

Summing up

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In this final chapter, we connect the main ideas and concepts gathered in this book. What we have done is provide a synthetic perspective on the main issues that appear in the different chapters as a way of making it easier for the reader to get an overall perspective on the state of the art in this emerging field of knowledge. The issues are organized according to seven basic themes. The following pages provide a description of each one of them.

1. Mobile telephones in the productive sphere

Papers in the first section of the book deal with different aspects of the economic sphere. As with any general purpose technology ICTs should have a pervasive presence in different economic sectors. They may improve processes and foster innovations (Jovanovic and Rousseau, 2005); therefore contributing to the introduction of changes in economic organization when they are incorporated into business decisions (production, marketing, etc.).¹ This is the focus of the first two papers in this section; specifically they study the use of mobile telephony in the productive sphere among specific low income segments of the population of developing countries.

From Chapter 1 it can be concluded that there is not a single, integrated trend regarding available mobile-based livelihood services in Africa. Provision of these mobile services needs to be integrated with Internet based applications, as they exceed the limits of person-to-person communication. Jonathan Donner highlights the increasing institutional involvement that can be observed in this sector, mostly because

¹ See introduction.

of technological and design requirements. In our opinion, his most interesting conclusion leads us to the observation that, at present, it is not possible to observe a new paradigm of economic organization in these markets.

This is an important point shared in common with Roxana Barrantes (Chapter 2). Regarding rural producer households in Puno (Peru), she argues that the possible positive uses of mobile phones occur first in marketing but are not (yet, fully) manifested or perceived in defining parameters for production. In this sense, the length of time that mobile service has been employed seems to be a key point as it looks as if the longer the time a business decision-maker has been using a mobile phone, the higher the influence of this technology on her, or his, decisions. Initial observable changes in the productive field seem to be related to marketing and purchasing decisions, while production decisions should respond to longer seasonal cycles. As these last cycles are longer, more time would be needed to notice the expected changes due to the use of this new communication tool. In this sense, Mariscal (Chapter 3) also mentions the existence of a learning curve regarding the introduction of mobile phones as useful tools for the working sphere.

The diffusion of a new means of communication entails changes in communication habits and as a consequence in social and economic spheres (Castells et al., 2006). Hence, the study of effective appropriation processes of this technology appears to be important to fully comprehend the present and future economic impacts of mobile telephony in developing economies. It is not easy to determine what the final use is of some means of communication, particularly mobile telephones. Indeed, ICTs show mixed uses and mixed finalities, as different chapters of this book show (as also recognized in a recent paper from Donner, 2009). Personal and economic spheres are, in general, mixed. This is even clearer for informal workers, where there is no clear distinction of the limits between business links and social or family links.

In this context of mixed uses, mobile telephony may have greater economic impact in those places in which no telephone was previously available, as in such cases it constitutes the first long-distance-synchronic means of communication in operation. This is the situation in many areas in developing countries, mainly in rural but also poor urban areas in large metropolises. Evidence in this book points to this result, as do previous local studies (see, for instance, Jensen, 2007).

2. Diffusion, access and use

Moving one step forward and keeping the perspective of general purpose technologies, ICTs can also be studied from the consumer's perspective, as Chapters 3 and 4 do. In this case, regulation and policy-makers' recommendations are also included. Chapter 3 is Judith Mariscal's analysis on the use of mobile telephony among the urban population at the bottom of the pyramid in Mexico. This chapter provides us with a rich picture of the issue, while its main conclusion is that mobile phones are highly appreciated but expensive. Thus, a main concern among the surveyed population is affordability. In this context limited use arises, as well as the perception of the existence of a situation of limited communication. Therefore, for complete comprehension of the phenomenon, a clear distinction should be made between access, which is independent of being the owner or not of the device, and regular use of mobile phones.

These limitations among low income users are also reported and studied in depth in other sections of this book (for instance, Chapter 7). In addition, in Chapter 5 there is an interesting discussion on user innovations. When they are mainly driven by affordability and budget constraints, what they show is the existence of barriers inhibiting the ability of individuals to employ ICTs as extensively as they would like.

Mariscal's policy recommendations revolve around the idea of market regulation, which could foster a reduction of consumer prices. In particular, for the Mexican case,

reduction of barriers to entry in the mobile telephony sector will promote competition and a reduction of tariffs. The author also argues that the deployment of business models targeted at the bottom of the pyramid would accelerate the dissemination and use of mobile services (as argued by Prahalad, 2006).

In this sense, Gutiérrez and Aznar (Chapter 4) also discuss two different models of Internet broadband access deployment from a macroeconomic perspective: high-tech services at high prices, or more modest broadband capacities at lower prices. In their model the current situation of this general purpose technology is taken into consideration, as on the one hand, universal service provision is still far from being reached in Latin America, the continent under study, as well as in the rest of the developing world; and on the other hand, there exists a general framework of liberalization of telecommunications markets.

As recognized by the International Telecommunication Union (ITU, 1989), policy-makers' role and market regulation are not neutral. It seems that, particularly in the case of mobile telephony, diffusion is reaching very high levels. The most recently compiled data from UNCTAD (2009) show the clear inequality shrinking in terms of access to telephony and Internet. However, micro-level studies show us that access and effective use cannot be considered the same thing. We do consider post-access (or access 2.0) the capacity to use communication tools within reasonable limits with no cost constraints. In this sense, the levels of use of ICTs should be taken into account when evaluating the existence, or absence, of digital divides (Galperin and Mariscal, 2007; Barrantes and Galperin, 2009).

3. Multi-faceted strategies for cost reduction and access

In Chapter 5, Araba Sey presents research on Ghana on cost management of mobile communication. The author identifies a plethora of strategies for getting the most communicative capacity at the lowest costs, describing both common trends already

identified in other parts of the world (as summarized by, among others, Castells et al, 2006; and Donner, 2008) as well as local particularities. As an example, in Ghana and Cameroon (see Chapter 6) it is possible to make free calls at late night hours; thus communication practices are accommodated to this feature that constitutes a particularity of the African market.

User innovations driven by budget constraints, such as the use of missed calls in low income contexts (often even for business purposes), should be understood in their correct dimension. Therefore, as highlighted by Sey, while these cost-saving innovations are interesting and point in an overall positive direction in terms of outcomes, users could benefit from longer-term and more permanent solutions to their inability to access and use mobile phones.

In addition, technical challenges also constitute another important element affecting the ability of individuals to employ ICTs as widely as they would like. These challenges are also faced by finding innovative solutions (ibid; Bar et al., 2007).

First of all, there must be an appropriate deployment of infrastructure. No mobile phone can be used if there is no network access. Sometimes it is not easy to get a mobile signal; therefore it is necessary to move to specific spots within a village or outside it to have a line. Mirjam De Bruijn (Chapter 6) notes that these spots of access to network service constitute meeting points where it is possible to get information from members of one's personal network.

Electrical power constraints also constitute an important technical problem in low income contexts, especially in regions where electricity provision is limited or unreliable (Bar et al, 2007). Mirjam De Bruijn (Chapter 6) and Inge Brinkman and Silvia Alessi (Chapter 7) describe people owning mobile devices even though there is no electricity in the villages where they live. It is common to find villages with no efficient roads, no electricity and other limitations in infrastructure where the inhabitants own mobile

phones and find different ways to incorporate them into their everyday communication needs.

Finally, Internet-connected computers require more infrastructure than mobile phones. This is one of the reasons for the lower diffusion of this ICT. As mentioned in Chapter 7 regarding South-Eastern Angola, generators are needed in villages to run these computers, as electric supply is only available in the regional capital, Menongue. Because of this, Internet speed is low and service interruptions are common. Thus, the use of this technology is quite limited and not as productive as it is when these constraints are not present. Again, a distinction must be made between access and effective use of ICTs to properly evaluate not only the actual effect but the possible effect of these communication technologies.

4. Mobile youth culture

In Chapter 8, last in Section two, Siri Lamoureaux studies the practice of poetic text-messaging among urban university students. A specific manifestation of mobile youth culture in Sudan is presented. Text message poetry illustrates the existence of an active engagement with the art form, as receivers appropriate these texts, and usually forward them after introducing some modifications. This is why the author talks about the recycling of poetic discourses.

The pre-existing practice of poem sharing has now been redefined in two main ways: first, because SMS allow an active role in the sharing and transformation of poems; and secondly, because the practice has been adopted by lower and middle classes from the Nuba community, using Arabic –not any Nubian language- as the language of the poems. They are mirroring the country's elite, which are part of the Arab-Islamic tradition. But, as pointed out by the author, the Nuba adoption of this poetic tradition is an example of their ongoing marginalized status. Power relationships, in this case, remain as they were.

In short, this example confirms the common trend already described (Ling, 2004; Castells et al., 2006): a mobile youth culture can be observed where this means of communication spreads. Following a general path, the new created practice reshapes existing ones, bringing them new meanings and creating a collective identity among those individuals that participate and develop this specific practice.

5. (Im)mobile use

Chapters 6 and 7 study two African societies that can be described as being on the social, economic and geographic margins of their respective countries: Barmenda Grassfields, in Cameroon, and the South-Eastern region of Angola. In both cases, the research fits under the common analytical framework of communication ecology. The analysis, therefore, is not only focused on ICTs but on the whole range of communication technologies available in the areas under study (roads, postal services, fixed telephone, mobile telephone, Internet, etc.), so ICTs are placed in the context of all relevant modes of communication, as well as in the cultural context of the societies under study.

In this sense, the authors give us an interesting picture regarding mobility in these remote areas. There is a common main idea; that is, mobile telephones perfectly fit the communication needs of the populations under study because these two societies have always been highly mobile cultures, rooted in nomadic practices. Thus, perhaps if they were more sedentary societies, mobile communication would not be as widespread as it is. In this case poverty is not related to immobility.

This, in fact, appears to be very different from other contexts in which poverty and marginality are a part. S. Ureta (2008), for example, shows us that mobile phones are “immobile tools” among poor families in the greater metropolitan area of Santiago de Chile. The author finds that the potential mobility of families under study was low, as was the mobility of their mobile phones. This evidence shows us that ICTs are usually

used to do what individuals usually do, at least during initial stages of appropriation of these technologies.

In the two regions under study, an intense distant communication already existed due to high existing mobility. New means of communication have accelerated this; as a result, certain other social processes have accelerated as well. In particular, a strengthening in the links with (at least) some of the nodes in personal networks can be observed. For instance, there seems to be a perception that visits from relatives have increased thanks to the enhanced frequency of communication allowed by mobile phones. In the terms of Ling (2008), social cohesion is being reshaped.

We can conclude, then, that mobile telephone utilization will depend on the configuration of each personal network; while mobility, or immobility, will not be defined by the device itself but by the personal situation in which that communication tool is used. Internet, in contrast, presents significant differences in this respect, as it can act as a window open to the world independent of personal network configuration. This feature is of great importance, as we will see regarding migrant cultures

6. Migrant cultures

Migrations being a common reality in many regions and countries of the world, and one that often connects developing and developed parts of it, this Conference devoted a significant amount of attention to the intersection between migrations and ICTs. The fact that these two elements are coming together in many contexts and in many ways is beginning to get the attention of analysts although it is still underrecognized (Gebrewold, 2007). A new perspective on connected migration has been developed in recent years (Diminescu, 2005; Nedelcu, 2009; Ros, 2010). No matter where or how, communication technologies are serving the interests and needs of people in movement. As a logical consequence, mobile contexts and mobile technologies are coming together at different levels. Take this as an example of this phenomenon: the

lists of prices of telephone calls by countries to be found at cybers and telecenters also serve as good approximations of the migration map of these particular places. At the Conference, our intention was to take a step forward in analyzing the relationship between ICTs and migration.

One of the most important issues that appears from examining the role of communication technologies in migration contexts is the possible changes in migratory culture and intentions. The lives of people in developing countries are today influenced by the information and communications they get through TV programs (satellite and local TV), websites, and long distance telephone calls. In this panorama of interconnection, dreams and wishes of how and where to find a better life are shaped. This imaginative role is played out, as Appadurai reminds us, through the new media. However, as Ivan Ureta (Chapter 9) and Aly Tandian (Chapter 10) point out, we cannot draw a simple cause-effect relationship. The force of images of wellbeing in Europe or the US arrives along with information about the difficulties of real life. Ureta states very clearly that “the Internet does not induce a new, virtual society. Rather, it expands, and develops, existing social networks’. One of the challenges of migration studies today is to better understand how ICTs as constant and immediate communication and information, are changing cultures of migration and how new ideas about communities abroad are shaped and what social relations over greater distances imply for their cultures in general.

At the same time, the intensity in the usage of technologies of communication –mobile phones especially—in cultures of migration make us think that these are appropriate contexts for these technologies. Mirjam De Bruijn’s (Chapter 6) communication ecology paradigm suggests a strong relationship between mobility culture and ICTs. Papa Sow and Rosnert Alissoutin (Chapter 12) point out that “a mobile phone culture” has existed in the Senegalese immigrant community for many years.

7. Coordination networks

At a different level of analysis, ICTs are making the lives of migrants, as well as candidates for migration, easier. Communication and connections work pretty well – though recent research on Bolivian women in Barcelona reveals the existence of communication problems with their families in Bolivia (de la Fuente and Ros, 2009). In general, networks facilitate migrant journeys making them more open and less predictable, as Joris Shapendonk shows (Chapter 11). The migration strategy is also influenced and shaped by the new possibilities for getting information and communicating. In his chapter, Tandian shows us some examples of Senegalese social websites. However, more research is needed in this area as disinformation continues to exist in many migratory contexts. Disconnecting is difficult to achieve and networks are more efficient than ever before.

Coordination is a key element of global activities. Migrant communities are better coordinated in transnational practices which open up new possibilities for co-development as signalled by Tandian and Sow and Alissoutin regarding the Senegalese diaspora. These possibilities can be also explored for developing conditions in general and in particular for reducing the negative impact of brain drain, as Ana M. González, Jörg Müller and Milagros Sáinz suggest (Chapter 13).

New communication and information resources are also shaping changes in family power relations in migrant communities. Referring to the Senegalese community in New York, Tandian thinks that “men do not have a monopoly on the use of the Internet to monitor their financial activities”. He also suggests that that the traditional role that family (“blood and marital”) links have played in migrant support may be lessened, as global networks are now creating new possibilities for economic support.

Closing

Conferences often act as mechanisms for bringing attention to previously unexplored issues. This was the case of the Conference upon which this book is based. More than specific and concrete results, this book shows that there is still much research to be done and the analytical and social relevance of continuing on this track. The diffusion of and access to communication technologies in many developing countries are too recent to provide us with conclusive knowledge about their impacts, despite the growing number of studies in the field. However, there are opportunities that cannot be ignored. First, research can play a key role in the design and implementation of business infrastructure strategies (for example, in the extension of broadband). Second, research, as this book shows, is a way of documenting the historical changes which have taken place (in many cases in less than a decade) in many regions in the developing world in moving from situations of isolation and lack of communication to highly communicative contexts. The transformations and challenges to come for developing countries and their inhabitants also remain unknown.

In this chapter, we have identified some important questions that remain unanswered. We cannot be certain about the implications of ICTs for the quality of individual and community life in the long run: will increasing and accessible communication produce a considerable improvement in people's lives and greater opportunities? What will be the effects on the level of literacy in countries with high levels of illiteracy? Will women find in communication technologies a tool to fight for a more equal role in society? What will be the real effect of the arrival of Internet and mobile technologies in the productive sphere and in job creation? And how will the lives of millions previously disconnected from the world's other realities and their own families abroad be affected? Is there proportionality in the dissemination of these technologies in contexts of poverty and hunger (Gebrewold, 2007)? Research and analysis must continue to contribute to the answers of such important questions.

One of the most important conclusions of this work is that in future analysis of the impact of ICTs, local evaluation made by people in particular contexts should be taken into account.

If only one common issue had to be highlighted from these works, it is the importance communication has for people. The enthusiasm and energy, and even the budget that people in poor areas of the world dedicate to communication technologies are expressions of the role of communication. Indeed, our societies are based on communication. This is why new communication tools spread, as has mobile telephony, once they prove to be useful. The possibility of communicating at any moment from anywhere with anyone is already a precondition in the organization of life for millions of workers, parents, youths, migrants, students, activists, politicians and artists throughout the world. In this matter, the reality in developing and developed countries has much more in common than we would expect.

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