The Rhetoric of M4D

ARTICLE · MAY 2014

1 AUTHOR:

Gado Alzouma

American University of Nigeria

26 PUBLICATIONS   **17** CITATIONS

The Rhetoric of Mobile Communication for Development (M4D): A Critical Analysis

Gado Alzouma

ABSTRACT

Increasing access to mobile phones in Africa has sparked a reformulation of the ICT and development discourse. In previous decades, abundant literature has argued that access to computers and the Internet will make leapfrogging development possible; today, scholars' attention is shifting away from those devices to focus instead on the potential of the mobile phone for development. A new rhetoric centered on mobile communication for development (M4D) and building on the old premises is now emerging. Its core ideas are: a) the adoption of the mobile phone is unique in the history of technology in Africa; b) the mobile phone has an all-encompassing character; c) the mobile phone has a leveling effect; d) mobile leapfrogging is possible. The purpose of this paper is to identify and critically assess the underlying assumptions and a priori *conclusions that form the fabric of this rhetoric constructed around those four pervasive and repetitive themes in the literature devoted to ICTs for development. I argue that this rhetoric obscures social inequalities by overemphasizing mobile phones' physical availability and the technological side of development at the expense of many other conditions that should be met for technology use to have an effect on social development.*

Key Words:
ICTs; Development; Mobile phone; Africa; Social inequalities

INTRODUCTION

For the past two decades, extensive literature—primarily in the form of evaluation reports and increasingly in the form of social and scientific research—has been devoted to information and communication technologies for development (ICT4D) in Africa. The main assumption underlying this research is that computers and the Internet, as well as mobile phones in particular, have the ability to promote economic and social development in Africa and hasten the continent's entry into the so-called "information age". Hundreds of programs and projects focusing on these technologies are currently underway in Africa. Annual symposia, conferences, seminars, and international meetings of all kinds are devoted to these technical objects and their effects on improving the population's liv-

Gado Alzouma is Associate Professor of Anthropology at the University of Nigeria. Email: alzouma@aun.edu.ng

ing conditions. Some of the recent efforts include the 5th Annual International Conference on ICT for Africa (ICT4Africa.org), held in Harare, Zimbabwe, on March, 20–23, 2013 as well as the upcoming 4th International Conference on Mobile Communication for Development (M4D), to be held in Dakar, Senegal, on April 8–9, 2014 (http://m4d2014.net/), and the IST-Africa 2014 Conference, held in Mauritius on May 6–9, 2014 (http://www.ist-africa.org/). Numerous other efforts, focused on particular aspects of ICTs and development, such as the eLearning Africa annual conferences for the education sector (http://www.elearning-africa.com/) or the eHealth and MHealth Africa conferences (http://www.mhealthafrica.com/) devoted to the potential of mobile phones for health and development, are also held every year. In addition, international corporations specializing in ICT-related services, such as Facebook, Microsoft, and Google, are all engaged in efforts geared toward promoting ICTs for economic and social development and hastening the entry of Africa into the information society. It is from this perspective that Mark Zuckerberg, founder of the social networking service Facebook, recently published a manifesto calling for the consideration of connectivity (including mobile internet) as a universal right (Zuckerberg, 2013). According to Zuckerberg, "only" 2.7 billion people in the world are connected; through Facebook, he aims to connect the other 5 billion people. Similarly, Google recently initiated what it calls Project Link to develop and extend a fiber-optic infrastructure in Africa in order to facilitate broadband access, one of the most important obstacles to connectivity in Africa (Google, 2013). In addition Microsoft, present in Africa since 1992, has initiated Microsoft 4Africa, which it presents as "a new effort through which the company will actively engage in Africa's economic development to improve its global competitiveness" (Microsoft, 2013). It should also be noted that long before Microsoft, Google, and Facebook launched these initiatives, international development organizations such as the World Bank, the International Development Research Center (IDRC), and USAID as well as United Nations' development agencies such as UNESCO and the United Nations Development Program (UNDP) have been promoting and piloting multiple programs and projects for development in Africa centered around mobile phones and other ICTs.

Similarly, in most African countries, interest groups have formed around communication professionals, educators, and businesses to promote ICTs at the national and continental levels. As Nshimbi says, in Africa, "civil society and non-governmental organizations have been mostly the promoters and the drivers of the use of ICTs in building participation through their various focal areas and interest groups, and have embraced these more than governments have" (2012: 19). These actors have enhanced the associated discourse in the media and among the international organizations, on the role ICTs are supposed to play in development and are working to promote the technological upgrading and integration of Africa into the globalized world. The idea is now widespread among African people—especially young people—that Africa will escape its long marginalization thanks to ICTs, especially mobile phones. All development actors, as well as intellectuals, journalists, politi-

cians, and civil society activists, are engaging in a discourse increasingly centered on the potential of the mobile phone for development whose tone is essentially "normative" (Hornidge, 2012: 403) and revolves around a number of recurring and pervasive themes, the most important ones being:

1. The "revolutionary" and somehow "historically unique" character of mobile phone adoption by Africans;
2. The all-encompassing character of the mobile phone;
3. The levelling effect of technology, especially mobile phones; and
4. The possibility of mobile leapfrogging.

The purpose of this paper is to identify and critically assess the underlying assumptions and *a priori* conclusions that form the fabric of this rhetoric such as it is constructed around identified themes. I argue that the current discourse on ICT4D/M4D is obscuring the inequalities that exist between users and the capacity for change that resides in people's hands by overemphasizing the technological side of development and the physical availability of mobile phones. This rhetoric tends to ignore the many other conditions that should be met for the use of technology to affect the well-being of people and the development of society.

FRAMEWORK AND METHODOLOGY

This study takes place within the structuralist–constructivist theory and method devised by Bourdieu, who, speaking about the objective structures that constitute the social world (classes and power relations between groups), stressed the fact, in order to study them, the social scientists also have to take into account "the representations" and what he calls "the schemes of perception and action" that guide their behaviors, "particularly if one wants to account for the daily struggles, individual or collective, which purport to transform or to preserve those structures" (Bourdieu, 1989: 15). This implies the need to correlate points of view and utterances to the positions occupied by agents in the social structure or the real, with the real being the set of relations between agents. In this perspective, not only is social reality an object of perception, but its definition (how it ought to be perceived by agents) is an object of struggle in which what is at stake is the imposition of a vision of the world. In this struggle, agents are endowed with different symbolic powers or different capacities to impose a vision of the world. Thus, some are in a position to impose "the scale of values most favorable to their products" (Bourdieu, 1989: 21), which amounts to imposing a legitimate symbolic violence or a worldview that comes to be accepted as legitimate, taken for granted, and unquestioned.

In this perspective, it can be said that the discourse on ICTs and development analyzed herein is a "performative" one in the sense that Bourdieu uses this concept –namely, a discourse– which calls into existence what it enunciates. It rests on "the diffusion of a new planetary vulgate" (Bourdieu and Wacquant, 2001: 2) – that is, a set of statements and utterances continuously repeated in the development literature, conferences, colloquia, and other instances. The objective of this vulgate is to impose a particular historical experience (i.e., the Western experience of development) as universal.

To counter this universalizing account, this study adopts a critical methodological position from which relations of symbolic power and language are examined. The study focuses in particular on some of the commonplaces "which the perpetual media repetition has gradually transformed into a universal common sense" (Bourdieu and Wacquant, 2001: 3). These commonplaces are those previously listed: the "revolutionary" and somehow "historically unique" character of mobile phone adoption by Africans; the all-encompassing character and the levelling effect of mobile phone; and the possibility of mobile leapfrogging. These are the themes that seem to reflect the core ideas of the entire discourse as well as the shared values and shared beliefs of development actors when it comes to ICTs. They are the result of a reformulation of the ICTs and development discourse that recently took place when the mobile phone came to the forefront of that discourse, replacing computers and the Internet as the central object-topic of discussion. The selection of these commonplaces (why they are emphasized and not others), like any selection, is of course subjective and somewhat arbitrary. The methodology used to proceed in this selection is as follows.

To identify which technological device currently occupies a central position in the ICTs and development discourse, I first listed computers, radio, satellite, the mobile phone, and television as those that appear the most in the literature. Using the ELDIS online platform (www.eldis.org), which contains a repository of thousands of documents devoted to all aspects of development, a cursory review of the literature under the heading or topic "ICTs for development" revealed 1280 related studies on December 10, 2013. Of these, 231 were devoted to the mobile phone in development as compared to 180 for computers, 69 for radio, 34 for television, and 9 for satellite. Therefore, based on what can be found in the ELDIS repository, the mobile phone alone currently constitutes almost 45% of the subjects of the studies in the literature devoted to ICTs and development. Of course this ascertainment is probably not absolutely accurate as it might be affected by studies dealing with two or more technologies at the same time, by technological convergence (for example, studies that deal with people who use the mobile phone to listen to the radio), etc.; however, in any case, the centrality and the pervasiveness of the mobile phone still remain.

As for an utterance being a commonplace, I tried to determine with which effects on development the mobile phone, for example, is associated or what (it is believed) can be done with the mobile

phone to foster development. For example, to come to the conclusion that the mobile phone has an all-encompassing character, I tried to determine the breadth and extent of the effects associated with the mobile phone, based on the topics of studies devoted to mobile communication for development. I thus discovered that the mobile phone is associated with a wide variety of effects. This technological device is said to be "an appropriate tool" for conservation and development, maternal health, election monitoring, poverty reduction, banking, mobile internet, platform for democratic debate, m-governance, learning (education), agricultural extension, the building of information services, women's entrepreneurship, disaster management, environmental resources management, m-business, knowledge sharing, microfinance, climate change adaptation, potable water provision, etc. As can be seen, with such a wide variety of benefits and effects on development attributed to the use of the mobile phone, it can be said that this technological device is believed to be endowed with an all-encompassing character. I proceeded the same way for all other utterances and commonplaces, coming to the same conclusion as some statements concerning the mobile phone being continuously repeated and appearing to be pervasive in the literature.

The paper is divided into three parts. In the first part, I challenge current assumptions on the historically unique character of mobile phone adoption by Africans as compared to other technologies. In the second part I question the all-encompassing character and the levelling effect of mobile phones. In the third and last part, I show what we are missing by overemphasizing the technological side of development.

THE REVOLUTIONARY AND UNIQUE CHARACTER OF MOBILE PHONE ADOPTION BY AFRICANS

According to some recent studies, more than 600 million Africans (a figure that corresponds to 60% of the current inhabitants of the continent) will have access to mobile phones by 2016 while this access stands at more than 500 million today (2013). In some countries, the subscription rate is already much higher than 100%, including 135% for Botswana with 2.65 million mobile subscribers in 2011 and 110% in South Africa for the same year (PricewaterhouseCoopers, 2012). In 2012 alone, Senegal added 2,144,818 new subscribers for a total population of 13 million, reaching a 94.24% subscription rate (Diaw, 2013). Constantly remembered and repeated in media articles, evaluation reports, scientific papers and international organizations' conferences and summits, such figures are presented as evidence that Africa has now entered the information society. Better yet, this seemingly unprecedented level of adoption of this technical object is presented as unique in the history of Africa. Many authors do not hesitate to say that no other technology has ever been so fast and so massively embraced by Africans. For example, Etzo and Collender write that "only superlatives

seem appropriate to describe the mobile phone 'revolution'—its impact and its potential—in Africa" (2010: 659). For their part, Rotberg and Aker, speaking about the same device, contended that "[n]othing is so powerful, so transformative… No other recently-introduced technology has been so widely embraced or has so much potential to alter rural and urban outcomes for the better in Africa, Asia, Latin America, and elsewhere" (2013: 111). For Michael Minges, "Mobile communication has arguably had a bigger impact on humankind in a shorter period of time than any other invention in human history" (2012: 11). The GIZ, quoting Johnson (2011) writes that the mobile phone is "changing Africa not only economically but also socially, uniting the continent in a way which no other technology has managed" (2011: 3). Similar affirmations are now pervasive in numerous journal articles, conference reports, and evaluation studies.

Do these statements withstand scrutiny or, like numerous other assertions made about Africa and perceived as obvious without further examination, is it possible to show that they are, at least partially, wrong? Indeed, many technologies exist that have been as widely adopted by Africans as mobile phones. We can even add that it is not possible to demonstrate that mobile phones have played a more important role in contributing to development than these other technologies. For example, in the case of the radio, Farm Radio International (2011) found that more than 76% of households in rural areas in five representative African countries surveyed own a radio. The figures are even higher in most other African countries. In Namibia in 2004, 88% of urban households and 70% of rural households possessed a radio while 72% of urban households and 15% of rural households had a TV set (Sherbourne and Stork, 2010). The Farm Radio International report indicated that 90% of males and 79% of females in Mali and 87% of males and 75% of females in Ghana have access to radio sets in their households. Similar figures can be found in most other African countries.

Therefore, as far as access is concerned, it could be said the rate of the mobile phone adoption is not unique in the history of Africa as other information and communication technologies have enjoyed similar levels of penetration in this continent. It might have taken longer for radio and television to be adopted at such a scale, but this probably has nothing to do with any special properties of mobile phones and more to do with economic and commercial reasons (channels of distribution of the product, consumers' purchasing power, policy regulations, etc.). The same could be said about many other technologies. For example today in Niger, in all rural villages, cheap electric bulbs, electric lamps, and lights of all shapes and sorts, made in China and powered by batteries or solar energy abound everywhere. Also, one just has to think about gadgets such as the portable flashlight (especially in African rural areas, where nobody ventures outside at night without it) or the electronic calculator widely used by African merchants, sellers, and shopkeepers, etc., to see that the claim that the level of adoption of the mobile phone is somehow extraordinary or unprecedented is an overstatement.

ICTs AND MOBILE PHONES AS ALL-ENCOMPASSING TECHNOLOGIES

Most technological objects have only one use or are fairly specialized to a small number of uses. The history of technology has always obeyed this progressive specialization, and such objects' evolution has always been viewed in terms of their diversification and specialization. However, ICTs are probably one of the few technologies whose effects, according to the rhetoric of ICT4D, cover "all aspects of economic, social and political activity" (AISI, 2003). Thus, development projects focusing on ICTs have been created in almost every field imaginable.

For example, the field of education includes not only virtual universities in Africa, but also mobile phone-based adult education programs (Aker, Ksoll, and Lybbert, 2011) in which rural farmers learn literacy and numeracy using mobile phones as well as the One Laptop Per Child project (http://one. laptop.org/about/faq), whose goal is to promote education through the use of affordable laptops by children in poor countries. In the field of health or e-health, apart from the now well-known field of telemedicine, a growing field is that of m-health, or projects that focus on improving health through the use of mobile phones. The field of agriculture includes e-agriculture, whose purpose is to improve the production and development of agriculture through the use of information and communication technologies, such as by helping poor farmers sell their agricultural products at markets and/or by identifying and disseminating information about their activities. Meanwhile, e-banking is often presented as the area where the use of ICTs has had the most spectacular results, particularly with regard to the use of mobile phones to make purchases or transfer money between users. E-banking, now well developed in countries such as Kenya and Uganda, is rapidly spreading throughout Africa and is hailed as the one sector where Africa is ahead of countries such as the United States and Germany. Meanwhile, e-governance aims to help improve the performance and efficiency of African governments and promote good governance on the continent. Finally, numerous projects that do not have a recognizable name make use of ICTs to help elderly or disabled persons, fight climate change, provide support during natural and humanitarian disasters, address gender discrimination, or support fish markets. All these innovations undoubtedly have their usefulness or have proved useful in a given time. That is why, when the ICT4D/M4D rhetoric is criticized, we hear some people say: "Yes, we need solutions for malaria ; we need better teacher training (better pay) and better schools. Yes, we need that children have access to computers earlier and better internet connectivity across the continent. Everyone can explore one of these two tracks without burdening those who choose the other" (Pisani, 2013: translation by the author). However, the choice is not between one or the other. We do not need to abandon one for the other, but to recognize that without one, the other would not be possible. Without literacy and education, the benefit to be derived from the use of the mobile phone or the Internet is less. What is at stake is the relationship between technology

and education. In other words, the condition for the efficient use of technology is education. Extolling the introduction of technology in an environment without education is like putting the cart before the horse. Yet, the all-through-ICTs mindset tends to make us believe that no development project can be successful without the use of ICTs or that ICTs are the magic key to development problems of any kind because of their ubiquity or all-encompassing character.

This idea is supposed to find its justification in the peculiar characteristics of ICTs which, we are made to believe, are like no other technologies. According to Zuckerberg, if universal connectivity is important, it is because "[t]he internet not only connects us to our friends, families and communities, but it is also the foundation of the global knowledge economy" (2013: 2). The nature of that economy is believed to be different from any other one we knew before. It is believed to have its own dynamics and in these dynamics, ICTs occupy the central place. Therefore, according to Zuckerberg, a uni-versal connectivity is not only a need, it is a necessity, an inevitable process of adaptation rooted in the technological sphere through which we have to go: "[g]iving everyone the opportunity to connect is the foundation for enabling the knowledge economy. It is not the only thing we need to do, but it's a fundamental and necessary step" (Zuckerberg, 2013: 3). Much like Castells (2000), Zuckerberg thinks that the main feature of information and communication technologies is not only the overall character of their expansion, but also the fact that the processes associated with these technologies inescapably shape all sectors of the economy and society. Therefore, any resistance to the changes underway would be futile; rather, we must resolve to adapt or perish.

As can be seen, this language borders on historical fatalism that makes men toy with a fate over which they have no control. Bourdieu and Wacquant suggest that the function of such rhetoric, "is to dress up the effects of American imperialism in the trappings of cultural oecumenicism or economic fatalism and to make a transnational relation of economic power appear like a natural necessity" (2001: 4). Yet far from being a new era or a new phase of advanced capitalism, the information age appears to us as mostly a rhetoric centered around technical objects that are no more revolutionary or transformative than other inventions (such as the radio or the landline phone or even the paper or the tractor) were in their times. This rhetoric is actually intended to build consensus around the issues of globalization by imposing analytical categories that have the force of evidence.

It is important to criticize this reductionist view, not because ICTs or mobile phones are not useful for development or because innovative or efficient applications of mobile phone use for development are not important goals to waste time on, but because the end result is that they restrict the range of possible solutions and also divert efforts and money that could be better used elsewhere. Moreover, they tend to dispossess human actors of their capacity to deal with the problems involved with the

transformation of their own social and economic environment and to rely instead on technology for change; which amounts to disempowering them.

THE LEVELLING EFFECT OF MOBILE PHONES

The above-mentioned analytical categories generate further agreement as they give the impression of erasing social and economic inequalities through communication. Thus, many journalists, mobile operators and mobile activists (Ledgard, 2011; GSMA, 2012) and before them some authors (Kyem and Lemaire, 2006; Boyera, 2007) now argue that the functionality of new-generation mobile phones (smartphones), such as the possibility for users to navigate the Internet, and especially the rapid expansion of these technical objects in developing countries will make the bridging of the digital divide possible and help reduce social inequalities (see Hyde-Clarke and Tonder, 2011; Alzouma, 2012; Napoli and Obar, 2013), which means that technology—especially mobile phones—also have a "levelling effect" or the capacity to erase social differences and inequalities. As Ledgard writes, "[t] here are already 84m internet-enabled mobiles in Africa. It is predicted that 69% of mobiles in Africa will have internet access by 2014. A week's worth of data can be had for $3… And the mobile web is a more potent communication tool than anything else in African history, because it is interactive, participatory, and to some degree democratic and anonymous" (2011, online, para 11). As people from all cultural backgrounds and social strata can own mobile phones, access is believed to be "democratized" and differences erased. Moreover, mobile phone owners are believed to be em-powered and capable of transforming their social and economic conditions through the use of that device. Thus, the mobile internet is believed to have played an important role in what came to be known as the Arab Spring as well as in the sectors of health and education by allowing people who were previously excluded from access to the Internet to contribute to social and economic changes around them.

This also appears in the ubiquitous character of the mobile phone. In Africa as elsewhere, rural dwellers as well as urban dwellers, men and women, young and old, and rich and poor have access to it without, apparently, the social or cultural barriers playing any significant role. In the develop-mentalist rhetoric, this "universal" adoption of mobile phones is presented as proof that this techni-cal tool has a levelling effect on social inequalities. For example, Ledgard noted that "The internet vision for the past decade was internet cafés (or 'community data centres' as donors called them) in villages, which were supposed to make money by printing off birth certificates and CVs. That has been replaced by a more potent vision: a supercomputer in the pocket of every African" (2011). Meanwhile, to bridge the digital divide, Boyera wrote, "there is a third way to explore a solution to take advantage of the 2.4 billion-plus mobile phones spread across the world and provide them with

direct Web access" (2007: 13). In these arguments, the underlying assumption is that having or not having the technical object is the main barrier or inequality between users. Given that, globally, 5.4 billion of the 7 billion humans on earth have mobile phones and that even in the poorest countries more than 45% of the population owns this tool while 80% to 90% of them have access to it even if they do not possess it (United Nations Development Program, 2012), it is believed that not only access is becoming more democratic, but also that all users have the same chances to benefit from the use of this technology.

However, this assertion does not resist scrutiny. For example a UNDP report written in 2012 states:

> The price basket for mobile services can amount to 15.75 percent of monthly average per capita income in countries with low human development (compared with 4.86 percent in medium human development contexts). And coverage in remote or marginalized areas is often nonexistent. There are indications that at least ten percent of the global population and 40 percent of people in least developed countries are not covered by a mobile network, entrenching divisions between populations in urban centers and poorer populations in the periphery (UNDP, 2012: 8).

It should also be noted that in Africa, for example, a high percentage of users are multiple-SIMS users (dual SIMS or even triple SIMS users), meaning that many SIMS are registered under the same name, artificially inflating the subscription numbers that are in fact lower than indicated. Gfk Retail and Technology (2011), a company that tracks mobile phones sales in various countries, estimates that this phenomenon concerns 25% of users in Ghana and 30% of users in Nigeria.

Better yet, many studies (Granjon, Lelong, and Metzger, 2009; Witte and Mannon, 2010; Muschert and Ragnedda, 2012) have shown that the digital divide is a multidimensional phenomenon that cannot be reduced to just physical access or to the possession of technical objects, as ubiquitous as they are. Moreover, the digital divide is not a thing of the past, including in the most developed countries of the world, such as the United States, where the latest Pew Center study indicates that "wealthier countries have higher rates of internet access….In nearly every country, the young and the well-educated are especially likely to embrace all of these technologies. People under age 30 and college graduates tend to use their cell phones for more purposes than those in older age groups and those without a college degree, and they are also more likely to use social networking sites" (Pew Research Center, 2011: 2). In addition, in Africa, not all users have the ability to utilize all the functionalities of computers or mobile phones (Alzouma, 2012). Users who are illiterate or those

with poor technical skills (computer literacy) tend to use mobile phones only for calling and receiving calls. The existence of a particular functionality does not mean that it is used. In addition, not all users can afford to buy phones that offer all the features. Some phones are expensive and generally beyond the reach of the overwhelming majority of users. A lack of money to buy credits also means that they use their phone less frequently than others. Furthermore, African users who live in remote rural areas find it harder to use their phones than those living in urban centers. They are more likely to receive than make calls, and are reduced to "beeping" their interlocutors in the hopes that they will respond. In some social contexts, users have no interest in using certain functionalities. On the other hand, a user whose social and cultural capital (social networking, organizational skills, family membership, and attendance and social proximity of specific social spaces) is important will take better advantage or benefit more from the use of technology than a user whose social capital is low. Therefore, the technology might be identical, but the result obtained from its use by two different users could be completely different.

MOBILE LEAPFROGGING: WHAT WE ARE MISSING BY OVEREMPHASIZING THE TECHNOLOGICAL SIDE OF DEVELOPMENT

The first ICTs-based development programs and projects were founded on the idea that, due to the characteristics of these technical objects, it was possible to make Africa take a giant leap on the path to development (i.e., leapfrogging development). However, the notion of leapfrogging was first understood as technological leapfrogging before it became developmental leapfrogging. Technological leapfrogging was defined as "the adoption of advanced or state-of-the-art technology in an application area where immediate prior technology has not been adopted" (Fong, 2009 cited by Napoli and Obar, 2013: 2). However, today, the notion of leapfrogging is increasingly associated with mobile phones and development as a way to have access to Internet-enabled mobile phones and, in the process fostering development: "This leapfrogging of PC-based Internet access has been hailed in many quarters as an important means of rapidly and inexpensively reducing the gap in Internet access between developed and developing nations, thereby reducing the need for policy interventions to address this persistent digital divide" (Napoli and Obar, 2013: 1). Yet this reductionist ideology obscures the many other conditions that should be fulfilled for the use of technology to affect the development of society. Indeed, it presupposes that one can simply ignore the problems related to education, health, and infrastructure of all kinds and go directly to a knowledge economy that would integrate Africa into the information age. However, the "mobilization of knowledge" for material and intellectual production does not occur in a dematerialized world without corresponding social relations and the structuring of economic activity (see for example Clévenot and Douyère, 2008). Taking advantage of ICTs requires a sufficient material and economic basis (electrical and communication

infrastructure, educated population, etc.). Thus, the idea that a shortcut exists for joining the information age is questionable.

Several reasons support this conclusion. First, the idea underlying the leapfrogging theory is that mobile phones or computers have a ripple effect on all other aspects of economic and social activity and that those effects concern all aspects of individuals' lives. As previously demonstrated, we are made to believe that ICTs are all-encompassing. However, this amounts to ignoring the many other sides of development (the multidimensional aspect of development), such as a lack of education and a lack of basic amenities. In addition, even when they are equipped with technology, people who have education and other aspects of social and cultural capitals are in a better position to benefit from the use of technology.

For example, one can suppose that an illiterate African farmer equipped with a computer or mobile phone will reap the benefits; however, these benefits will be much more limited than those gained by a man who has a higher education. First—and as is often the case in Africa—the peasant will have to find one of his relatives who can read and write so that he can understand emails sent to him and send emails in return. The farmer can thus send emails to his son, who is an immigrant worker in Europe, for example, asking for money. The email will be sent faster than a postal letter, and the money the farmer receives might also come faster since Western Union and other transfer agencies in Africa use computers. Thus, from this point of view, the farmer will benefit and no one would claim that computers, smartphones, or the Internet have not been useful for him. A similar case is his need to buy medication for his sick daughter or seed and fertilizer before the still-wet earth dries out. However, if we think for example of the network of relationships that this farmer has, one realizes that this network is limited for the most part to people like him—that is to say, people who can neither read nor write, but also people who are poor, helpless, powerless, and without technical or managerial knowledge. Compared to the peasant, the social network available to an individual with a higher education—that is, all the people whom the individual knows or even those he is likely to meet in addition to those he is likely to be able to contact as well as the opportunities he will have with the Internet (either through a computer or smartphone) to find and contact these people—puts him in position to benefit more broadly than the peasant who uses his phone for email and the Internet.

Moreover, the use of and value of computers, smartphones, and the Internet are not limited to sending and receiving emails. With a new computer or smartphone, an enlightened individual can download documents relating to the management of personal accounts, purchase goods and books online, and join professional networks to expand his or her circle and increase his or her knowledge—not to mention the fact that every day, on these online professional networks, information of

16

all kinds concerning this individual's domain of activity and interests will be mailed to him or her. This individual will be able to be informed in the real time of share prices, take university courses, and even earn degrees. In short, there are an almost infinite number of things such an individual can do. However, the number of things that the peasant would be able to do with access to smartphones or computers and the Internet will be far more limited because the peasant is illiterate. In order for him to benefit more from the opportunities offered by the modern world, we might ask ourselves whether it would not be more useful to teach him to read and write before offering him a smartphone or computer for the purpose of browsing the Internet. Although a computer or smartphone might be useful for him even if he is illiterate, as already discussed, such tools would be even more useful if he were educated.

However, such an observation does not necessarily protect us from the dangers of overemphasizing technology in our approach to development. People who overemphasize the role of technology in development, when faced with such a peasant, would certainly propose, for example, the invention of a computer for illiterate peasants—a computer that would recognize the user›s voice and would have an interface that could be used without the user being able to read. In other words, they would propose a technological solution to the problem the peasant is facing. Yet why not just train the peasant to learn to read and write before? It is obvious that the benefits he would draw from knowing to read and write are not commensurate with having a computer that an illiterate man could use. Being literate would be more transformative in terms of empowerment of the farmer than giving him a computer because all aspects of his life (hygiene, technical skills, social relations, etc.) would be changed. Here again, people who overemphasize the role of technology in development have a ready answer: If this farmer can neither read nor write, we should offer him an adapted laptop or mobile phone with which he can learn to read. In other words, any social or economic problem that arises can be immediately grasped under the prism of technology and technology alone while simpler, more efficient, and less expensive solutions exist.

Better yet, an aspect often ignored by people who overemphasize the role of technology in development is that technology can enhance, rather than reduce, social differences, as those who have higher social capital consequently have ways to become richer than they are. Many disparities in the use of phones exist and, contrary to the rhetoric of M4D, these differences are not erased once an individual has access to mobile phones.

CONCLUSION

Information and communication technologies have spread at an unprecedented rate in Africa. This expansion was accompanied by the elaboration of a developmentalist rhetoric whose main themes developed around the notions of promoting leapfrogging development, the levelling effect of technology, and the all-encompassing character of technology. These concepts reflect a kind of humanitarian messianism in the service of technological development whose purpose is to integrate the African continent into the information age. However, they tend to ignore the conditions that would make true development possible and lead us to believe that a shortcut to joining the information age exists. They also tend to obscure social inequalities and human agency in favor of technology. Finally, a careful examination shows that this rhetoric seems to obey a kind of repetitive cycle where the advent of each new technology gives rise to a resurgence of messianic discourses centered on the new object. One can therefore wonder if this cycle does not respond to consumerist logic rather than historical necessity or an inescapable "stage of development" because that is indeed what the orientation of the developmentalist discourse on this subject seems to suggest.

BIBLIOGRAPHY

African Information Society Initiative (AISI). 2003. *An Action Framework to Build Africa's Information and Communication Infrastructure.* Addis Ababa: Economic Commission for Africa (UNECA).

Aker, Jenny C, Christopher Ksoll and Lybbert Travis J. 2011. "ABC, 123: Can Mobile Phones Improve Learning? Evidence from a Field Experiment in Niger". Paper presented at the 8th Midwest International Economic Development Conference, Lowell Center, University of Wisconsin-Madison, April 15–16.

Alzouma, Gado. 2012. "Dimensions of the Mobile Divide in Niger". In *The Digital Divide: The Internet and Social Inequality in IX international Perspective*, eds. M. Ragnedda and G. Muschert. New York: Routledge, pp. 300–312.

Bourdieu, Pierre. 1989. "Social Space and Symbolic Power". *Sociological Theory, 7(1)*: 14-25.

Bourdieu, Pierre and Loïc Wacquant. 2001. "Neoliberal Newspeak: Notes on the New Planetary Vulgate". *Radical Philosophy* 105:1–5.

Boyera, Stephane. 2007. "Can The Mobile Web Bridge the Digital Divide?". *Interactions 14(3)*, pp. 12–14.

Cabinet du Premier Ministre. 2004. "Plan de développement des Technologies de l'Information et de la Communication au Niger". In *PLAN NICI du Niger*. Niamey: Cabinet du Premier Ministre.

Castells, Manuel. 2000. "Materials for an exploratory theory of the network society". *British Journal of Sociology 51(1)*: 5–24.

Clévenot, Mikael and David Douyère. "Pour une critique de l'économie de la connaissance comme vecteur de développement". 2008. Available from http://www.academia.edu/2510961/Pour_une_critique_de_leconomie_de_la_connaissance_comme_vecteur_du_developpement [Accessed on 30 Dec 2013].

Diaw, Malick. 2013. "Marché des télécommunications: Espresso tisse sa toile, Orange reste mobile, Tigo perd le réseau". *Sud Quotidien*, 8 May 2013.

Etzo, Sebastiana and Guy Collender. 2010. "The Mobile Phone 'Revolution' in Africa: Rhetoric or Reality?". *African Affairs* 109/437: 659–668.

Farm Radio International. 2011. "The New Age of Radio. How ICTs are Changing Rural Radio in Africa". Ottawa: Farm Radio International.

Fong, Michelle W. L. (2009). "Technology Leapfrogging for Developing Countries". *Electronic Journal of Information Systems in Developing Countries* 36(6): 3707–3712.

GIZ-Deutsche Gesellschaft für Internationale Zusammenarbeit. "Trash or treasure?" Cooperation with the Private Sector in Africa Newsletter, Issue n. 3, June 2011. Available from http://www.goethe.de/ins/za/prj/sua/gen/rei/wer/afri/enindex.htm [Accessed on 3 March 2014].

Gfk Retail and Technology Nigeria. "Multi Sim Phenomenon Continues in Emerging Mobile Markets". 2011. Available from http://www.gfk.mobi/rt/news_events/market_news/single_sites/007260/index.en.php [Accessed on 15 May 2013].

Global System for Mobile Communications Association (GSMA) and Deloitte. 2012. *Sub-Saharan Africa Mobile Observatory 2012*. London: GSMA.

Google. 2013. "Project Link: A Better Way to Connect". Available from http://www.google.com/get/projectlink/ [Accessed on 30 Dec 2013].

Granjon, Fabien, Benoit Lelong, and Jean-Louis Metzger. 2009. Inégalités numériques. Clivages sociaux et mode d'appropriation des TIC. Paris: Hermès Lavoisier.

Hyde-Clarke, Nathalie and Tamsin Van Tonder. 2011. "Revisiting the Leapfrog Debate in light of Current Trends of Mobile Phone Usage in the Freater Johannesburg Area, South Africa". *Journal of African Media Studies 3(2)*: 263–276.

Hornidge, Anna-Katharina. 2012. "'Knowledge', 'Knowledge Society' and 'Knowledge for Development'. Studying Discourses of Knowledge in an International Context". In Meth*odologie und Praxis der Wissenssoziologischen Diskursanalyse, Band 1: Interdisziplinäre Perspektiven*, eds. R. Keller and I. Truschkat. Wiesbaden: Springer VS Verlag, pp. 397–424.

ICT4Africa.org. 2013. "Consolidating Africa's Competitiveness through Bespoke ICTs". Available from http://www.ictforafrica.org/index.php?option=com_contentandview=archiveandItemid=58 [Accessed on 30 Dec 2013].

IST-Africa. 2013. "IST-Africa 2014 Conference". Available from http://www.ist-africa.org/conference2014/ [Accessed on 2 Jan 2013].

Johnson, Dominic. 2011. *Afrika vor dem großen Sprung: Erinnerungen, Novellen* (African and the Great Leap Forward: Memories, Stories), Capricci Berlin:Wagenbach.

Kyem, Peter A. Kwaku and Peter Kweku Lemaire. 2006. "Transforming Recent Gains in the Digital Divide into Digital Opportunities: Africa and the Boom in Mobile Phone Subscription". *Electronic Journal of Information Systems in Developing Countries* 28: 1–16.

Ledgard, Jonathan. M. 2011. "Digital Africa. A Landscape Transformed by Smartphones". The Economist. Intelligent Life Magazine Spring. Available from http://moreintelligentlife.com/content/ideas/jm-ledgard/digital-africa?page=full [Accessed on 3 Jan 2013].

M4D2014. 2013. "The 4th International Conference on M4D: Mobile Communication for Development". Available from http://m4d2014.net/ [Accessed on 3 Jan 2013].

Microsoft. 2013. "Microsoft 4Africa". Available from http://www.microsoft.com/africa/4afrika/ [Accessed on 3 Jan 2013].

Minges, Michael. 2012. "Overview". *In Information and Communications for Development 2012: Maximizing Mobile Information and Communications for Development 2012: Maximizing Mobile*, ed. World Bank, 11-30. Available from http://wwwworldbank.org/ict/IC4D2012 [Accessed on 2 Jan 2013].

Muschert, Glenn and Ragnedda Massimo. 2012. The Digital Divide: The Internet and Social Inequality in International Perspective. New York: Routledge.

Napoli, Philip M. and Jonathan A. Obar. 2013. "Mobile Leapfrogging and Digital Divide Policy. Assessing the limitations of mobile Internet access". New America Foundation. Available from http://newamerica.net/sites/newamerica.net/files/policydocs/MobileLeapfrogging_Final.pdf [Accessed on 28 December 2013].

Nshimbi, Isabel. 2012. "The Impact of Inclusive e-government Applications". In *E-Governance, A Global Journey*, eds. F. N. Sultana and M. Finger. Amsterdam: IOS Press, pp. 11–22.

21

Pew Research Center. 2011. *Global Digital Communication: Texting, Social Networking Popular Worldwide*. Washington: Global Attitudes Project.

Pisani, Francis. 2013. "Le portable révolutionne l'Afrique". *Le Monde*. August 18, 2013. Available from http://www.lemonde.fr/idees/article/2013/08/18/le-portable-revolutionne-l-afrique_3463006_3232.html [Accesed on 4 Jan 2013].

PricewaterhouseCoopers. 2012. "Telecoms in Africa: Innovating and Inspiring". *Communications Review: A Journal for Telecom, Cable, Satellite and Internet Executives* 17: 1.

Rotberg, Robert I. and Jenny C. Aker. 2013. "Mobile Phones: Uplifting Weak and Failed States". *The Washington Quarterly* 36(1): 111–125.

Sherbourne, Robin and Christoph, Stork. 2010. *Namibian Telecommunication sector Performance Review: Towards Evidence-based ICT Policy and Regulation*. Vol. 2, Policy Paper 7. Windhoek: Institute for Public Policy Research.

United Nations Development Program (UNDP). 2012. *Mobile Technologies and Empowerment: Enhancing human development through participation and innovation*. New York: United Nations Development Program.

Witte, James. C. and Susan E. Mannon. 2010. *The Internet and social inequalities*. New York: Routledge.

Zuckerberg, Mark. 2013. "Is Connectivity a Human Right?". Available from https://www.facebook.com/isconnectivityahumanright [Accessed on 17 Nov 2013] .

WEBSITES

http://www.eldis.org
http://www.elearning-africa.com/
http://www.mhealthafrica.com/
http://www.microsoft.com
http://one.laptop.org/about/faq