# Mobile phones, restrictions and discontinuities

Mireia Fernández-Ardèvol

IN3 – Open University of Catalonia c/Roc Boronat, 117, 7<sup>th</sup> floor (08017) Barcelona, Catalonia, Spain <u>mfernandezar@uoc.edu</u> +34934505329

How to quote this paper:
Fernández-Ardèvol, M. (2014). Mobile phones, restrictions and discontinuities, in Ibrahima Niang and Christelle Scharff (eds.): Proceedings of 4th International Conference on M4D Mobile Communication for Development M4D 2014, General Tracks, Karlstad, Sweden: Karlstad University Studies. (pp. 119-130).
Retrieved from http://kau.diva-portal.org/smash/get/diva2:709233/FULLTEXT03.pdf

Abstract: By means of a qualitative approach I bring insights on the relationship older people (60+) have with mobile communication in a low income district of Lima (Peru). The case study I conducted in September 2013 included interviews and one focus group with 20 inhabitants of San Juan de Miraflores district. The user/non-user dichotomous classification turned out to be too narrow in this context. While some participants reported a common, bidirectional use of the device, restrictions and discontinuities played a role. Some described an asymmetric use of the mobile phone, as they used it exclusively for receiving calls, while never making outgoing calls. Others described discontinuities in ownership, which was the case when their mobile was stolen and they could not replace it immediately. My initial hypothesis is that such restrictions are related to income, skills and age.

**Keywords**: Older People, Mobile Communication, Case Study, Lima, Low-income groups.

## 1. Introduction

Ageing populations must be seen as an integral part of development (Lloyd-Sherlock, 2010). The population aged 60 years and over (60+) constitutes an increasingly important demographic group. It accounts for 9% of the population in developing countries in 2013, a proportion that will reach 19% in 2100 (UN, 2013). Mobile telephony, on the other hand, is the most pervasive information and communication technology (ICT) in the developing world, with an estimated penetration rate of 89% in 2013 (ITU, 2013). New ICT artifacts and new ICT services have to take over space in an existing technology landscape (Loos, 2012) and, therefore, there will always be older individuals with increasing life expectancies who will need to deal with and decide whether to use, or not, new communication technologies.

Due to the relevance of both trends, it is timely and of most interest to analyze the way older people interact with and through mobile telephony in developing countries. However, empirical analyses available of the intersection of ageing and ICTs refer mostly to developed countries. The 2012 special issue "Community Informatics and Older Persons" of The Journal of Community Informatics (Gurstein, 2012) only contains one contribution from the developing perspective which analyzes community radio in Zambia (Stam & Mweetwa, 2012). Another exception is Wong, Thwaites, & Khong (2008) on Malaysia, which is focused on mobile phones but not on low-income segments of the population.

Considering the lack of research in this area, I developed a qualitative case study on mobile telephony and older people in Lima (Peru) in September 2013. In what follows I discuss the results obtained in a low income district, San Juan de Miraflores. Section 2 describes the analytical framework; section 3 is devoted to methodology while Section 4 describes the context. Section 5 contains the results, and discussions and conclusions are in Section 6.

## 2. Analytical framework and research questions

Ageing is related to socio-cultural aspects: personal values and interests change over one's lifetime. Age shapes physical characteristics as well as cognition and reading capacity, or more basic abilities, like handling small featured devices (Charness, Parks, & Sabel, 2001). Communication practices also change with age and affect the choice of media, which evolves as we grow old. ICT use decreases with age; however, the most pervasive technology among all age groups is mobile technology (ITU, 2013; for Peru see ECLAC, 2009). Given its pervasiveness, age is a dimension that tends to specify 'the type of use rather than the use itself' (Castells, Fernández Ardèvol, Linchuan Qiu, & Sey, 2006, p. 41).

This paper is part of a wider research project that explores every day use(s) - or lack of use - of mobile communication among older people. Theframework of the case study is built upon five key concepts: (1) Heterogeneity: the category 'older people' (here: individuals aged 60+) gathers a range of heterogeneous personal profiles. Differences in life course constitute an important source of diversity that must be taken into account (Dannefer, 1988). (2) Personal networks play a role in adoption and learning processes. Support is of most relevance in the first stages of appropriation (Bakardjieva, 2005 among others). In the case of older people, such support often comes from an adult son or daughter (Fernández-Ardèvol, 2013) and their expectations shape effective uses by older people (Ling, 2008). (3) Use evolves with time. Decisions on use are not static or permanent but respond to decisions based on needs and available ICTs that change with time. For instance, initial reluctance among older individuals can turn into acceptance if the service meets personal needs (Ling, 2008). In any case, mobile phones need to be perceived as useful, social and enjoyable in order to be adopted by older individuals (Conci, Pianesi, & Zancanaro, 2009). (4) The study of any ICT must take into account the individual's communicative ecology (Tacchi, Slater, & Hearn, 2003), that is, the whole structure of communication and information in everyday life. This big picture allows a better understanding of the "impacts and possibilities of a particular medium" (ibid, p.15). And (5), in low-income contexts resource restrictions shape the effective use of mobile phones thus creating asymmetries in use (see Barrantes and Galperin, 2008 for Latin America).

Within this analytical framework, my research interest is focused on the relationship low-income older individuals have with mobile telephony. Research questions respond to the interest for describing the ways low-income older people incorporate, or do not incorporate, mobile communication in everyday life practices: How do older people use mobile phones (if they do)? What combinations of communication media can be found among seniors? What are the motivations for not using mobile phones: rejection or lack of resources? Are there other motivations? What are the effects (if any) of economic constraints? Is it possible to find specific characteristics in mobile phone use regarding low-income older people?

# 3. Methodology

The case study followed a flexible and interactive design that took into account the circumstances in which the research was carried out (Maxwell, 2005). Facilitators and informants played a crucial role in guiding practical and contextual issues, contributing to fieldwork success.

In order to gather a wide range of current situations and life trajectories, the main selection criterion was age: individuals being 60 years or older, with no upper boundary considered; both women and men. Purposive sampling procedures reached a total of 20 participants in San Juan de Miraflores.<sup>1</sup> However, being a mobile phone user was not a selection criterion. This allowed a better understanding of the subjective experiences and motivations for using – or not using – this technology, and of older people's relationship with mobile telephony from a broad perspective.

The main tools for information gathering were semi-structured interviews and focus groups. Conversations revolved around participants' uses of mediated communication channels (landline, mobile phone, Internet) and the specific role mobile communication played in their everyday life, if it played any. I asked participants about drawbacks and benefits of mobile telephony, while the interview also considered motivations, opinions and personal experiences regarding mobile phones. Conversations were voice recorded to allow for further text analysis. Participants were informed of the goals of the research project, and the anonymity of their contribution. They received a symbolic reward at the end of the interaction. During interactions, I answered every question participants had. To fully adapt to the Peruvian context I followed the ethics protocols of the Institute for Peruvian Studies (IEP), the host institution that allowed me to conduct the fieldwork.

# 4. Context

The district of San Juan de Miraflores has almost 400.000 inhabitants (INEI, 2011), roughly representing 5% of the population of Lima (INEI, 2013). In socioeconomic terms, the majority of the inhabitants (72%) in this area of the city belonged to segments C and D in 2012 (38% and 34%, respectively, APEIM, 2013).<sup>2, 3</sup> As for the last available data, up to 19% of the population in

<sup>&</sup>lt;sup>1</sup> The case study in Lima reached a total of 37 participants 60+ living in different districts of Lima. I also conducted additional interviews with two key informants.

<sup>&</sup>lt;sup>2</sup> Following a common practice in Latin America, APEIM (*Asociación Peruana de Empresas de Investigación de* Mercados) yearly estimates the socioeconomic levels of the Peruvian sociaty. This multidimensional indicator has five categories, ranging from A (higher socioeconomic level) to E (lower socioeconomic level).

San Juan de Miraflores was poor, while up to 27% lived in households with at least one unsatisfied basic need (INEI, n.d. based on the 2007 Census).

Participants were contacted, in a first instance, through a workshop for older people organized every Saturday morning in the catholic parish Sagrada Familia, located in Trébol Azul neighborhood, in San Juan de Miraflores. The district -particularly this neighborhood- constitutes a heterogeneous area where older people have different life conditions, some more close to poverty than others (Ramos, Vera-Tudela, & Cardenas, 2009). As a facilitator said, people living in this area have a "stark life". The workshop, managed and conducted by volunteers, is called Taller del Adulto Mayor "Esperanza del Señor" (TAM). It is designed as a place for older people to socialize, fostering active ageing and preventing isolation. Volunteers reported a moderate degree of attendance to the workshop the day I participated, with 15-20 participants, due to the cold weather. Elders did some light exercise and some crafts. Gospel reading and prayers constituted an important part of the group dynamics. The workshop, with a length of 3.5 hours, ends with a lunch prepared and served by volunteers that is provided for free. Those who need it, also take leftover food home with them.

### 5. Results

I conducted a thematic analysis of the information provided by the 20 senior participants. Names are not real to guarantee anonymity and the participant's age is detailed in parenthesis. More details on the characteristics of participants are gathered in Table 1 (Annex).

Every participant had access to a phone at home, being it fixed or mobile. All but one had either a landline at home or owned a mobile phone. The exception was Carlos (80), who had indirect access to mobile telephony through relatives living in the same household. Conversely, Mario (62) was the only one who described using computers and Internet. He was an accountant who ran his own business, located in the first floor of his lot, and used these ICTs on a daily basis.

Yet for mobile phones, the dichotomous classification "user / non-user" resulted too narrow and too static as it hid the richness of the landscape, which was shaped by two different constraints: those general among low-income population segments and those specific that older people face. Among users

<sup>&</sup>lt;sup>3</sup> At a district level, information on socioeconomic levels is grouped in zones. San Juan de Miraflores belongs to Zone 8 together with Surquillo, Barranco and Chorrillo.

there were participants who described a common, bidirectional use of the mobile phone. They called and were called on the mobile phone, regardless of their skills and frequency of use. However, some described using the mobile phone exclusively for receiving calls. This is what I call an *asymmetric use* of the mobile phone.

Among non users, some never had a mobile phone and would like to have one. Others were not interested in having a mobile phone, as they did not see it as part of their everyday life. Yet, some individuals described what I call *discontinuities in ownership*. It happened when the mobile device got lost – usually it was robbed – and there was no money to replace it in the short term.

In what follows I develop in detail the evidence I gathered on the asymmetry of use and discontinuities in ownership. While the number of participants who described these situations is minimal, as will be discussed in the next paragraphs, their narratives are relevant to understand how restrictions operate and which consequences they have. Still further research is needed to find out whether these situations are common, or not, among low-income older people as this broader goal is out of the reach of the current qualitative case study.

Asymmetric use: I talked to three seniors who only received calls on the mobile phones. All of them were women, with ages ranging from 62 to 80 years old. First of all, Maria (62) explained that her "daughter made the sacrifice of buying [the mobile phone]." She had a mid-range, sliding-screen device in which the keyboard is usually hidden. Somebody took a picture of her and set it up as the screensaver. Despite the personalization of the handset, she explained she only performed one activity on the mobile: answering calls. She preferred the landline for making calls due to usability issues: "[the mobile phone] is a bit difficult for me". Phones were important for her, mainly for coordination as she looked after her grandchildren who lived in the same household while the daughter was at work.

Second, Ana (80) had a more basic phone with camera and FM radio. Even though she was happy to participate, the conversation with her was short and a little difficult as she had a hard ear. She explained that her adult children gave her a mobile phone so they could put their minds at rest while she attended the day centre. She explained she attended the day center daily, which indicates a certain degree of dependency related to her age. She also mentioned usability problems for not using the mobile phone beyond the reception of calls. In this case, her visual limitation prevented her to explore the device. As in the case of Maria, she received calls from her children on the mobile, and used the home landline for making calls.

Both women were clear about the button they had to "crush" when the mobile rang. From what they explained, they were not expected to do anything beyond that, as they were not good at learning how to perform other tasks on it. They already had the landline for making calls, so they did not complain about feeling disconnected. They lived with children and grandchildren, and in both cases a daughter took care of the mobile phone and the associated expenses. While they did not mention it, their children might also take care of buying airtime to keep the subscription in operation and of using the airtime periodically to avoid wasting the money they need to spend to maintain the line active.

Third, Fermina (79 years old) lived on her own. She also had a sliding mobile phone, which was a type of handset popular among participants. She had no landline and no credit on her mobile phone, so she had to wait for her relatives to call her. She complained about being disconnected, but did not use telephone kiosks, as she was very concerned about the cost of calls. She got the handset, her first mobile phone, two years before our conversation. She used it as a watch during the day, and at night she had a specific place at the head of her bed where she kept it. She was clear about when the battery needed to be charged so the device was always ready to function. Yet, she explained she did not know how to make calls. She even showed interest in using advanced, zero cost services. For instance, she appreciated the embedded camera: she tried, unsuccessfully, to take a picture during the Saturday workshop. The device memory was full so an error message appeared on the screen. In fact, during our two interactions I realized that, despite her interest, she did not understand the features of the device and was not able to perform sophisticated tasks such as checking or managing SMS or deleting contents to free up memory space.

She explained that sometimes it turned out to be difficult to reach her on the phone, as she did not hear it ringing and/or it took her too much time to answer. In these occasions relatives communicated with her through her granddaughter, who lived in the adjacent lot. The role of the extended family living close to her seems, therefore, crucial to help her in mediated communications.

**Discontinuities in ownership:** On occasion, the mobile phone broke down or was robbed and the user was not able to replace it immediately. Two

participants faced these discontinuities, while two others explained what they would do in such a case.

Cora (76) stopped using mobiles when her device disappeared. She was given a new mobile phone in 2009 as a Christmas present. She used it for a couple of months in combination with the landline, but then her grandson took it to school and "lost it" – a common expression they used to refer to robberies, which were frequent. She "enjoyed" having the mobile phone and "learnt how to use it." But, "they [her children] don't buy me another one. Not anymore." Neither did she seem willing to make such a purchase. However, if she received a mobile phone as a present she would be happy to (re)learn how to use it. The mobile phone represented and extra layer of communication as they already had a landline at home. Therefore, she did not characterize the loss of the phone as a big problem. In addition, her husband, Cesar (84), had never been interested in having a mobile phone.

The second example corresponds to Juana (62), who had to manage without her mobile phone for a period of time. She moved from Ayacucho to Lima in the eighties due to the hidden civil war the country was suffering at that time. Her husband was killed there in 1992 along with other relatives, and her current economic situation was not good. Her son bought her first mobile phone in 2005. At that time prices of mobile communication were higher, indicating how important this communication tool might be for the family who, at that time, had no landline.

Her old device was "beautiful" with "big buttons" and "little cartoons" (icons) which were really useful for her to identify who to call, as she was illiterate. When her mobile phone was stolen, one year before our conversation, she had to wait "for a while" to have a new device. It was a featured phone, with camera and radio, which turned out not to be as useful as the first one. Her children paid for it, because "I don't work [anymore]." She complained about being robbed and losing a device she liked. However, she seemed happy to accept her children's support while at the same time acknowledging that she was not economically dependent and that, therefore, some decisions were not hers to make. During the time she had no mobile phone she made use of her daughter's device from time to time. She could also use the landline at home. In fact, they did not use to have a landline but it was necessary for her daughters' Internet connection. Even though she was robbed and replacing a mobile phone was not easy, she had not considered the possibility of leaving the handset at home when she goes out, as she appreciated being permanently reachable.

In order to understand how restrictions could affect mobile phone ownership I asked participants what would happen in case their handset was lost. Two cases illustrate differences in resource restrictions. On the one hand, Leo (74) explained how the mobile phone turned out to be a key tool when he started his monthly trips to Arequipa province to deal with the producers of the cheese he resells door-to-door in Lima. He had been developing this activity since he lost his job in the building sector for being "too old". He described a very limited use of the mobile phone. Outgoing calls surpassed the number of incoming ones, "but I call only when it is necessary." However, sometimes "there is not money" for buying minutes and his communication was restricted to incoming calls. In the same sense, if his handset were lost he might not be able to buy a new one immediately, but would save in order to replace it. On the other hand, Julio (69) used to be an independent driver who had his own car, but was retired at the time of the interview. He already had a landline at home when his son gave him a mobile phone as a present. He used it on a regular basis; thus, in case it got lost or broken: "I will buy another one, because I'm already used to it." He made clear he had a comfortable economic situation, therefore "it would be no problem [to buy a new one immediately]" as he could either withdraw money with his card or buy it on credit.

#### 6. Discussion and conclusions

In this paper I analyze the relationships that a group of older individuals (60+) living in a low-income district of Lima (Peru) had with mobile telephones. The 20 participants described a diversity of situations, while I focus my interest on restrictions they faced.

Voice calls constituted the main service (Ling, 2008), with very few participants using SMS or even the camera. Younger seniors who had been using mobile phones for some years described more autonomous and sophisticated uses, while some older participants reported being assisted users. Among them, some had the mobile phone only for receiving calls. Participants could suffer discontinuities in ownership when their device broke down or was lost. Finally, some partakers were not even interested in having a mobile phone.

Two different kinds of constraints appeared in conversations: resource constraints and skill constraints. While the former affects different age cohorts (as described, for instance, by Barrantes and Galperin, 2008) the latter seems to affect particularly older people who, in some cases, only knew how to answer incoming calls. Asymmetric use was linked to lack of skills, as explained by

Maria (62) and Ana (80). Yet it was also linked to a combination of lack of skills and lack of resources, as for Fermina (79). Discontinuities in ownership were linked to lack of resources, as in the case of Cora (76) and Juana (62).

The way participants described *asymmetric use* and *discontinuities in ownership* suggests these older individuals have no or little agency with regards to the use of mobile telephony. Participants depended on their children for using the device or for obtaining a new one. In situations of discontinuities it was the case that either another adult household member had a mobile phone or that there was a landline in operation. Maintaining the older adult's mobile phone, therefore, did not seem to be a priority in these situations as the family was not disconnected.

My hypothesis is that breadwinners, as Julio (69), will never stop having a mobile phone due to their central role in the household. They decide where to allocate their resources. The rest of the family members seem to agree that it is important that key family members – as the head of household – should have a personal device. Conversely, those who do not play a central role in the family dynamics, as Juana (62) who depends economically on her children, could go longer without connectivity. Purchasing a mobile phone for such family members is not seen as a household priority.

Further research is needed to explore whether results obtained in this case study are specific to San Juan de Miraflores or if they are common to other low-income contexts.

Summing up, while some restrictions seem to be common to any age cohort in low-income population segments, there are specific restrictions older people seem to face. They are rooted in two different dimensions. The first one is a lack of skills, which might be shaped by learning capacities or by physical limitations. Second is a lack of resources, which I observed among economically dependent elders, due to the [peripheral] position elders have within their family and due to their economic dependence. When these restrictions appear, the agency of older individuals is challenged and the way they manage their mediated communication is more limited than the way of younger family members. Therefore, standard categories such as 'mobile phone user' and 'mobile phone non-user' become too narrow to grasp the effects of described restrictions.

The dimensions I analyzed impact how later life is experienced and, therefore are relevant for the analysis of ageing populations in developing contexts (as argued by Lloyd-Sherlock 2010). The obtained results also contribute to overcoming stereotypes on the relationship older people have with ICTs that are currently shaping public policies and private sector decisions concerning this age group. For instance, there is a common assumed idea that ICTs are the potential *saviors* of the older person-*victim* of ageing (Richardson, Zorn and Weaver, 2011). However, the cases I discuss here show that mobile phones are not always the only element allowing connectedness in the case of older people as social support networks can operate through other channels.

#### Acknowledgements

The Institute for Peruvian Studies (Instituto de Estudios Peruanos, IEP) and Dra. Roxana Barrantes hosted my visit in Lima. María Kathia Cárdenas facilitated access to San Juan de Miraflores inhabitants through the *Taller de Adultos Mayores "Esperanza del Señor"* and provided key advice for the success of the fieldwork in Trébol Azul neighborhood. Sarah Wagner helped in language revision. Usual disclaimer applies.

### References

- APEIM. (2013). Niveles socioeconómicos 2013 (p. 52). Lima (Peru): Asociación Peruana de Empresas de Investigación de Mercados (APEIM). Retrieved from http://www.apeim.com.pe/wp-content/themes/apeim/docs/nse/APEIM-NSE-2013.pdf
- Bakardjieva, M. (2005). Internet society: The Internet in everyday life. London: SAGE.
- Barrantes, R., Galperin, H. (2008). Can the poor afford mobile telephony? Evidence from Latin America, IDRC, 31p. Retrieved from http://www.dirsi.net/sites/default/files/ GalperinHernan.pdf
- Castells, M., Fernández Ardèvol, M., Linchuan Qiu, J., & Sey, A. (2006). *Mobile communication and society: A global perspective*. Cambridge, MA: MIT.
- Charness, N., Parks, D. C., & Sabel, B. A. (Eds.). (2001). Communication, technology and aging: Opportunities and challenges for the future. New York, NY: Springer.
- Conci, M., Pianesi, F., & Zancanaro, M. (2009). Useful, social and enjoyable: Mobile phone adoption by older people. In T. Gross, J. Gulliksen, P. Kotzé, L. Oestreicher, P. Palanque, R. Oliveira Prates, & M. Winckler (Eds.), *Human-computer interaction INTERACT 2009: Proceedings part I* (Vol. 5726, pp. 63–76). Berlin, Germany: Springer.
- Dannefer, D. (1988). What's in a name? An account of the neglect of variability in the study of aging. In J. E. Birren & V. L. Bengtson (Eds.), *Emergent theories of aging* (pp. 356–384). New York, NY: Springer.
- ECLAC. (2009). ENAHO 2009, Peru; ICT Statistical Information System. Peru. Data explorer. Retrieved June 27, 2013, from http://www.eclac.cl/tic/flash/default.asp ?idioma=IN
- Fernández-Ardèvol, M. (2013). Deliberate missed calls: A meaningful communication practice for seniors? *Mobile Media & Communication*, 1(3), 285–298.
- Gurstein, M. (2012). Community informatics and older persons: The necessary connection. *The Journal of Community Informatics*, 8(1).
- INEI. (2011). Cuadro 1. Población total al 30 de junio, por grupos quinquenales de edad, según departamento, provincia y distrito, 2005 y proyecciones. Instituto Nacional de Estadística e Informática (INEI). Perú. Estimaciones y proyecciones de población. Retrieved from http://www.inei.gob.pe/media/MenuRecursivo/indices\_tematicos/cuadro001\_1.xls

- INEI. (2013). Perú en Cifras Lima: Indicadores demográficos 2011. Instituto Nacional de Estadística e Informática (INEI).Data explorer. Retrieved from http://www.inei.gob.pe/ perucifrasHTM/inf-dem/cuadro.asp?cod=9177&name=d15\_03&ext=jpg
- INEI. (n.d.). Sistema de Consulta de Principales Indicadores de Pobreza. Censos Nacionales 2007 XI de Población y VI de Viviendas. Perú. Instituto Nacional de Estadística e Informática (INEI). Retrieved from http://desa.inei.gob.pe/Censos2007/Pobreza/
- ITU. (2013). *The World in 2013: ICT facts and figures* (Brochure). Geneva, Switzerland: International Telecommunication Union (ITU). Retrieved from
- http://www.itu.int/en/ITU-D/Statistics/Documents/facts/ICTFactsFigures2013.pdf Ling, R. (2008). Should we be concerned that the elderly don't text? *The Information Society*, 24(5), 334–341.
- Lloyd-Sherlock, P. (2010). *Population ageing and international development: From generalisastion to evidence*. Bristol, England: The Policy Press.
- Loos, E. F. (2012). Senior citizens: Digital immigrants in their own country? *Observatorio* (OBS\*) Journal, 6(1), 001–023.
- Maxwell, J. A. (2005). *Qualitative research design: An interactive approach* (2nd ed., Vol. 41). Thousand Oaks, CA: Sage.
- Ramos Padilla, M. A., Vera-Tudela Traveso, D., & Cardenas Garcia Santillan, M. K. (2009). Las personas adultas mayores y su contribución a la lucha contra la pobreza. Lima (Peru): UNFPA: Ministerio de la Mujer y Desarrollo Social. Retrieved from http://www.redadultos mayores.com.ar/2011/El%20AM%20y%20su%20contribucion%20a%20la%20economia %20familiar.pdf
- Richardson, M., Zorn, T. E., & Weaver, C. K. (2011). Older people and new communication technologies. Narratives from the literature. In C. T. Salmon (Ed.), *Communication Yearbook* 35 (pp. 121–154). Taylor & Francis.
- Stam, G. van, & Mweetwa, F. (2012). Community radio provides elderly a platform to have their voices heard in rural Macha, Zambia. *The Journal of Community Informatics*, 8(1).
- Tacchi, J., Slater, D., & Hearn, G. N. (2003). *Ethnographic action research: A user's handbook*. New Delhi, India: UNESCO. Retrieved from http://eprints.qut.edu.au/4399/1/4399.pdf
- UN. (2013). World population prospects: The 2012 revision, Key findings and advance tables (No. ESA/P/WP.227). United Nations, Department of Economic and Social Affairs.New York, NY: Author. Retrieved from http://esa.un.org/unpd/wpp/Documentation/pdf/WPP2012\_%20KEY%20FINDINGS.pdf
- Wong, C. Y., Thwaites, H., & Khong, C.-W. (2008). Oh! My battery was drained because I forgot to press the end call button. In C.-W. Khong, C. Y. Wong, & B. von Niman (Eds.), *Proceedings of 21st International Symposium of Human Factors in Telecommunication HFT 2008* (pp. 31–38). Prentice Hall. Retrieved from http://www.hft2008.org/images/paper/hft08.cywong-seniorcitizen.pdf

#### Annex

# Table 1. Characteristics of participants, typology of interaction, parish workshop membership, and use of selected ICT

Name <sup>1</sup>	Sex, order id, age	Typology of interaction	Parish workshop member	Mobile phone	Land- line	Internet
Maria	Woman1(62)		Yes	Yes	Yes	No
Sara	Woman2(65)	Focus	Yes	Yes	Yes	No
Elisa	Woman3(63)	group	Yes	No	Yes	No
Ana	Woman4(80)		Yes	Yes	No	No
Estrella	Woman5(78)	Interview	Yes	No	Yes	No
Fermina	Woman6(79)	Interview	Yes	Yes	No	No
Celia	Woman7(78)	Interview	Yes	Yes	Yes	No
Ramona	Woman8(61)	Interview	No	No	Yes	No
Julio	Man9(69)	Interview	No	Yes	Yes	No

Jose	Man10(83)	Interview	No	No	Yes	No
Cora	Woman11(76)	Join	No	No	Yes	No
Cesar	Man12(84)	interview <sup>1</sup>	No	No	Yes	No
Juana	Woman13(62)	Interview	Yes	Yes	Yes	No
Catia	Woman14(88)	Interview	Yes	No	No	No
Reme	Woman15(74)	Interview	Yes	Yes	No	No
Ignacia	Woman16(63)	Interview	No	Yes	No	No
Severo	Man17(73)	Interview	No	Yes	No	No
Mario	Man18(62)	Interview	No	Yes	Yes	Yes
Leo	Man19(76)	Interview	No	Yes	No	No
Carlos	Man20(80)	Interview	No	No	No	No

<sup>1</sup> Participants' names are not real to guarantee anonymity. <sup>2</sup> Couple. Source: Own elaboration.