PhD carried out at FARM

Socio-cultural appropriation of mobile phones by farmers in Burkina Faso

On June 15, 2011, Eric Pasquati, information and communication technology (ICT) project leader at the Foundation for World Agriculture and Rurality (FARM), defended his PhD on the socio-cultural appropriation of mobile phones by farmers in Burkina Faso. This research was carried out at FARM, between January 2008 and June 2011, as part of a CIFRE convention, in partnership with the joint research unit "Models Dynamics Corpus" of the University Paris Ouest Nanterre La Defense, within the discipline of information and communication sciences. Brigitte Juanals has directed this thesis and Bernard Bachelier, then director of FARM, has provided professional guidance to Eric Pasquati.

One of the main results of this research is to confirm the importance of socio-cultural aspects in the process of mobile phones appropriation by the farmers encountered. This suggests mainly **the need to change the reasoning of researchers and funders** in the field of ICT application for development, **from the dominant approaches focused on adoption and impact to the approach focused on the appropriation of these technologies by local actors**.

In addition, paying particular attention to reflexivity - that is, the systematic questioning of oneself, its own convictions - and decentring - namely, the opening to others, the consideration of their views - Eric Pasquati has developed a research protocol aimed at minimizing the *communicative distance* with the farmers he has met. The result is **a set of methodological principles to facilitate gaining and maintaining trust between local and external actors**. These principles can nurture considerations about modes of partnership within the framework of international cooperation for development.

The purpose of this note is to briefly present the research conducted for the thesis, the research context, the theoretical and methodological approaches adopted, the exchange protocol developed and the results obtained. In conclusion, the contribution of this research and its implications for FARM's actions in the field of ICT for development are underlined.

Research context

The questioning at the origin of this research was to know **how to harness ICTs for improving rural livelihoods in developing countries**. If, on the one hand, the importance of information for agriculture and the poor communication infrastructure in rural areas of developing countries leave little doubt about the potential of ICT for the development of these regions, on the other hand, the realization of this potential is less obvious.

Indeed, the vast majority of projects attempting to apply ICTs to rural development in developing countries have not yet demonstrated their success. In addition, particularly with regard to the use of ICT, international cooperation for development seems to be dominated by what might be called *the logic of the offer*: **actors from the so-called developed countries formulate *technological solutions* without real connection with the socio-cultural realities of the field**.

This rationale of donors implies that the majority of the research made in the field of ICT for development focuses on adoption and impact approaches, less careful about socio-cultural aspects than the appropriation approach.

Faced with these indications of distance from the field and of relative negligence of socio-cultural aspects, it seemed legitimate **to test directly with farmers, the importance of socio-cultural aspects for the appropriation of ICT**.

From this comes the importance assigned to **field work** in this research. First with preliminary study tours in **West Africa** (June 2008) and **India** (April 2009) and then with a **six-month field work in the Boucle du Mouhoun region** (July-December 2009), in central western Burkina Faso, where is located the Union of farmer groups for the marketing of agricultural products of the Boucle du Mouhoun (UGCPA-BM), a farmers' organization partner of the FARM foundation.

From this comes also the main hypothesis of the research, which is the existence of reciprocal influences between the building process of mobile phone uses and the socio-cultural organization of rural communities in the Boucle du Mouhoun region. In this research, it has been necessary to concentrate

on the **mobile phone**. We wanted, indeed, to favor a technology that makes interactivity possible - hence putting aside the radio - and which was sufficiently widespread among farmers in the Boucle du Mouhoun region - hence discarding the Internet.

In addition to these considerations, some researchers, such as Burkinabe sociologist André Nyamba, highlight the socio-cultural risks associated with the appropriation of ICTs in Africa. Nyamba speaks, for example, of the disadvantages of abandoning proximity communication. Three secondary hypotheses were then proposed in connection with mobile phones appropriation by farmers in the Boucle du Mouhoun region: the possible relativization of the importance of proximity communication, the possible construction of new identities, and the possibility of changes in social relations of power.

Theoretical and methodological approaches

To test the hypotheses, a theoretical and methodological approach was developed from various sources of inspiration. A fundamental point of this approach is to emphasize the **non-superiority of researchers over "ordinary actors"** or, in the field of development aid, the non-superiority of external actors over local actors. In this regard, three main sources of inspiration have been mobilized:

- **Robert Chambers' *farmers first* model**, who advocates a reversal of the behavior of external actors, towards a greater respect for farmers and the desire to learn from them;

- **Harold Garfinkel's ethnomethodology**, from which the concept of *ordinary skills* indicates that all ordinary agent knows perfectly well the logic behind the dynamics of the society to which he belongs. According to Garfinkel, the researcher's role would be to describe such skills and learn with ordinary agents;

- Finally, **Bruno Latour's sociology of associations** (or the Actor-Network Theory), for whom it is necessary to recognize the significant uncertainties in the event of any phenomenon of living together. According to Latour, the magnitude of the gap between what is known and what is not should disqualify the supposed superiority of the scientific method over non-formal methods to apprehend reality.

In this research, to talk about the non-superiority of the researcher over ordinary agents is to emphasize **the possibility and the interest of learning from farmers**. Considering this, it becomes possible to consciously conduct an effort to interest local actors.

Unless we do it, it is not possible to make the research relevant to them. This indicates, finally, the importance of the protocols of reflexivity and decentring in this research. Indeed, the permanent questioning of oneself implied in reflexivity and the exercise of openness suggested by the decentring protocol seem both fundamental if we are truly to learn from others.

Another choice in the research that deserves to be highlighted is the effort to minimize the *communicative distance* between interlocutors and the researcher; in other words, **the researcher's attempt to create a communication process as smooth as possible with its interlocutors**. This has been a subject of consideration and of prior consultations that led Eric Pasquati to develop his methodological approach and a specific research protocol.

The objective of reducing the *communicative distance* is at the origin of the continual effort to **circumvent or minimize the socio-cultural barriers between farmers from Burkina Faso and the researcher**. The point was to try to establish at each time a common ground, as egalitarian as possible, for the conversation to take place. Informality and simplicity have therefore become keywords of Eric Pasquati's behavior in the field. In addition, the challenge of capturing the interest of local actors cannot be achieved without the establishment and the maintenance of trustful relationships with these actors. Minimizing the *communicative distance* also means gradually winning the trust of one's interlocutor.

Research protocol

The main field work was conducted in the Boucle du Mouhoun region, in Burkina Faso, from July to December 2009. During these six months, Eric Pasquati met some forty farmers, both men and women, in 18 villages of the region. In the majority of cases, two or three interviews were carried out with each producer. Research questions were approached by successive approximations: first trying to understand the basics of the organization of social life, then the local dynamics of communication, and only in a third time, issues related to mobile phones' forms of use.

An important choice was to limit the sample to francophone farmers. Eric Pasquati does not speak local languages, but he didn't want to use the services of translators. Indeed, indirect talks, with the mediation of a translator, would be inconsistent with the objective of minimizing the *communicative distance* with farmers. This choice clearly introduces a significant bias in the research. Ignorance of local

languages has probably been the biggest handicap in this work.

In order to reduce the *communicative distance* with his interlocutors in the field survey, Eric Pasquati developed a protocol based on **qualitative methods** and specific instructions. The main methods used were: *transect walks*, where a local actor presents his village to an outsider; participation in local activities, including field work, and semi-structured interviews.

The **main instructions of the research protocol** were: to focus on direct exchange with farmers, in their villages or in their fields; to be systematically introduced to farmers by someone from their social network; to keep the first contact exclusively for introductions, without in-depth interview; to be transparent about research objectives and methods; to use simple language, as much down-to-earth as possible; to pay attention to eye contact and the use of silence during conversations, adapting the researcher's behavior accordingly in order to maintain the conversation environment as relaxed as possible; and finally, not to use recording devices neither to take notes during the conversations, in order to avoid nurturing distrust between the farmer and the researcher.

Discussion of results

A first field observation can be stated as follows: the socio-cultural organization of rural communities in the Boucle du Mouhoun region affects the construction of mobile phone uses, forming a set of *socio-cultural conditions of use*. **Habits and conditionings shared by members of the communities visited act as boundaries, fostering the development of certain uses and imposing constraints to the development of other uses**. For example, gender inequality, which remains dominant in these communities, is also expressed through the use of mobile phones: a woman cannot move away from her husband to answer a call, but a man can move away from his wife and talk in discretion.

Another finding is that, conversely, the construction of mobile phone uses affects the local social organization, being translated into *social footprints of use*. **The mobile phone seems to catalyze changes whose magnitude depends on the scope of action and on the specific intentions of actors, but often increasing relational speed and intensity of those who have access to it**. A good example is the introduction of a new dynamic to obtain social recognition in connection with mobile phone appropriation: either through exploration of the image related to the possession of the mobile phone or by the act of helping others with the mobile phone. Two quite different ways of acting, but in both cases, the strategic use of the mobile phone provides the user with a new opportunity to obtain social recognition.

These two observations confirm the main hypothesis of the research: there are mutual influences between the construction of mobile phone uses and social organization of farmers in the Boucle du Mouhoun region. Let us now analyze the secondary hypothesis of the research in the light of field observations.

With regard to proximity communication, we can say that **the use of mobile phones gives rise to new ways of dealing with space and time, it puts the notion of distance into perspective** and creates new dynamics in the family and professional domains in the Boucle du Mouhoun region - one can talk regularly with a family member who went to work in Cote d'Ivoire, or one can get business information much faster than before the arrival of mobile phones. **However, proximity is still essential for gaining and maintaining trust** between interlocutors: the majority of farmers encountered are not at ease, for example, with a service of remote contact offered by a market information system; according to them, without a face-to-face contact, they would not negotiate with a dealer they do not know.

Then, concerning the construction of new identities and the change in social relations of power, it was found that **the acquisition and the appropriation of mobile phones by certain individuals make them be noticed by their peers**; these individuals become points of reference of the local communication network, which could be associated with a new social identity. If, on the one hand, this may suggest the possibility of significant changes in power relations, on the other hand, the fact that **the new identities can be constructed in accordance with local tradition** put into perspective the magnitude of potential change. The strategy of achieving social recognition by serving others with the mobile phone is a good example of the possibility of compromise between ICT use and local traditions – in these traditions, the fact of serving others is a legitimate source of authority.

Contributions and implications

The first contribution of this research comes from the confirmation of the main hypothesis, concerning the importance of taking into account socio-cultural aspects for the understanding of mobile phones appropriation by farmers in the Boucle du Mouhoun region. Without making sweeping generalizations, this result serves as an **argument**, with respect to the use of ICT for development, **to foster a change in the reasoning of researchers, and especially in that of donors, from a conception based on the**

adoption and the impact of technology to an approach based on their appropriation. Indeed, the autonomy of local development initiatives vis-à-vis external aid – a goal that legitimizes international cooperation for development – cannot be achieved without the appropriation of these initiatives by local actors.

We should now move on to a stage of operational deployment of the lessons learned about the process of ICT appropriation by farmers in Burkina Faso, in order to strengthen FARM field activities, particularly in the context of its food crop projects. The idea is to develop an **action research to support the structuring of communication and information services of farmer organizations partners of FARM**, as, for example, for obtaining and managing business information. Consistent with the FARM approach of supporting the structuring of farmer organizations in West Africa, and in addition to current activities of the foundation in terms of access to inputs and credit, the goal is to work with these organizations to help develop or strengthen their strategies for both internal and external communications. Lessons learned from the research will guide the implementation of this. By assessing the opportunities and constraints arising from the socio-cultural specificities of local contexts, it should be possible to support the selection and the application of the most effective and the most adapted ICTs (radio, mobile phone or Internet, among others) to these contexts. If it is possible that this action research on communication becomes eventually a new component of the food crop projects, it would be natural, at first, to test its deployment in the Boucle du Mouhoun region, within the UGCPA-BM.

That being said, the most important contribution of this research is methodological. We propose strategies for getting closer to a given reality; strategies which are particularly suited to the case of researchers who are foreigners to their context of study. Indeed, a set of specific instructions were added to the standard methods to make them work best in the field of this research, mainly concerning the reduction of the *communicative distance* with the farmers encountered. The research protocol that gathers these guidelines is the main contribution of this work.

This protocol was designed to facilitate the maintenance of trustful relationships between local and foreign actors. It may **contribute to the internal debate at FARM about innovative forms of partnerships with stakeholders from the South**. Strengthening the professional skills of local actors is a fundamental aspect of these partnerships. The challenge here is to improve the understanding of the demand – that is, the training needs of existing partners of the foundation – in order to formulate strategic directions for FARM in the training domain. This may include an articulation with other actors involved in the training sector in the North and South.

To conclude this note, it is useful to recall the evolution of our reasoning about the application of ICT for agricultural development during the three years of the PhD research. We moved from a concept still a little techno-centric about ICT appropriation – where the implicit objective was to design an information system best suited to local contexts – to an approach particularly attentive to human relationships underlying cooperation for development – preferring the development of methods to support local actors in strengthening their information and communication processes. **The development initiatives making use of ICT, more than the ICTs themselves, are to be appropriated by local actors.** This involves not only to put into perspective the importance of ICT in the development process, but also to review the role of external actors in local development initiatives.

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