

Introduction

Mireia Fernández-Ardèvol, Adela Ros Híjar
Internet Interdisciplinary Institute (IN3), Open University of Catalonia
mfernandezar@uoc.edu
aros@uoc.edu

The “Conference on Development and Information Technologies: Mobile Phones and Internet in Latin America and Africa: What benefits for the most disadvantaged?” was held at the Internet Interdisciplinary Institute (IN3) of the Open University of Catalonia the 23rd and 24th of October, 2009. The Conference met the research interests of two IN3 research programs: Migration and Network Society, led by Adela Ros; and Mobile Communication, Economy and Society, led by Manuel Castells and Mireia Fernández-Ardèvol. It was made possible thanks to the economic support of the ACCD (Agència Catalana per a la Cooperació i el Desenvolupament [Catalan Agency for Cooperation and Development]) of the Catalan government.

The goal of the Conference was to promote an interdisciplinary discussion on the influence that mobile telephony and the Internet could have on development and, specifically, among the most vulnerable segments of the population. The conference also had a special interest in the relationship between information and communication technologies (ICTs) and migratory processes. From a geographic perspective, two regions were selected, as they are the main sending regions of population that immigrate to Catalonia: Africa and Latin America.

The Conference was organized around two main research issues. One was the influence of ICTs in African and Latin American countries and the other was the influence of these technologies in migratory contexts. Migratory contexts can be defined as places where migratory pressure is high, whether they are in receiving,

transit, or destination countries.¹ Therefore, the wide geographic focus of the Conference included not only the aforementioned continents, but also developed countries, mainly European.

This book is an important result of this international meeting, as it gathers the results of the discussions as well as the most challenging papers specifically prepared for it. The aim of this publication is to contribute to the spread of knowledge in this multidisciplinary area of research and to foster future research in the field.

Information technologies

We consider that, at present, the key ICTs in the developing world are Internet and mobile telephony. Both have spread around the world at very fast pace, reaching previously disconnected locations. In fact, there are 23 Internet users per 100 inhabitants in the world (that is, a penetration rate of 23 percent), while a significantly higher diffusion can be observed in the case of mobile telephony with 60 mobile subscriptions per 100 inhabitants (that is, a penetration rate of 60 percent).²

However, information technologies are unevenly distributed throughout the world as United Nations figures show: In developing countries, the penetration rate for the Internet is 13 percent, and mobile penetration equals 39 percent; while in the developed world these figures are 64 percent and 100 percent, respectively (UN, 2009).³ What is more, besides this lower coverage, costs are higher in poorer countries (ibid, page 69).⁴

Africa and Latin America show different degrees of economic and social development, following United Nations classifications in this regard. Indeed, 90 percent of the African population live in countries classified as low or middle-low income; whereas, in Latin

¹ For a more precise definition, see the contribution by Ivan Ureta (Chapter 9).

² Source: ITU (2009), last available data referred to 2008.

³ Last available data referred to 2007.

⁴ For instance, monthly price of broadband Internet services in 2008 was \$288 in the developing world while it was \$28 in developed world. (Data expressed in PPP: Parity Power Purchase).

America and the Caribbean only 28 percent of the population live in countries categorized as such.⁵ The diffusion of information technologies clearly mirrors these differences between continents as it is inferior in Africa. For instance, the Internet users ratio is 9 percent in Africa, in comparison to 27 percent in Latin America; while regarding mobile diffusion, penetration is 42 percent and 79 percent respectively. In addition, official available figures on households show that information technologies are gradually reaching wide segments of the population in both urban and rural areas. However, rates are higher in urban areas and also higher as household income grows (Partnership, 2008). This disparity should be taken into account when interpreting empirical analyses carried out in these two regions.

Although penetration in developing countries is clearly lower in comparison to richer countries, the role of mobile telephony and Internet is seen as important among the population, especially the poorest. This can be deduced from the relatively significant economic efforts made to pay for these services (see, for instance, Galperin and Mariscal, 2007). New possibilities that arise in this scenario need to be carefully analyzed, assessing the advantages as well as the risks involved. Thus, along with capacities for communication and interconnections, it is also possible to find new interdependencies, both real and symbolic, as well as new challenges to be faced. In this sense, Kranzberg's First Law must be taken into account: technology is neither good, nor bad, nor neutral (Kranzberg, 1986).

Information and communication technologies are general purpose technologies (GPT), like electricity. As explained by Jovanovic and Rousseau (2005), this term was coined to describe a new method of producing and inventing that is important enough to have a protracted aggregate impact. In this sense, GPT can be identified by (1) their pervasiveness in the economy among different sectors as well as in households; (2) the general improvement their adoption involves; and (3) their ability to spawn

⁵ Source: ITU (2009).

innovation. Hence, there is evidence that information and communication technologies seem to improve information interchange capacities, both in terms of volume of data and velocity of interchange.

Consequently, a sum of empirical evidence arises. ICTs can improve efficiency in business (Esselaar et al., 2007) and markets (as shown, for instance, by Jensen, 2007). At an aggregate level, they also seem to favor economic growth (Roller and Waverman, 2001; Waverman et al., 2005; Torero and von Brau, 2006), as well as productivity (as Jorgenson and colleagues analyze in several contributions: Jorgenson, 2001; Jorgenson and Mothashi, 2005; Jorgenson and Stiroh, 2000; Jorgenson and Wu, 2007).

Therefore, it is widely accepted that ICTs can favor development. This is why diffusion of mobile phones and Internet are included in the Millennium Development Goals stated by United Nations to fight against poverty.⁶ However, any analysis of the situation must overcome prejudices and preconceptions regarding the effects of information technologies. Their impact, highly controversial as evidenced by discussion at the Conference, needs to be correctly addressed.

Migratory context

As our societies are based on communication, migratory processes are affected by the use of communication technologies, just as is any other vital and social activity. It is therefore essential to improve our knowledge of the possible effects of the spread of IT on migratory processes. In this sense, a significant effect on migratory processes, as well as on the relationship among migrants and their personal support networks, could be expected from new communication technologies (as studied by, among others, Tall, 2004; Vertovec, 2004; Chéneau-Loquay, 2004; and Riak Akuei, 2005). Regarding support networks, the individuals that shape the nodes of these networks may be

⁶ For more information, see <http://www.un.org/millenniumgoals/> (last accessed: December, 2009).

located in different countries, though they would mainly be living in sending and receiving countries. Their personal experiences regarding distance could modify the concept of migration as it has been, until recently, understood. Indeed, the huge amount of information now available through the use of IT may create new dynamics and new interdependencies. This conference explored these issues and has helped to meliorate current knowledge on this issue.

ICT studies from a migratory perspective allow us to discover new realities within a traditional reality. Many things are changing in the contexts of migration, though we have not yet seen much change in immigration and integration action and policies. Physical distance has a different meaning now. Thanks to ICTs, migrant communities remain connected through communication and material exchanges in powerful diasporas. The effects of distance vary. Now there is a new “onsite” non-displaced migration, in a world with new imaginaries and dreams. Connecting and disconnecting, traveling back and forth, finding additional means for precise, effective communication...These are issues undergoing change which will transform the meaning of being a migrant.

Reading guide

A multidisciplinary approach was defined for the Conference. Therefore, contributions cross different disciplines: from economics to sociology and communication, from ethnography to cultural studies. Papers are based on empirical research done in Africa and Latin America using a diversity of methodological approaches. They are not expected to provide a simplified picture of the situation, nor a one-dimensional answer to the question of the effects of information and communication technologies. On the contrary, they respond to three main axes or research questions regarding the influence of ICTs on the economy (from both a macro and micro perspective), communicative habits and migratory contexts.

A cross disciplinary reading of the papers presented here may help reveal the emerging analytical questions in this wide area of research. The Conference, in this sense, proved to be a highly profitable opportunity for presenting issues and finding interrelationships among them. The main issues are listed below.

First, access to ICTs and their costs. In this sense, an important distinction must be made between accessing a service and the real ability to use it among the poorest segments of the population (high cost will inhibit better use of these communicative tools). Therefore, defining who gets access and for what draws the real map that should be observed. The role of telecentres as public places for community life -- sometimes owned by migrant families-- is connected to the issue of access and to quality of access.

Second, the use of technologies, and their conditions and particularities, represent an avenue for analysis in developing regions. Here we find the role of helpers and infomediaries, and in general a greater shared use of ICTs than in developed contexts. Questions on what else ICTs can bring in the future belong to this perspective.

Third, it is important to identify some of the most general social uses for ICTs found in Africa and Latin America. Communication within migratory (distant) groups may be one of them, and we devoted specific attention to it. In general, ICTs are making it possible to connect the disconnected.

Fourth, a complementary approach comes from the meanings individuals and groups instill in ICTs. The appropriation of mobile technology, for instance, refers to a rich process, often compelling for users. And last, businesses are a key actor, especially in the generation of investment strategies.

Under this multifaceted focus, the book is structured in three sections, corresponding to the three analytical axes already mentioned: economics, communicative habits, and

migratory contexts. Therefore, the first section analyzes how information technologies shape the economic sphere in the geographic areas under study. Chapter 1, by Jonathan Donner, describes a collection of initiatives delivering support via mobile phones to small and micro businesses, both commercial enterprises and farms, as well to self-employed in Africa. He discusses the current dependence on the SMS channel and considers the role of these services as supporters, or transformers, of existing market structures.

This view, built from the perspective of available services, is complemented by Roxana Barrantes in Chapter 2. In this chapter mobile phones are analyzed as a tool in the household production function among rural families in Puno (Peru). By using evidence gathered through a representative survey in the area of influence of two rural markets in the region, where livestock husbandry is the main important activity, the paper identifies how rural producers use mobile telephony and tries to explain its impact on farm profits as well as on household welfare.

Continuing in Latin America, in Chapter 3 Judith Mariscal provides a picture of the landscape of mobile phone use among the Mexican population at the bottom of the pyramid. That is, mobile phone use among the poorest segments in the country. Her paper offers evidence of patterns of mobile phone use gathered through a survey of households in poor urban areas of Mexico. It seeks to identify perceptions regarding the impact of mobile services on everyday life activities, as well as perceptions regarding the cost and benefits of mobile communications. This first section closes with Chapter 4 which introduces a macroeconomic perspective in the analysis. Carlos Gutiérrez and Juana Aznar model the achievement of universal provision of broadband Internet access and its influence on developing countries depending on different pricing schemes. The authors motivate their model by analyzing the South American telecommunication market.

The second section analyzes the transformation of communicative practices due to the popularization of information technologies. All the chapters in this section are focused on countries in Africa, where this issue has been more seriously studied. Araba Sey opens the section with an empirical study on cost management of mobile communication in Ghana (Chapter 5). Her study on mobile phone practices shows that users create low-cost models of communication, as cost remains a significant limitation for a more intensive use of the tool. Mirjam de Bruijn's empirical research moves us to the Grassfields of the Bamenda region, in Cameroon (Chapter 6). This is a remote, marginal and marginalized area in Africa. Although the label marginal suggests disconnection, people in this area have always been part and parcel of patterns of mobility both within and outside the region and the continent. Therefore, the author deals with the question whether connections through mobile technology will (re)shape the mobile margins, and vice versa.

Under the same conceptual framework, Inge Brinkman and Silvia Alessi study another marginalized region in which mobility is very important as well: South-Eastern Angola (Chapter 7). Previously known as the "lands at the end of the earth", Angolan authorities have re-named it to the "lands of progress" as the region has become central in the country's development efforts since the end of the civil war. Transport and communication means are key elements of this developing strategy. In this context, the authors explore the ways in which people communicate as well as the changing processes of communication and interconnections.

Chapter 8, by Siri Lamoureaux, ends the second section by analyzing text-messaging practices in Sudan. The author gathered information from university students and through empirical analysis provides new evidence of the importance of texting around the world. The author describes a local form of appropriation that transfers an older cultural practice, poetry exchange, into the SMS context. The new context has revitalized this practice in a novel way as, among other aspects, the spread of poetic

texting permits the studied youthful users to appropriate an Arab-Islamic tradition through their own use of literary style and linguistic choice.

The third section is devoted to the study of the interrelationship between information technologies and migratory cultures. Therefore, African and Latin American countries are considered here not only as sending countries, but also receiving countries and migratory transit countries as well. In this sense, Iván Ureta (Chapter 9) analyzes the influence of media and IT in migratory contexts. The author's analytical framework is based on the idea that Internet connection permits what he defines as an "on-site migration". This is a key concept for understanding the relationship among information technologies, migratory intentions and socio-economic performance in the region under study. Empirical analysis is based on the information gathered through an online survey addressed to university students in the Maghreb, mainly in Morocco but also in Tunisia and Algeria, three of the African countries with higher Internet penetration.

Senegal, another society that can be clearly considered as a migratory context, is studied by Aly Tandian in Chapter 10. Nowadays, migration is a central issue in Senegalese culture. The spread of the means for long distance communication together with media treatment of the phenomenon are helping to promote this culture of migration. The social representation of migration also reveals the existence of strong links between the receiving country and the sending country.

Moving one step forward, Joris Schapendonk offers us a mobile view on sub-Saharan African migration towards Europe (Chapter 11). His analysis of migrant trajectories shows us that interesting results can be found when the study of migration is understood as a process of moving, a process which is also shaped by the availability of information and communication tools. Empirical analysis is based on the study of migration dynamics, as the author carried out fieldwork in various places of migration in different countries (Senegal, Morocco, Turkey, Spain, Italy and the Netherlands).

Papa Sow and Rosnert L. Alissoutin analyze the relationship between Catalonia and Senegal in Chapter 12. The interrelationship between sending and receiving countries is studied in the case of these two specific locations, as an example of the establishment of spaces of intense exchange mainly between those members of the family that remain in the homeland and those that are in the diaspora. The authors explore, through empirical and qualitative fieldwork, how information and communication technologies could be seen as tools for political and socio-economic transformations in emigration countries, as well as instruments for co-development. Access to these tools - Internet and mobile telephony - is a key aspect if they are to be operative.

The last chapter in the section also considers co-development, while in this case the focus is on the relationship between Latin America and Spain (Chapter 13). Ana M. González Ramos, Jörg Müller and Milagros Sáinz Ibáñez analyze the use of information and communication technologies in developing countries to take advantage of their high skilled researchers and manage the negative effects of brain drain. A case study is developed by focusing on the mobility actions promoted by the Spanish Carolina Foundation in Latin America. This institution implemented mobility programs based on the brain circulation concept and the return of talent to country of origin in order to promote development. The Carolina Foundation also engenders a certain common sense of identity among the Latin America diaspora, promoting a powerful elite of highly skilled personnel that are or have been recipients of grants from the institution.

The concluding chapter provides a summary of the research explored throughout the book, the common results and ideas proposed.

The publication of this book, as well as the celebration of the Conference, has been made possible thanks to the contribution of all the participants who contributed with

their research, their knowledge and opinions to the prolific discussions. Last, but not least, the Conference was possible thanks to the work and personal involvement of Sandra Santafé, general coordinator of this project, who is also responsible for the compiling and editing of this publication.

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