, why not?

## APPENDIX B

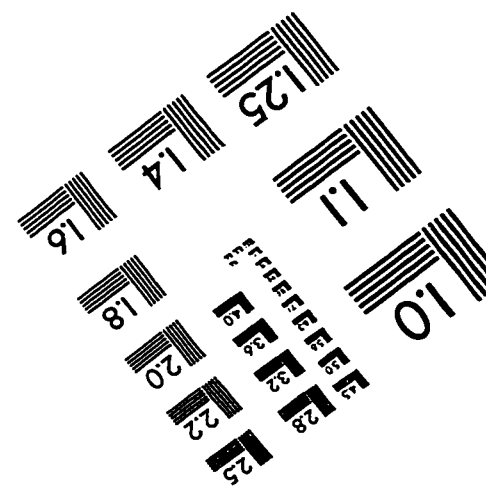
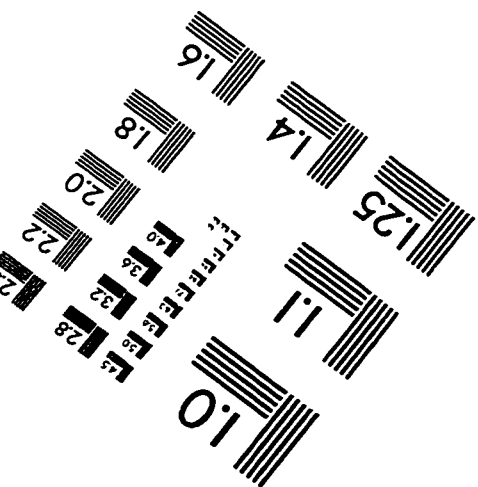
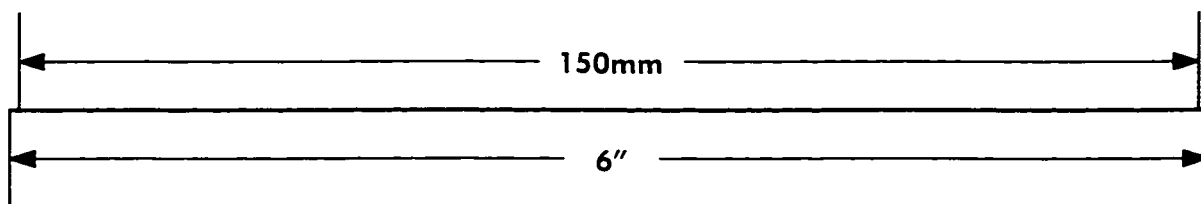
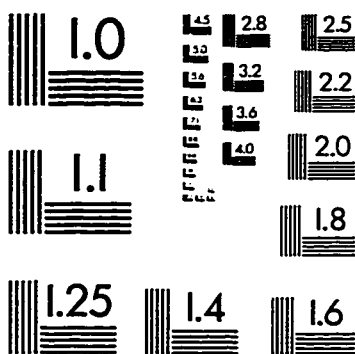
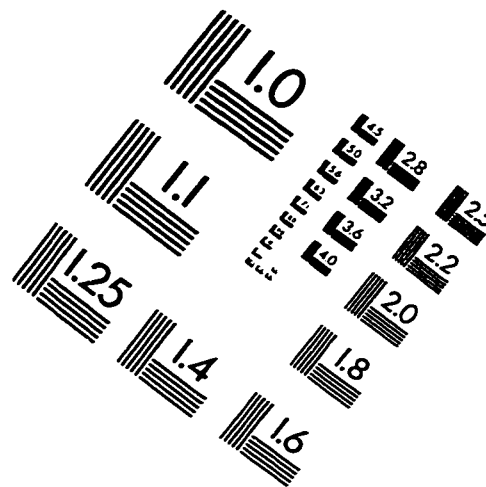
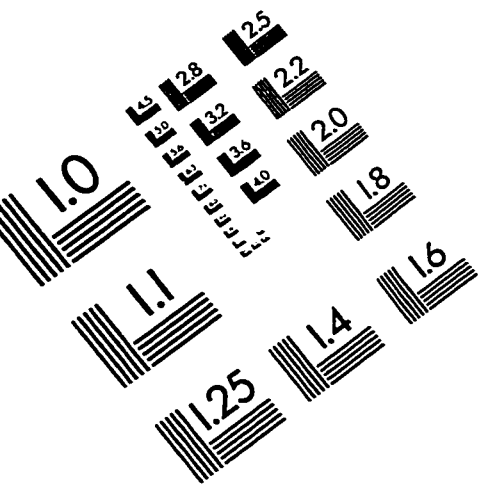
### Participant Observation in Regional Meetings

Representatives in the ABANTU for Development Workshop included:

Arusha Node Marie	Tanzania
EDNA Tiers Monde	Senegal
Multi-Disciplinary African Women's Health Network	Kenya
ZARD	Zambia
Association of Media Women in Kenya	Kenya
Institute of Development Research	Ethiopia
FEMNET	Kenya
Women for Change	Zambia
Forum for Women In Democracy	Uganda
NGOCC	Zambia
Forum of African Women Educationalists	Kenya
Council for the Economic Empowerment of Women	Uganda
National Women's Lobby Group	Zambia
Earth Council	Kenya
Uganda Gender Resource Center	Uganda
SANGONET	South Africa
ISIS Women's International Cross Cultural Exchange	Uganda
Assoc. pour le Soutien a la femme Entrepreneur	Cameroon

The SAHRINGON AGM included representatives from NGOs working to address human rights issues in Zambia, Botswana, Lesotho, Mauritius, Zimbabwe, Swaziland, Mozambique, South Africa, Malawi, Tanzania and Namibia.

# IMAGE EVALUATION TEST TARGET (QA-3)



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