Africa in the Age of a Global Network Society: The Challenges Ahead

PATIENCE AKPAN

Abstract: This paper considers the discourse that links African development with new information and communication technologies (ICTs). It begins with an examination of classical modernization theories of development and communication. It poses the following questions: Are the new ICTs the solution to many of the challenges that face sub-Saharan Africa? What are the immediate and future consequences for the region if these new technologies are ignored? The paper attempts to resolve the tension between the need to be part of the global network society and the urge to provide basic needs for sub-Saharan peoples. It argues that assumptions about the new ICTs and their prospects as instruments of economic development in Africa may be extremely exaggerated.

Nigeria's president, Rtd. Gen. Olusegun Obasanjo, has never been a favorite of Nigerian journalists. His disdain for them when he was head of state the first time around was returned in full measure, with regular reports and cartoons about his famous "uncouthness." Days before the February 27, 1999 presidential elections, Obasanjo's reputation as a "bush" man (Nigerian for an "uncultured" man) received a boost from the man himself. During a televised interview with journalists, Obasanjo reportedly reacted to questions regarding the Internet by playing on the words "download" and "upload." If he is to download, he asked, when does he upload? On a serious note, he said, he did not particularly care about technologies that download unless they meet the basic needs of Nigerians. He was quoted in a Reuters report as saying that he was not against the Internet or information technology, "but (acquiring) it ... should not be a priority over the technology to produce food or pound yams" [1]. This indication of his future policy direction--a preference for "appropriate technology over newfangled ideas of globalization and information technology"--generated vociferous attacks on Obasanjo from Nigerians at home and abroad [2]. One subscriber to Niajanet, a US-based Nigerian Internet discussion forum, expressed concern over Obasanjo's "warped policy preference" and the "need for enlightened people in leadership positions" [3].

This episode is symbolic of the two major perspectives of the coming of new information and communication technologies (ICTs) to Africa. Frequently the debates are framed in either/or language, slotting advocates into uncomfortable positions of sounding either too elitist or not "enlightened" enough. This structuring of the debate has been replicated at the scholarly level. It becomes a "war" between the pessimists, such as Jegede [4], and the optimists, such as Olivier Coeur De Roy [5]. But there are also those who argue that it is not an either/or position and present a middle ground between becoming "cyber-struck" at the perceived wonders of the new ICTs and articulating policy strategies aimed at meeting the basic needs of African populations.

The debate is clearly rooted in the classical theories about the role of communication in development. The present focus may be on new communication and information gadgets, but the debate goes as far back as the 1950s and 1960s when modernization theorists were engaged in intellectual speculations on how to transform the newly emerging, formerly colonial states into western-type societies. Although many modernization theories of economic growth and political development have since been abandoned, or reformulated, their assumptions structure much of the current debate on the prospects for African countries advancing to industrialization and modernity via their modem connections.

This paper examines the classical arguments on the causal link between communication and development. It also considers the possibilities and constraints for sub-Saharan Africa in acquiring and utilizing the new knowledge and information technologies. It addresses the following questions. How important is it for Africa to get "connected" when juxtaposed with the urgency to provide basic needs for most of its populations? Are the new ICTs the solution to many of the challenges that face sub-Saharan African or are they mere distractions? If one takes the position, as Nigeria's Obasanjo does, that the priorities should be about addressing the basic needs of the population, can these states afford not to be part of the global network society? In the first part of the paper, I will explore some of the arguments that represent the two extreme positions: the need to be part of the global network society and the urge to provide basic needs for sub-Saharan Africans. In the second section, I will attempt to resolve the tension between the two approaches by pointing to a third way, one that does not sacrifice the basic needs of the people and at the same time does not place the region in an even more disadvantaged position by ignoring the implication of the new ICTs. First, it is necessary to define some of the concepts.

DEFINITION OF CONCEPTS

First used by Manuel Castells, "the network society" refers to "movements, linkages, and flows which reshape and often undermine the integrity and coherence of borders and spatial entities" [6]. "Network" is a word spun from the actions of a spider and its web creation; it literally refers to any system of lines that cross, or a group of people who work together to promote common goals. More relevant to ICTs, a network is a system that links together a number of computers [7]. In a network, there is the potential for parts to become an intrinsic to the whole. To understand the function of global in this context, it is necessary to seek its definition in the larger process of globalization.

Globalization is not new, but it has become one of today's buzzwords. David Held and Anthony McGrew define globalization as a multifaceted process manifested most vividly in four issue areas: security, economy, politics, and law [8]. The effects of globalization are felt most deeply and extensively in the economic sphere. "The internationalization of production and the globalization of financial transactions, organized in part by a relatively small number of powerful transnational corporations" [9] have drastically shrunk the economic world. This process has been hastened by advances in transport, communication and information technologies that facilitate the rapid movement of capital around the globe.

Ron Kasmir refers to globalization as the "unprecedented volume of flows of capital, people, commodities, microbes, cultural images, technologies, religious and political ideologies,

weapons, drugs, and pollution--all cutting across political and cultural borders"[10]. While geo-spatial boundaries have disappeared to the point where the world is truly a "global village," sub-Saharan Africa seems ever more distant from the core of economic and political processes. The African continent in general seems to occupy a complex position in the global system.

"In one sense, [Africa] is the system's most marginal geographical region. But in another sense, Africa is central to how the system constitutes itself, whether as a harbinger of doom in Robert Kaplan's apocalyptic vision; the moral focus of humanitarian concerns; a laboratory for peacekeeping, epidemiological, and environmental interventions; or the source of pride and commitment for diaspora communities." [11]

This complexity fuels the debate on the need for Africa to be part of the global society--to create a niche for itself, if it is ever to escape its poverty and marginalization.

The notion of "society," as used here in the classic Grotian sense, seems to resolve the tension between Africa's location on the periphery of the global process and as an integral node or unit in a global network with its implicit assumption of equality. In the Grotian image of the world, states in the "societies of states" are not only equal through sovereignty, but they are willing to cooperate with each other in the pursuit of common goals [12]. This means that, despite their marginality, African states still belong to this society of states, although their role and participation are necessarily constrained by their structural location on the margins of the global society.

Taken together, therefore, these concepts produce the idea of a "global network society," also variously referred to as the global information society, the information society or the postindustrial society. In a global network society, "boundaries and borders of all sorts are being re-imagined or re-figured in complex political and cultural ways" [13]. One effect of this process is the shrinking of the global network society, with geo-spatial boundaries giving way to digital spaces where distance is measured in time--the number of seconds it takes to transmit data across cyberspace. In this global network society, new and wider spaces have opened up, prompting many Africans and Africanists to argue that it is time sub-Saharan Africa, the poorest region in the world, finally shared a spot in the sun.

INFORMATION AND COMMUNICATION TECHNOLOGIES AS DEVELOPMENT TOOLS FOR AFRICA

One side of the debate on the implications of the new ICTs for development in Africa argues that entering these new spaces will depend on how connected, or plugged in, the region is. The region's ability to take advantage of the "information revolution" [14] will depend on how it engages with the high-tech world of information and communication technologies. Hence the push for the region to accord high priority to the acquisition of the new ICTs if it hopes to be part of what is approximating not only an empirical global village, but a planetary village.

These technologies include, at the basic level, the telephone, and, at the more advanced level, satellite communications. In between is the Internet, a technology developed in 1969 by the US military for the purposes of protecting strategic military information in the event of a nuclear attack. The Internet came into public usage in 1974, starting in the academy and spreading rapidly, to general usage in North America and Western Europe. While all the

information and communication technologies do feature in the debate on sub-Saharan Africa's entry into the global network society, many of the references to ICTs in this paper are specifically about the Internet and related hardware and software--telephone, computer, modem, access to the Internet itself, databases, and all aspects of the World Wide Web.

In many countries in the West, having an e-mail account to exchange data over the Internet has become very common, but even in the industrialized world, the new ICTs have not lost their novelty. As Michèle Martin writes, "The print media [in Canada] often tend to highlight the grandiloquent aspects of the project (massive job creation, mammoth investments, revolutionary home services, etc.) ..." [15]. Vincent Mosco also argues that "as is common with any new technological innovation, the current discourse surrounding the information highway tends to focus on the 'novelty' aspect of the project" [16].

The technology assumes an astronomical level of grandiloquence and novelty when discussed in the context of sub-Saharan Africa, a region that has the lowest telephone density in the world. By comparison, 99 per cent of the population in Canada have access to a telephone [17]. There are more telephone lines in Manhattan, New York than there are in all of Africa. But then, with the highest infant mortality rate in the world, sub-Saharan Africa can be forgiven if access to telephones is the least of its headaches. This attitude toward communication technology in Africa is being challenged in the current discourse by those who argue that it is important for the region to link up with the global network society. While the end-goals are not always well articulated, the idea is that when sub-Saharan Africa arrives at the cyber El Dorado, all other things will follow. This echoes the Biblical injunction to "[S]eek ye first the kingdom of God, and his righteousness, and all these things shall be added unto you." [18]. Therefore, all that sub-Saharan Africa needs to do is get connected first and worry about other things later. The central argument around the need for this is based on two major premises. Much of the debate on the new technologies is rooted in the first premise, which focuses on the new ICTs as means to economic growth in other sectors of national economies. The second, and less articulated, is an analysis of ICTs as ends in themselves, as revenue earners.

As means or avenues to economic development, ICTs present sub-Saharan Africa with an opportunity to participate in the production of knowledge about Africa and about the world. This argument resonates with the "knowledge is power" rhetoric. It also echoes the exposure and diffusion theories of development communication. Accordingly, if African countries have control of and access to knowledge, they will be in a stronger position to compete with the rest of the world. Through access to information about events and issues in the "outside world," the region will be exposed to "industrial values" that will motivate people to change by transforming their attitudes. Viewed from this perspective, information plays the dual role of empowering and transforming.

Also, the new ICTs can be the means to development because access to information and data in other parts of the world will lead to the creation of an African scientific community. This community will then produce knowledge about the continent and make the knowledge available to the rest of the world, while also appropriating useful knowledge from other parts of the world.

The need to be producers of knowledge harks back to the 1970s debate on a new information world order. The South was rejecting the unidirectional flow of information from

the North, which distorted information and knowledge about the South. The new ICTs provide an opportunity to reverse the trend. This is a highly contested claim. In the first place, the technology still comes from the North in the language of the North, and is financed, in large part, by aid or investment funds from the North. The US, for instance, in 1997, promised to spend $15 million on a project to get Africa connected. Already six countries have been linked to the Internet with this assistance.

The link is tenuous, but it is expected that by bringing the continent in to the information age, economic development will be stimulated. In the global economy, the argument goes, information and communication technologies are vital variables in the growth process. Olivier Coeur De Roy (1997) stresses the need for information in the development process in Africa, referring to it as a first and necessary objective:

"these technological developments in networking and communication infrastructure are not a luxury-they are a priority for Africa as they comprise considerable and tangible stakes: stakes of power, because nowadays being on the information highway gives power, economic stakes because of the huge investments involved with new information technologies; technological stakes in the choices being made over infrastructure and methods of connection in Africa; and stakes in the research sector to develop the new information technologies according to the priorities, needs and expectations of the African continent" [19].

The assumption here is that the problem of African underdevelopment is tied to lack of access to information. The Internet provides a window to the world in cheaper and more accessible ways than ever before. The cost-and-accessibility aspect of this argument is highly disputable. For example Internet access in Zimbabwe (the country with the third highest number of Internet users in Africa) costs US$300--the equivalent of the minimum annual income for an average worker in the country [20]. This does not include the cost of acquiring the basic phone line or the hardware and software required to access the Internet.

It is indisputable that access to information facilitates research in a variety of sectors. For education, ICTs allow both students and educators to access databases and libraries worldwide, including full-text academic journals and textbooks. Through telemedicine connections, medical practitioners in sub-Saharan African countries can access information and consult with specialists . Information on pest control and seeds can also help local farmers achieve bumper harvests. The greatest beneficiaries of the new ICTs, of course are , entrepreneurs who reap the optimal benefits of the new technologies by increasing their productivity with the help of time and laborsaving communication and information devices. Business, and especially financial speculators and stock traders, can access on-the-spot information in real time that enables them to make profit-maximizing decisions.

There are many other specific examples that highlight the importance of the Internet and other new ICTs in everyday life in Sub-Saharan Africa. In an article which first appeared in the Nov. 25, 1995 issue of the Dutch weekly *Vrij Nederland*, Michiel Hegener quotes research staff with the Association of African Universities in Accra, Ghana as saying:

"...Yesterday, I received a postal query from a lady in Nigeria. She sent it four months ago! The postal services in Africa are extremely slow, the delays are endless, and many letters never even reach their destination. Whenever I'm outside Africa and I see the Internet working--as at a recent conference of the Internet Society in Hawaii--I know that this is what we need! It's as

clear as day. For education in Africa, you need the Internet--it'll give you all the information you can possibly desire" [21].

Nat Tanoh, adviser to Ghana's minister of communications, sums up the views expressed by many Africans about the Internet: "There is an absolute need for us to lay our hands on state-of-the-art technology that will allow us to do a bit of catch-up . . . with the developed world" [22]. Tanoh was interviewed during an Information Society and Development Conference attended by representatives of 39 developing countries in Midrand, South Africa, in May 1996. The conference was aimed at "exploring how to bring the developing world into what has been dubbed the global information society." At that forum, South African Deputy President (now President) Thabo Mbeki remarked that:

"The continuing growth of the Global Information Society, as it is being termed, will have profound implications for African countries. Some fear that it will only accelerate the marginalizaton of Africa, as the pace of growth accelerates even more and the gap between those who are linked up and those who are not grows larger. Africa's disadvantage is a function of its underdevelopment in general, and of the low density of telephone connections in Sub-Saharan Africa" [23].

From the need to facilitate personal communication in the face of bad roads and poor postal services to the need to access information for research, the new ICTs are considered to be the tools that will enable sub-Saharan Africa to get connected, both literally and metaphorically, with the rest of the world. But within the countries themselves, ICTs have the potential to generate growth in the high-tech sector. Like the Industrial Revolution, the explosion of information and communication technologies has created employment oppurtunities and increased productivity in industrialized countries. Much of the sectoral growth in Western economies has occurred in the high-tech industry. As someone puts it, "revenue from information technology could be larger than life in the next few years" [24]. This assertion might be exaggerated, but, stripped of the hyperbole, it nonetheless stresses the need for sub-Saharan Africa to purposefully engage with the global network society by taking advantage of these new ICTs.

THEORETICAL ASSUMPTIONS ABOUT THE ROLE OF COMMUNICATION IN DEVELOPMENT

The debate on the central role of information or communication in the development process in Third World countries dates back to the modernization discourse of the 1950s and 1960s. The original theory that linked communication with development revolved around assumptions that exposure (exposure theory of communication) to "modern" values through the mass media would transform behavior and attitudes and in the process create a political and economic actors who would sow the "right seed, use credit efficiently, voice political views and demands through the appropriate channels, and organize the institutions needed to push traditional societies over the threshold of modernity and into the twentieth century" [25]. The actor's modern attitudes and influence would diffuse to the rest of the traditional society through the media which would adopt "modern" attitudes about savings that would in turn usher in economic development (diffusion theory of communication). "Classical and

neoclassical economic thinkers saw communication as a necessary factor for economic development and growth" [26].

Also arguing from this perspective, Daniel Lerner wrote in 1958 that communication changes attitudes by transforming "traditional" people into modern; and Lucian Pye (1963) added that communication was a prerequisite for development because "it can destroy traditional societies" [27]. Presumably, the problem of underdevelopment is traditionalism.

Alex Inkeles and R.H. Smith in their famous work, *Becoming Modern* (1963), enthused about the role of the mass media in effecting modernization. The media, they argued, were the inculcators of individual modernization. The theories that linked communication with economic (and political) development were primarily based on two major assumptions. First, it was assumed that there was a correlation between underdevelopment and the lack of information technology. That is, one could tell the difference between a developed and an underdeveloped country by simply looking at the number of western-type ICT gadgets that each country had. Local means of communication, such as the use of the gong man for public announcements, or the marketplace as a forum for exchange of information and views did not count [28]. To prove the point, Stover (1984) presented a statistical analysis of the penetration of mass media gadgets in countries and their levels of economic growth [29]. He concluded that "poor countries have fewer means of communication than rich ones, and the lack of information correlates with a low level of development" [30].

Stover does not critically analyze his data to explain the causality between the level of development and the presence of mass media gadgets. That is, he fails to explain whether some countries have many communication gadgets because they are developed and can afford them, or whether they developed because they had communication gadgets prior to achieving development which he implicitly conceives as a static plateau that industrialized countries have reached. He also leaves unexamined the assumption that poor countries are poor because they do not utilize communication gadgets in their development strategies. This line of argument was so prevalent in the 1950s that UNESCO established a threshold of access to media of communication. For a country to seriously begin the process of development, the UN agency suggested, it had to "provide ten newspaper copies, five radio receivers and two sets of cinema seats for every 100 inhabitants" [31]. It did not matter if the "100 inhabitants" could read, or if the community had electricity.

Exposure to these media was expected to automatically enable people in "traditional society (to) ... gain new skills and attitudes" that would usher them into the dawn of a modern (western) era of development. This thinking is replicated in the current discourse on new ICTs despite the fact that the development theory of communication, just as many classical modernization theories, has since proved unable to explain underdevelopment in sub-Saharan Africa. For instance, the UNDP is now at the forefront of projects aimed toward getting Africa "connected." In 1992, the agency initiated the Sustainable Development Networking Program (SDNP) with 12 countries in Africa, Asia, and Latin America. "The program emphasizes the importance of sharing information at all levels of society in developing countries. Access to information sources by decision makers and by different members of society is the essential element in understanding and furthering the concept of sustainable development" [32].

Other facilitators of African communication networks include the World Bank (All in One) and the US Agency for International Development, which in 1997 set aside $15 million to fund the Leland Initiative, a program that aims at getting some African countries hooked up. Private transnational communication corporations, such as AT & T, are considering the business opportunities that Africa offers.

John Fleming, writing in the *Christian Science Monitor*, sums up the interest of the UNDP and other development agencies in giving Africa Internet handouts: "The message of all institutions and other organizations involved in development programs emphasizes the urgency of providing Africa with ways to enter and participate in the world economy, where information and communication technologies are a factor of economic development" [33]. This statement sounds eerily familiar. In 1964, Wilbur Schramm argued that "it was the duty of advanced countries ... to provide communication expertise, hardware, and software to less developed countries, thus stimulating their quest for modernization" [34]. More than 30 years later, the western scholarly community is still pondering underdevelopment in Africa. Obviously, radio and television sets did not succeed in transforming the continent into an industrial society. If previous efforts by aid agencies and donor countries to provide access to now traditional media outlets (such as radios) to Africans did not work, the current optimism on the miracle-working powers of the new ICTs seems eminently utopian.

A related assumption about the linkage between communication and development is that communication can facilitate change in less developed countries. And in contemporary development discourse, "information technology can help organize a development project, letting *primitive* [italics added] villagers know that shovels exist, can be ordered, delivered, and used to accomplish the goal of obtaining ground water to increase agricultural production" [35]. This statement presupposes that the primitive villagers have access to telephone lines and computers with modems -- all necessary items before they can place an online order for a shovel. It also assumes that they are all literate in the mainstream language of the new ICT-- English. Why, then, are they still "primitive?"

While the earlier assumptions about the potential of communication to assist in the development implied transformation from one level to another, there was also concern that communication could be used to maintain the status quo. This was a critique that emerged in the 1970s, mainly from neo-Marxist perspectives. The argument was that western communication tools might actually help in not only perpetuating the gap between Africa and the rest of the world, but also widen the domestic income gap. This point was clearly rooted in the emergence of military and authoritarian regimes in 1960s Africa and the use of the media by these regimes as propaganda tools. The concern about the perpetuation of inequality through communication is even more acute now because the development of new ICTs is creating another level of disparity--that between the information haves and information have-nots [36].

A glimpse at the distribution in the use of the Internet indicates the new power structure that is emerging in the world. About 41 million of the 68 million Internet users in 1997 were based in the US, with 68 percent of all Internet servers based in the US [37] Meanwhile, the whole of Africa accounts for less than one percent of Internet activity in the world [38].

Within Saharan African countries, the gap between those who have access to the new ICTs and those who do not also widens. With a teledensity of one telephone per 1,000, slightly higher

in South Africa and Ghana (3:1000), clearly the new ICTs will be accessed by the very wealthy, a factor that will invariably maintain the status quo in areas of inequality and distributive justice. It is hard to imagine that the elite in urban areas who have access to ICTs would be willing to share the "gains" accrued from their access to electronic knowledge and information, unless it serves their interest in maintaining the power structure. Getting the general population connected to the Internet is a more arduous task than providing everyone with access to basic needs. And 40 years after many sub-Saharan African countries gained political independence from their colonial masters, that task has not even begun.

Ironically, while focus on the external pervades discourse about the new ICTs, the top fifteen obstacles to economic growth in Africa in 1997, as published in the *Africa Economic Report*, were all internal. The report listed corruption at the top, with terrorism at the bottom. An "inadequate supply of infrastructure" placed third. While one may read new ICTs into "infrastructure," there is no indication in the report that lack of access to the new ICTs was a factor in the slow economic growth recorded for the continent in 1997. "Thus one can safely conclude that high priority must be given to eliminating corruption and regulating taxes in all African countries, in order to help businesses flourish" [40]. Admittedly, one could insist that the countries performed as poorly as they did because they did not pay adequate attention to the role of communication in the development process.

AN OLD DILEMMA EMERGES IN A NEW FORM

It could be argued that increased activity in the information and communication high-tech sector will result in economic growth that will eventually trickle down to the masses. Through taxes and high levels of employment leading to increased savings and investment of foreign and local capital, new ICTs will generate revenue that would accrue to national governments. But this raises some pertinent questions. First, has the income gap between the poor and rich in industrialized societies diminished as a result of growth in the high-tech sector? One may argue empirically that Western societies attained their levels of economic growth because of their use of communication and information technologies--both old and new. Secondly, and more relevant to the allocation of scare resources, should African governments give priority to this sector and hope high-tech wealth will trickle down and benefit all, or, should they focus on projects that more directly affect the majority of their populations? These questions are not new; they were asked during the oil boom era, when oil-producing countries in Africa (for example, Nigeria) gave priority to grandiose projects in their strategies for development. Peter Enahoro, a Nigerian journalist and political analyst, had this to say about the dilemma then which vividly mirrors the current dilemma:

"We now have some of the best roads in the world, but it is questionable whether the money we spent building new expressways should have been used that way.... Nigeria imports millions of dollars worth of rice, yet we are a tropical country and could grow our own food. On the other hand, if we had not built highways, someone would say, they have magnificent mechanized farms but they cannot transport their produce.... So there is a debate over whether we have chosen the proper priorities" [41].

Enahoro made this statement in 1982, shortly before the oil crash, when the effect of the debt crisis began to hit home. Interestingly, those expressways that were some of the best in the world are now some of the worst. And the country does not have the mechanized farms either and can now hardly afford to import rice. Although times have changed, the dilemma expressed by Enahoro seventeen years ago still applies as many sub-Saharan African countries engage in the debate over local needs, on the one hand, and getting plugged in on the other. Stover attempts to resolve the dilemma by arguing that "communication is essential." For him, a cause of underdevelopment is the inability of rural people to "communicate their needs effectively" and in so doing become part of the development process. But does giving them e-mail accounts help, when the only account they have is with the local money lender?

Even if sub-Saharan African countries do succeed in getting connected to the global network society, they still confront many infrastructural obstacles. According to Jegede:

"[T]hree quarters of [the] African population is illiterate (so hooking them to the Internet is out of the question); three quarters of Africa is rural without basic facilities of electricity and telephone (so hooking up to the Internet can only be restricted to the urban areas); three quarters of universities in Africa have depleted library resources, have overworked academics and run computer science departments without computers ... And there are currently 200 million personal computers world-wide but less than one percentage of them are located in Africa" [42].

Besides, argues Jegede, even if everyone in Africa was electronically connected, this would not necessarily develop Africa. In fact, it would divert attention from other problems of development [43]. "Most Africans are concerned about having enough to eat and worry little about choosing the best Internet service provider. The digital revolution has indeed opened the vast world of Internet information to Africa, but only to the rich and privileged. Ironically, this availability actually widens the already huge gulf between the rich and the poor" [44].

FEEDING THE POPULATION FIRST; HOOKING THEM UP LATER

The optimism about the new ICTs may be misplaced. Scarce funds should be applied to development projects that actually tackle the enormous poverty that exists among African populations. About 80 per cent of African populations, many of whom have never used or seen a telephone, do not need to be part of a global network society. They do need clothes to wear, roofs over their heads, and food to eat.

In obvious response to the failure of mainstream theories of economic growth, development theorists are returning to the theoretical drawing table. Indices of growth were incorrectly anchored on macro-economic indicators that had nothing to do with how ordinary people lived. If one must insist on the linkage between development and communication, then the emphasis should be on how to use communication tools to get people to actively participate in the development process, in what John Brohman (1996) refers to as the popular development model [45].

In this vein, Stover proposes a new concept of participatory developmental communication that integrates the social, political and economic aspects of development. It is characterized by a two-way flow of information "where information is shared rather than simply disseminated

from the top downward. It must also be horizontal in nature, where relative equals exchange messages and link themselves together, and it must be decentralized so that villages and rural areas can participate." He then goes on to define participatory, developmental communication as "a process that involves understanding the audience and its needs ... planning around democratically selected strategies,' producing, disseminating, and receiving messages, encouraging interpersonal discussions with peers, and feedback" [47].

This is a definition designed for a global network society. Nevertheless, we can still see some new spaces opening up for the type of development strategies that straddle the need to go global and the need to stay local. Perhaps the new ICTs can help, as the old media were expected to, in changing the mindset of African peoples so they can move away from a conceptualization of development and modernity as being synonymous with macro-economic indicators and westernization. There is nothing wrong with "becoming modern", but tastes must match locally available resources. Otherwise, sub-Saharan Africa will never break away from the disempowering relationship of dependence that currently ties the region to the apron strings of industrialized countries.

If development is conceived of as "the fulfillment of the necessary conditions for the realization of the potential of human personality, which translates into reductions in poverty, inequality and unemployment, (and as)--the increasing satisfaction of the basic needs such as food," then African governments need to get down to the real business of development--addressing the basic needs of the people[48]. While the new ICTs should not be completely ignored, there should be greater emphasis on the development of appropriate technology and integration of imported technology in local ways of doing things. This departs from the mainstream development strategies that focused on "top-down diffusion of development impulses" [49]. In this new strategy, priority is given to "employment creation and basic-needs provisions, rather than economic growth per se" [50]. The assumption here is that a "healthy" GNP is meaningless if the most vulnerable of the population lack access to basic health care.

On the other hand, the region can not afford to be left out of this information revolution. As Hamid Mowlana (1997) points out,

"A new power structure is emerging based on information, data, and knowledge and leaving behind it leveling effects on traditional and existing social strata. Many decisions affecting the global sociocultural environment are now largely occurring outside local and even national political and economic systems. Not only are communication networks as cultural ecology affecting the sociocultural environment, but information and cultural relations are becoming ever more central to the conduct of international and global systems" [51].

To navigate its way from the margins to the center of human progress, sub-Saharan Africa needs to actively engage with the "outside world," politically, economically and socially, but it must do so on its own terms. Underdevelopment in Africa has shown that, there is no empirical causal relationship between development and communication. Rather than pump scarce resources into more white-elephant projects that meet the needs of a fraction of the population, governments should turn to the private sector. Leaving this new technology in the hands of the private sector has its own drawbacks, but for now, this should not be a major concern, as long as it frees up public funds for spending in areas that meet the needs of the greatest number of people. Already, private businesses, donor countries, and international nongovernmental

organizations are getting actively involved in the process of getting Africa connected to the global network society.

Governments' only role should be the creation of an enabling environment to facilitate the production of local communication infrastructure, software and basic equipment. The goal should be self-reliance, rather than dependency on industrialized and donor countries. The region must meet its basic needs and rely less on external linkages. This is a paradox in an era when the boundaries between the domestic and international are becoming increasingly blurred. But globalization should not be another excuse for sub-Saharan Africa to continue to lag behind the rest of the world. The region must negotiate the terms of its engagement with the global network society in ways that benefit its populations. Sub-Saharan Africa cannot successfully go global until it has met its local obligations.

Conclusion

Classical theories that link communication with development structure the current discourse on the place of sub-Saharan Africa in the global network society. Communication by itself does not lead to development, but should communication and development become fused as Hamid Mowlana suggests, it should not detract attention from what really matters: access to basic needs [52].

It is in Africa's interest to formulate national policies that will promote the allocation, integration and development of the ICTs in locally appropriate ways. It is hoped that in the near future satellite communications will eliminate the need for telephones in accessing the Internet and thus open up access to the global network society to a greater percentage of the population. This optimism, however, overlooks one crucial factor: the high illiteracy rate in many African countries. Introducing software in local languages does not eliminate illiteracy as an obstacle because a minimum threshold of literacy is needed in order to make meaningful use of the new ICTs. As a policy prescription, therefore, African states should invest heavily in education, and the infrastructure required for ICTs. A systematic focus on development-oriented education and the provision of basic technological infrastructure will diffuse to other spheres of the society and thus spur development. This will in turn facilitate entry into the global network society.

Africa first needs to define development for itself in order to determine how the new ICTs can assist in that project. In the end, Nigeria's Obasanjo may have found the right balance. Technology is of no use to Africans, unless it can enable them to meet their basic needs.

Notes

1. Chiahemen, John, "Earthy image dogs Nigeria's Obasanjo," Reuters, Feb. 26, 1999.
2. Ibid.
3. Achebo, Nubi, in a posting sent to Naijanet@esosoft.com, Feb. 27, 1999.
4. Jegede, 1995, cited in Obijiofor, Levi and Abraham Ninan, "New Information and Communication Technologies (ICTs) and Socio-Economic Development: A Pilot Study of Africa."

5. De Roy, Olivier Coeur, "The African Challenge: Internet, networking and connectivity activities in a developing environment." *Third World Quarterly*, 1997 Special Issue, Vol. 18 Issue 5, p883-1000.

6. "Crossing Borders: Area Studies and the New Geographies," Institute of International Studies, UC Berkeley (funded by the Ford Foundation). http://www.undp.org/sdnp/aif/isocprop

7. Definitions taken from the 1999 World Book, an IBM-computer-bundled (CD-Rom) software.

8. Held, David and Anthony McGrew, "Globalization and the Liberal Democratic State," in *Global Transformation: Challenges to the State System*, Yoshikazu Sakamoto, Editor. 1994.

9. Ibid., p. 64.

10. Kasmir, Ron, "The internationalization of African Studies: A view from the SSRC," in *Africa Today*, Apr-Jun 97, Vol. 44 Issue 2, p155-63.

11. Ibid.

12. Holsti, Kal J., *The Dividing Discipline: Hegemony and Diversity in International Theory*. 1985, Boston: Allen and Unwin.

13. Kasmir, Ron, "The Internationalization of African Studies: A view from the SSRC," in *Africa Today*, Apr-Jun 97, Vol. 44 Issue 2, p155-63.

14. Robert Keohane and Joseph Nye, "Power and Interdependence Revisited," in *International Organization*, 41, pp.725-53.

15. Martin, Michèle with contributions by Graham Knight, *Communication and Mass Media: Culture, Domination and Opposition*. 1980, Scarborough, Ontario: Prentice Hall Allyn and Bacon Canada. p. 271.

16. Ibid., p.272.

17. Ibid.

18. Matt. 6: 33, King James Version of the Bible.

19. De Roy, p. 883-2000.

20. Dickinson, Garth, "The Internet Comes to Africa," *Canadian Medical Association Journal*, Feb. 2, 1999, Vol. 160 Issue 3, p382.

21. Posted at http://www.toolnet.org/hege

22. Fleming, John, "Poor nations leapfrog to a future via new technologies," in *Christian Science Monitor*, May, 22, 1996, Vol. 88 Issue 124, p1.

23. Ibid.

24. See fn. 3.

25. Mowlana, Hamid, *Global Information and World Communication*, 2nd ed. 1997, Sage Publications. p. 188.

26. Ibid., p.189

27. Pye, Lucian W., ed. *Communications and Political Development*. 1963, Princeton, New Jersey: Princeton University Press.

28. The gong man in many African societies is the Western equivalent of the news person. He (always male) "broadcasts" news and information by going around the community early in the morning or in the evening, with his wooden gong. He beats on the gong to draw attention, then makes his announcement, beats on the gong again to conclude the

message, and moves on to the next section of the community. The gong man is generally a member of the community governing council and his announcements are mostly official (public service), but personal notices such as weddings and funerals are not excluded.

29. Stover, William James, *Information Technology in the Third World: Can I.T. Lead to Humane National Development?* 1984, Boulder, Colorado: Westview Press/A Westview Replica Edition.
30. Ibid., p. 8.
31. UNESCO research paper no. 9., 1955.
32. Dickinson, Garth, "The Internet comes to Africa." *Canadian Medical Association Journal*, Feb. 9, 1999, Vol. 160, p. 382.
33. Fleming, John, "Poor nations leapfrog to future via new technologies." *Christian Science Monitor*, May 22, 1996, Vol. 88 Issue 124, p1.
34. Paraphrased in Stover, p. 9.
35. Stover, p. 7.
36. Akpan, Patience Idaraesit, "Newspapers Through the Window: Creation of the Online Newspaper," an unpublished Master's Research Project. 1996, Carleton University.
37. Sens, Allen and Peter Stoett, *Global Politics: Origins, Currents, Directions*. 1998, Scarborough, Ontario: ITP Nelson. p. 470.
38. Dickinson, p. 382.
39. Ibid.
40. *Africa Economic Report*, 1998: 24, posted at: http://www.afbis.com/analysis/eca%20report
41. Quoted in Stover, p. 21.
42. Jegede, 1995: 221, quoted in Obijiofor, Levi and Abraham Ninan, "New Information and Communication Technologies (ICTs) and Socio-Economic Development: A Pilot Study of Africa." 1998.
43. Ibid.
44. Dickinson, p. 382.
45. Brohman, John, *Popular Development: Rethinking the Theory & Practice of Development*. 1996, Malden, Massachusetts: Blackwell Publishers Ltd.
46. Stover, p. 12.
47. Ibid.
48. McLean, Iain, ed. *Oxford Concise Dictionary of Politics*. 1996, Oxford & New York: Oxford University Press. p. 138.
49. Brohman, 1996, p. 201.
50. Ibid., 204.
51. Mowlana, 1997, p. 204.
52. Ibid. p. 196.

References

Africa Economic Report, 1998. http://www.afbis.com/analysis/eca%20report

Akpan, Patience Idaraesit, "Newspapers Through the Window: Creation of the Online Newspaper," an unpublished Master's Research Project, Carleton University, 1996.

"Bringing the Internet to the Developing World." *American Libraries*, Sept. 98, Vol. 29 Issue 8, p55-58.

Brohman, John, *Popular Development: Rethinking the Theory & Practice of Development*. (Malden, Massachusetts: Blackwell Publishers Ltd., 1996).

"Crossing Borders: Area Studies and the New Geographies," Institute of International Studies, UC Berkeley (Funded by the Ford Foundation.) http://www.undp.org/sdnp/aif/isocprop

Cyamukungu , Matthias, "Development Strategies for an African Computer Network." *Information Technology for Development*, Oct. 1996, Vol. 7 Issue 2, p.91-95.

De Roy, Olivier Coeur, "The African Challenge: Internet, Networking and Connectivity Activities in a Developing Environment." *Third World Quarterly*, 1997 Special Issue, Vol. 18 Issue 5, p883-1000.

Dickinson, Garth, "The Internet Comes to Africa." *Canadian Medical Association Journal*, Feb. 9, 1999, Vol. 160, p.382.

Fleming, John, "Poor Nations Leapfrog to Future via New Technologies." *Christian Science Monitor*, May 22, 1996, Vol. 88 Issue 124, p1.

Hegener, Michiel, "Telecommunications in Africa - - via the Internet in Particular." Available at: http://www.toolnet.org/hege

Kassimir, Ron, "The Internationalization of African Studies: " View from the SSRC." *Africa Today*, Apr-Jun 97, Vol. 44 Issue 2, p.155-63.

Lishan, Adam, "Brief communication: Content and the Web for African development." *Journal of Information Science*, Vol. 23, Issue 1, p.91-97.

Martin, Michèle with contributions by Graham Knight, *Communication and Mass Media: Culture, Domination and Opposition*. (Scarborough, Ontario: Prentice Hall Allyn and Bacon Canada).

McAnany, Emile G., ed. Communications in the Rural Third World: The Role of Information in Development. (Praeger Publications, 1980).

McLean, Iain, ed. *Oxford Concise Dictionary of Politics* (Oxford & New York: Oxford University Press, 1996.

Mowlana, Hamid, *Global Information and World Communication*, 2nd. (Sage Publications, 1997)

Obijiofor, Levi and Abraham Ninan, "New Information and Communication Technologies (ICTs) and Socio-Economic Development: Pilot Study of Africa." (Upcoming publication).

Pye, Lucian W., ed., *Communications and Political Development*. (Princeton, New Jersey: Princeton University Press, 1963).

Sens, Allen and Peter Stoett, *Global Politics: Origins, Currents, Directions*. (Scarborough, Ontario: ITP Nelson, 1998).

Stover, William James, *Information Technology in the Third World: Can I.T. Lead to Humane National Development?* (Boulder, Colorado: Westview Press/A Westview Replica Edition, 1984)

Wilhelm, Donald, *Global Communications and Political Power*. (Transaction Publishers, 1990).