

**Ageing and Technology: the case of a one-tablet-per-senior program in Uruguay**

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## **Abstract**

This thesis examines the relationship between older persons and technology, focusing on a one-tablet-per-retired-senior public program —*Plan Ibirapitá*— being developed in Uruguay. It is situated within recent Science and Technology Studies (STS)-inspired research on aging and technology that has stressed that older people and technology are co-constructed or co-constituted, namely, that rather than being technologically-averse, older people negotiate with technology in specific contexts. This thesis also uses the philosophical reflections of José Ortega y Gasset on the relationship between self, circumstance and life as a *que-hacer* (having-to-do), suggesting that it could provide new means of conceptualizing the relationship between older people and technology, emphasizing the agency of the former. Within this framework, this thesis is the product of a qualitative research design through which I interviewed Uruguayan seniors who received the tablet. My research found that there is a prevailing techno-optimist discourse that frames technologies, such as the tablets distributed under *Plan Ibirapitá*, as an intrinsically good and necessary thing for seniors' lives that my research participants rhetorically embraced but was not reflected in their actual usage of the tablet. Such a program is valuable insofar it provides digital access to a population —older people— that theoretically suffers the consequences of the digital divide. However, exclusion from the information society may not be a problem for many seniors. I suggest that seniors should be conceptualized as agents who actively decide the role that technology plays in their lives and for whom being included in the information society means different things according to their individual context. I also suggest that it is necessary to focus on how

seniors relate to digital technology precisely as part of their circumstances, and how they understand being digitally included or excluded themselves.

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## Chapter 1: INTRODUCTION

### 1.1 Background

The dominant narrative about the relationship between older people and technology has usually been framed in terms of incompetence or ineptitude (see, for example, Essén and Östlund, 2011; Roberts, 2009; Schreurs, Quan Haase and Martin, 2017). One example of this was a German short comic video from 2012 (Knallerfrauen, 2013) that was popular on social media in Uruguay. The video shows a father and daughter who are in the kitchen. The middle-aged daughter is cutting potatoes. As she puts them into a steaming pot, her father, an older man, is in the back, chopping vegetables. The daughter asks her father: “Dad, how do you find the new iPad we gave you for your birthday?” “Good”, the father responds. “So, you are able to manage the different apps?” the daughter inquires. “What apps?” the father asks as he walks toward the pot and dumps chopped onions from his new iPad into the pot. The daughter looks at her father astonished as he is using his new iPad as a chopping board. Then, he walks towards the sink, rinses it, and places it into the dishwasher as if it was part of a normal routine with the habitual wooden chopping board!

This comic sketch was popular in Uruguay because of an innovative public program, consisting of the delivery of tablets to low-income retired seniors, that the leftist party Broad Front (*Frente Amplio*) promised if they were to win the presidential election for a third term in 2015. Broad’s Front leader Tabaré Vázquez finally won the elections and launched this program called *Plan Ibirapitá*<sup>1</sup>.

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<sup>1</sup> *Ibirapitá* is the name of a tree common in Uruguay. The name *Plan Ibirapitá* is also meant to signify a continuation with *Plan Ceibal* —the one-laptop-per-child policy that Uruguay has been developing since

Back in 2015, the general feeling of Uruguayans was one of scepticism and echoed the German video. The idea of delivering tablets to seniors caused a great deal of controversy. Are older people as inept with digital technology as the German video portrays? What other ridiculous uses would seniors give to devices such as tablets besides chopping boards? Was this merely demagogy from a government wanting to assure votes from seniors in the next election? At the same time, how the father in the video uses the tablet raises questions about what artifacts —such as tablets— *are* for seniors. Even though he is not using it as it is intended, he is *using* it nonetheless. Hence, we could ask: what *are* digital technologies within the life of an older person and his or her practices?

The issue of ageing demographics is a concern for many countries (United Nations, 2017) and the relationship between older people and technology is being increasingly scrutinized. This is particularly relevant for Uruguay, which has a growing aging population, and has the second lowest population-growth rate in Latin America (Berriel, Fernandez and Rodriguez, 2011: 13). In fact, many political actors as well as groups within civil society, were suspicious about Plan Ibirapitá. For instance, organizations of retirees and pensioners, questioned the program because they claimed that a more important priority should be to increase monthly pension payments (see Cotelo, 2015). Nevertheless, President Vazquez launched Plan Ibirapitá in 2015 with the mission to “promote the digital inclusion of older adults who have a low income.” (Memoria Annual, 2017: 1).

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2007— where *Ceibal* is also the name of common tree. However, Ceibal is meant to be the acronym for *Conectividad Educativa de Informática Básica para el Aprendizaje en Línea* (Educational Connectivity of Basic Computing for Learning Online).

The Presidential decree 130/15 from May 15, 2015 that created the program, stated (Decreto 130/105, 2015):

Given that it is of public interest the promotion and development of programs that promote equality in access to knowledge and social inclusion of all sectors of society (...)

Considering (...) that the country has made important advances in the generation of knowledge through the use of information and telecommunication technologies (software and hardware), as well as the related connectivity systems, for children and adolescents, and teachers related to the implementation of Plan Ceibal, The Republic's Presidency Decrees: Plan Ibirapitá will be created, with the objective of granting retirees with access to knowledge and social inclusion by means of providing them with devices with internet connection (Tablet), and thus conditions for integration in family, social, and relational realms in general.<sup>2</sup>

In addition, when President Vázquez was the keynote speaker at the opening of the First Open Forum of Sciences of Latin America and the Caribbean in 2016 that took place in Montevideo, he specifically referred to Plan Ibirapitá: “The program does not only mean giving a tablet, but also that older adults are able to communicate with friends and family, are able to access information, perform procedures and entertain themselves. That way, aging can be another stage of learning, activity and integration in social life.” (Tabaré Vázquez dijo que el Plan Ceibal es una transformación educativa, 2016). And in March of 2019 in a rally for accountability addressing the population, he said that the gap between young people with Internet access and the elderly who do not have access has

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<sup>2</sup> All the quotations from Spanish, including sources and empirical data, were translated to English by the author.

been reduced thanks to the delivery of 220,000 tablets for retirees with lower incomes from Plan Ibirapitá. In reference to the video of the father and daughter, he added in a rather self-congratulatory manner, “None of those tablets ended up as a chopping board.” (Presidente Vázquez en el Antel Arena, 2019)

In general, Uruguay has shown improvement tackling the so called ‘Grey Gap’, that is, the inequality in access to devices and the internet based on age (Anderson and Perrin, 2017; Lagacé et al. 2015; van Dijk and Hacker, 2013). Internet penetration has increased the most for the older segments of the population, namely, for those above 50 years of age and especially for those over 65 (Grupo Radar, 2015). Plan Ibirapitá is thus a continuation of public policy aiming towards the digital inclusion of the Uruguayan population who tend to be on the wrong side of the digital divide, which started with the one-laptop-per-child program called Plan Ceibal, inspired by Nicholas Negroponte at MIT, and created by a decree from President Tabaré Vázquez in April of 2007. Plan Ceibal was framed within the necessity of consolidating equality in the ‘information society’, therefore, the institution chosen to develop the policy was the public school — the institution that ideally promotes social inclusion *par excellence* (Rivoir and Lamschtein, 2012; 2014). This context makes Uruguay particularly interesting given that it is the country in Latin America which has shown the strongest policy framework involving information and communication technologies (ICTs), accompanied by significant progress in connectivity in the last decade and a half (see Rivoir, 2013).

The government office in charge of overseeing the implementation of Plan Ceibal —*Centro Ceibal*— was assigned to do the same with Plan Ibirapitá. The Plan stipulated that in order to receive a tablet one had to be a retiree with a monthly income of 33.232

Uruguayan pesos (approximately 1335 CAD or 1015 USD) or less (as of February of 2019). The program's website, [ibirapita.org.uy](http://ibirapita.org.uy), explains that the tablets are designed with an interface that is 'user-friendly and intuitive'. There is also training available for seniors to learn how to use the tablets provided by the Plan. As of 2018, 218,000 tablets have been delivered (Primeros en tecnología, 2019) and the program is ongoing.

The tablet that seniors receive has two interfaces: the regular Android one and another one specially designed for the Plan that has bigger buttons and font. It has the following technical characteristics: an Android 5.1 operating system, Intel Atom Processor, 1GB of RAM memory, Bluetooth, WiFi, USB Port, HDMI input, earphones plug-ins, microphone, speakers, eight-inch touchscreen, photo camera and 8 GB of internal storage, and the following features: Wi-Fi, games (some of them are already installed, such as: chess, checkers, Tetris, piano, accordion, freefall, Ping-Pong, Sudoku, among others), TV, Newspapers, PDF reader, Wikipedia, Epub (e-books that can be downloaded and read on the device), MP3 player, an app called Calendula which creates a calendar with reminders of when the user needs to take his/her medication, an app to access the BPS's website (BPS stands for *Banco de Previsión Social*, the Uruguayan social security office in Uruguay), a file-administrator app, and links to various websites (such as one to check the weather, one that tells you when and where to collect your pension, one to check the time schedule for buses, among others). Most importantly, Plan Ibirapitá beneficiaries also receive one gigabyte (GB) of Internet data for free that can be re-charged for a fee.

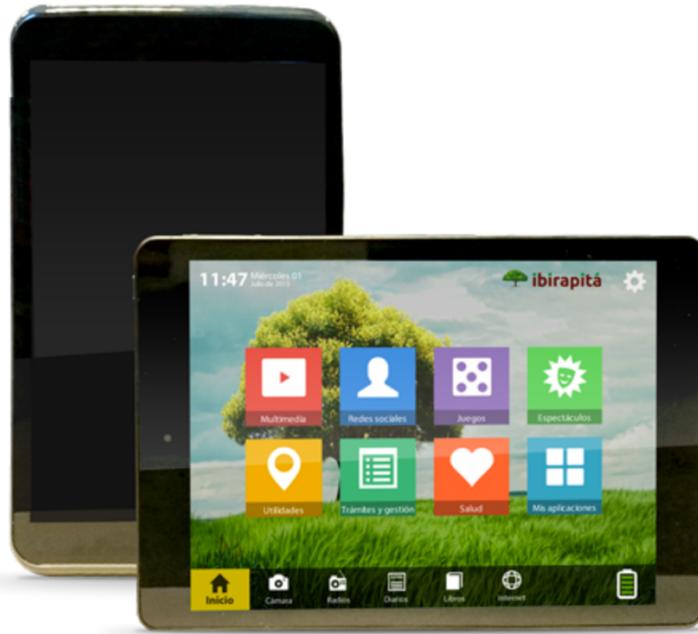


Image 1: Plan Ibirapita tablet (extracted from <https://ibirapita.org.uy/software-tablet-jp/>)

According to Plan Ibirapitá’s Department of Evaluation and Monitoring’s Third Survey of Use of October 2017, at a time when 130,000 people had received the tablet, 53% stated that they did not use the tablet during the past week. The main reasons for not using it were: lack of time (21%), not having Internet or Internet issues (21%), the tablet is broken (20%), lack of knowledge on how to use it (15%), lack of interest (8%), use of other devices (phone, laptop) (8%), health issues (4%), lack of people to help the senior (1%). Furthermore, 61% of seniors indicated that the tablet was their first encounter with a digital device, whereas 4 out of 10 persons also own a smartphone. 65% of the interviewees declare having Internet in their home and 76% stated that they did not run

out of Internet during the month. 90% said that the tablet works properly (Tercera Encuesta de Uso, 2017).

The fact that more than half of tablet recipients in 2017 did not use the tablet is worthy of further investigation because it poses questions about why older people do not seem to appropriate such a technology into their lives. It is also striking that lack of time is the one of the most frequent reasons for non-use along with lack of Internet access. Whereas the former hints at the fact that seniors perhaps do not see the tablets as useful within their lives, a significant number of them would perhaps use it more if they had greater Internet access. These are issues that arose in my data. But before referring to anything empirical, let us first review some significant literature on the meaning and practice of aging so we are in a better position to explore the role of technology in older people's lives.

## 1.2 The meaning of age and ageing

One of the things to consider when investigating a techno-policy such as the Plan Ibiripitá is what it means *to age*. Cheryl Laz (1998: 87), for example, described age as 'accomplished'. By accomplished she means something quite similar to the notion of performance as proposed by scholars of gender, that is, that the production of age is not essential but ongoing through social practices and framed by discursive practices. In other words, age is 'done', meaning that "age as a concept and institution is created, maintained, challenged, and transformed; how assumptions and beliefs about age in general and about particular age categories inform and are reinforced by social statuses, norms, roles, institutions and social structures." (Laz, 1998: 90). The same as sex, age is

premised on cultural factors, which does not mean denying that chronological age exists objectively; rather, it means to see its social interpretations and cultural effects more than as an unobjectionable given: “Conceptualizing age-as-accomplished does not ignore the fact of chronology. Rather, it enables sociologists to examine the process by which chronology is made factual and to view the consequences of our acting as if chronology were natural” (Laz, 1998: 101). At the same time, the praxis of aging entails integrating both the micro and the macro, namely, how structural definitions of aging are played out in micro processes (Wanka and Gallistl, 2018). This means moving away from seeing aging as a social problem, which defines it as a sort of independent variable and obscures the heterogeneity amongst older persons. The accomplishment of age, according to Laz (1998: 106), is useful to see how individuals “accept, reject, or negotiate the meanings of age that come “packaged” with state policy, national welfare systems, and labor markets.” It entails looking at particular contexts where people respond to structural definitions of age through their agentic practices (Giddens, 1984).

Furthermore, aging has been usually seen as a biomedical process where people’s bodies stop working properly and thus need interventions (Joyce and Loe, 2010). Authors such as Polivka (2000), have discussed how over time aging has been naturalized as a process governed by biology, especially in a context of changing economic, cultural and technological environments through the undermining of the welfare state. As a result, older people experience loss of meaning in our current times because aging is defined as a biomedical phenomenon to be solved instead of as a process through which a human being acquires life experiences and wisdom. There is also an issue of inequalities between affluent people who can construct their aging lives in many ways through

technology and scientific processes, while the non-affluent have their choices severely constrained (Polivka, 2000.).

Also addressing this biomedical construction of aging, Kimble (1990) suggested that it is key to change focus toward how people create meaning from aging. This has methodological implications for researchers, as it leads to hermeneutical strategies rather than statistical ones to truly grasp its meaning:

The resultant viewing of aging as pathological and as an avoidable or preventable affliction presents a further massive erosion of positive images and meaning concerning growing old and being aged. It generates a predictable glorification of youthfulness and an irrational denial of aging as a natural process of life that ends in death. In other words, it negates the meaning of being old. (Kimble, 1990: 114)

This negation of meaning in old age induces a hermeneutic-phenomenological methodology as the most appropriate way to studying the human implications of aging, because “phenomenology focuses on the importance of the individual as one who is actively and intentionally seeking meaning in the midst of his or her contextual, social, cultural lived world.” (Kimble, 1990: 114). Indeed, we experience the world as part of a society governed by what Spanish philosopher José Ortega y Gasset has called *usos sociales* (social customs). *Usos sociales* refer to what people do in the particular society they are born into, what is considered normal and common sense, or in other words, what is *vigente* (valid) in a society at a particular time (see Herrero, 1972; Marías, 1991). What is valid refers to the context where we find our *circumstance*, namely, our world; and the generation we belong to is a fundamental component of our lifeworld.

We live within our respective generation that defines the meaning we give to

things; it is a fundamental part of the framework of our lives through which we define them. A generation —Julián Marías (1949: 102) explained— “depends on the total system of *vigencias* (valid things) that structure [human] life in a particular time.... It is something that every man finds himself into and is part of; something that exceeds individual life, something that imposes itself and conditions it.” That is why the same event has completely different meanings for different generations, because “A generation represents certain positions toward life, from which existence is felt in a particular way.” (Marías, 1949: 95; see also Mannheim, 1952: 105).

As I will describe in this dissertation, certain technologies are a fundamental part of a generations’ material circumstance, something that researchers such as Larsson-Ranada and Hagberg (2014) have described in the case of older people as the ‘material room’. Older people indeed actively manage the material components of their lives, making decisions about what to keep, what to throw away, what to adopt, and what to reject. In an increasingly technologically-mediated world, deciding what technologies to use is fundamental, and this dissertation discusses this in relation to seniors who have accepted Plan Ibirapitá’s tablets.

### **1.3 Technological paternalism, ageing and daily life**

Different scholars (e.g. Llorente-Barroso et al., 2015; Baecker et al., 2014; Cotton et al., 2013) and multinational institutions (e.g. World Health Organization, 2017; Commission of European Communities, 2007) have suggested that information and communication technology (ICT) can help older individuals improve their quality of life and stay active. Research has pointed out that older people want to live independently in

their own homes for as long as possible (Neven, 2011; Dunér and Nordström, 2005), and that technology has the potential to help them achieve this outcome (Peek, 2017). Thus, governments around the world have tended to develop policies consisting of technological solutions for the problems brought by an aging demographic (Joyce et al., 2016). Researchers Louis Neven and Alexander Peine (2017; see also Neven, 2015) have noted that technoscientific solutions have been described as a “triple win” in so far as they alleviate the social consequences of aging, they give older people a better life, and they foster economic growth. But thus understood, science and technology are established as separate from the experiences of aging. This position projects what Peine, Rollwagen and Neven (2014) have described as an ‘implicit paternalistic stance’ that has dominated technology designed for older people. This paternalistic stance means that the senior who uses technology is conceived as a preexistent, separate entity whose “needs can be mapped and understood rather than as agents who learn about and develop new needs” (Peine et al., 2014: 927).

In this context, the way seniors experience their everyday lives and how they value technology has been largely ignored. Larsson (2009), for example, tackled this problem in Sweden through the term ‘occupation’ to examine seniors’ daily doings. ‘Occupation’ is defined by Larsson as “groups of activities and tasks of everyday life, named, organized and given value and meaning by individuals and a culture. Occupation is everything people do to occupy themselves (self-care), enjoying life (leisure), and contributing to the social and economic fabric of their communities (productivity). (CAOT, 2002, p. 34).” (Larsson, 2009: 17). According to Larsson, subjective experience is fundamental for what is considered an occupation, which depends on the environment

where everyday life takes place, consisting of the objects used when doing things, the spaces within which things are done, the social groups encountered, and the tasks available within a particular social, cultural and political context (Larsson, 2009: 18-19). Technology, undoubtedly, affects occupations as it is an essential portion of the environment, and Larsson (Larsson, 2009: 22) conceptualizes the technologies that surround a person as their ‘technological landscape’.

Larsson further remarks that little is known about how people relate to technology in their everyday doings and that it is something that warrants research. For instance, in her Swedish examination, she found that there is a discrepancy between how the participants regarded technology and how policy makers view technology for the elderly.<sup>3</sup> In fact, she noted how in public policy technology is described as something that facilitates independence and participation while the ‘oldest old’ in her study did not strive to make use of more or newer technology themselves (Larsson, 2009: 41). It seems that for technological objects to be incorporated in everyday life, they need to be integrated in the habits and daily doings of seniors (Quan Haase, Martin and Schreurs, 2016), and not respecting this bottom-up approach, and focusing on what older people want from technology themselves, leads to rejection and non-use of technology (Peek, 2017; Givskov and Deuze, 2016). This is something that Helsper and Reisdorf (2013: 94) noted:

The sociological focus of most large-scale, generalizable digital exclusion research steers researchers away from looking at individual motivations and the psychology of those who are currently not online. By focusing on measuring

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<sup>3</sup> Something noted by many other researchers such as Richardson, Weaver and Zorn (2011, 2005) or Oudshoorn, Stienstra and Neven (2016) that I also observed in this research.

use or nonuse and relating it to sociodemographic factors, this type of research often forgets to ask those who do not use ICTs directly why they do not engage.

Thus, it is fundamental to ask seniors themselves as to whether and how they would like to be included digitally. This also stresses the need for research on individual agency and the decisions that people make. This thesis looks to bring some insight in this respect.

#### **1.4 Thesis' goals and summary**

This thesis contributes to the growing body of literature on ageing, technology, and everyday life. Recent literature has been adamant in emphasizing that technology and ageing are not independent matters but are rather deeply intertwined. It has proposed that thinking of technology as 'impacting' the life of seniors as an external force for their well-being through technological interventions is conceptually misguided (e.g. Peine, 2019; Peine and Neven, 2019; Joyce et al., 2017; Peine et al., 2015; Loe, 2015; Neven, 2011). I add to this literature through an empirical study in Uruguay where I stress seniors' agency *vis-à-vis* technology.

Agency is a conflictive term to sociologists. Is agency only a human property or can non-humans have agency as well? ANT scholars would criticize that conceiving agency as something exclusive to humans would be a conceptual mistake that takes us back to the modern subject/object dichotomy. Other scholars, criticize precisely this notion of symmetry between humans and non-humans as it takes responsibility away from people (Larrión, 2019; see also Sayes, 2013). That is why in this thesis I use a combination of theories from Science and Technology Studies (STS),

Postphenomenology, as well as José Ortega y Gasset's<sup>4</sup> philosophy and anthropology of technology to tackle seniors' agency in a novel fashion, showing the role that technology plays in the horizon of older people's lives from many angles. Indeed, use of technology is far from straightforward and demands proper conceptualization, as Lagerkvist (2017: 107) writes:

The principal inhabitant of the digital ecology, our principal subject in media studies, is not a savvy, early adopter, but the human being who sometimes stumbles, falls, misunderstands, struggles, is vulnerable, hurting, speechless, and finds no solution; but who may also experience moments of ultimate meaning, community, support, and fullness, as she navigates through the torrents of our digital existence.

That is why I use such a theoretical mix. On the one hand, STS provides with a useful toolbox from the social construction of technology (SCOT) and actor-network theory (ANT). Both approaches have developed concepts that allow studying how seniors' *use* the tablet and for understanding the negotiations between tablets and seniors' daily life, in other words, how both are *co-constructed*. Postphenomenology, furthermore, also provides an interesting lens to look at the relationship between seniors and technology given its emphasis on the contextual meaning of devices and their role as active mediators of human perception. On the other hand, Ortega's thought provides an interesting framework to look at technology and seniors that does justice to how things, such as digital devices, appear in seniors' lives by focusing on the existential reality of

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<sup>4</sup> For the sake of brevity, I will often refer to him as Ortega, as he is referred to across the international literature.

people as responsible decision-makers. I particularly refer to Ortega's main philosophical proposal, that he considered "The Theme of Our Time"<sup>5</sup> (*El Tema de Nuestro Tiempo*), which is the inseparable link between human-being and their circumstances, and of *life* as the essential component way to understand human reality. Indeed, he overcame the schism between idealism and realism proposing *life as radical reality*, meaning that abstract reason cannot be without life and vice versa, and within life we have to deal with *things*<sup>6</sup>. Human existence is thus based upon a struggle for accommodation amidst unfavorable circumstances, given that what essentially makes a human being is fundamentally different from nature. Ortega did not say that human beings do not have a natural component—which is obvious—but that what makes us human is our constant struggle for living well, through which we actively create our environment rather than passively adapting to it (Ortega y Gasset, 2015). Thus, Ortega defines a difference between *contar con* and *reparar*. Whereas *contar con* (assume something) refers to things we take for granted, such as that the sun will rise every day or that people will stop at stoplights, *reparar* (pay attention to) means being conscious of something. The difficulties we encounter in our doings gives rise to this shift from *contar con* to *reparar* (Hanks, 2010), namely, when things start being problematic or stop being taken for granted in our daily lives. That is when human beings have the need to start thinking about things and their role in their lives as radical reality.

Under this framework, things acquire their meaning according to the situated activities of the individual, and these situations make us select matters for attention that

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<sup>5</sup> This is the title of one of his publications (Ortega y Gasset, 2002).

<sup>6</sup> Ortega's overcoming of both idealism and realism, in other words, his metaphysical innovation (Rodríguez-Huésca, 1982), is repeatedly recalled across his different books (e.g. 1980, 1984, 2016).

are problematic in our everyday activities. The individual has to develop meaning in a circumstance that increasingly involves ICT and that mediates our human situatedness (Echeverría, 2000; Mitcham, 2000; Verbeek, 2011, 2005). In other words, our circumstance, which more than ever encompasses technology, *co-constructs* us. Co-construction refers to the recursive relationship between agency and structural determination that people have within their material world (including technology).<sup>7</sup> For instance, as I will describe in this dissertation, my research participants (and, in fact, every human being) inhabit a particular technological circumstances —namely, a world where digital-technological mediation is increasingly inevitable— as well as conscious, responsible agents who accepted or rejected the intromission of technology in their lives or who directly did not find it useful within their life-projects.

The fundamental task that I propose to investigate, then, is: *what is the meaning of the Plan Ibirapitá delivered tablets in seniors' lives?* For which I formulate three more specific questions that guided this research:

- (1) What is the role of the tablet in seniors' lives?
- (2) How do seniors change their social practices with the digital medium?
- (3) How do the tablets of Plan Ibirapitá mediate and shape seniors' reality and their identities?

To answer these questions, in this dissertation I will describe that such devices are not 'independent atoms' external or autonomous from a person's life (Vega Encabo and

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<sup>7</sup> Many terms have been used to challenge technologically deterministic approaches besides co-construction, such as mutual constitution (Wajeman, 2015), co-constitution (Oudshoorn and Pinch, 2003; Akrich, 1992), or co-implication (Fernández-Alonso, 2018). (Postphenomeologist Peter-Paul Verbeek (2005, 2011) uses the term co-shaping which has a rather different meaning referring to the mediation character of technology.) I use these terms indistinctively across this dissertation.

Muñoz Serrano, 2018). Rather, their identity changes according to the senior's circumstance and agency within them. In a way, use or non-use of a particular technological device (as well as everything in between these extremes (Wyatt, 2014, 2002; Baumer et al., 2015b; Kania-Lundholm and Torres, 2017)) are contextual and conscious decisions of the individual. These decisions take place within a world where digital technology is practically inescapable and fundamentally composes their horizon of possibility, namely, *their circumstance*. However, I stress the individual's agency and challenge the assumption that digital technology is intrinsically a force for good that can easily integrate seniors into the 'information society'. I agree with literature on seniors and technology that is suspicious of paternalist attitudes displayed by actors such as governments or researchers in which technological policies for older people are often thought as external interventions that will impact seniors' lives making them better, or when they assume that older people will automatically adopt certain devices (see, for example, Peine, 2019; Peine and Neven, 2018; Joyce et al., 2016; Peine et al, 2015; Givskov and Deuze, 2018; Peek, 2017). The reality, I insist, is that older people and technology are *co-constructed*. Older people are indeed agents who, besides already being innovative users of technology in their daily lives (Joyce and Loe, 2010b; Loe, 2015), actively decide the role that it plays according to their contexts, their interests, their needs, or, better said, their *circumstance*.

In chapter two I review significant literature on seniors and technology, stressing how it has come to recognize that adoption and rejection of technology is not a binary but a complex, nuanced issue for which qualitative, situated studies are needed. I also refer to the notion of non-use of technology by virtue of seniors' agency as well as I describe

recent literature on the socio-material perspective on ageing. Finally, I briefly review recent research on seniors and tablets extending the criticism that it assumes that technology use will intrinsically benefit seniors rather than considering their co-construction.

Following the idea of co-construction, chapter three engages with literature from Science and Technology Studies —the Social Construction of Technology (SCOT) and Actor-Network Theory— and from Postphenomenology, thus fleshing it out some more. I put special emphasis on the idea of users of technology and their agency *vis-à-vis* devices and technological systems.

Chapter four describes Ortega's philosophy and anthropology of technology, which implies the notion of co-construction and is part of his larger system of thought. I connect it to the notion of *affordances*. By affordances I refer to the phenomenological notion that things offer certain opportunities for action, namely, that according to a situated actor's projects, things *act* as obstacles or tools, facilitators or difficulties (see, for example, Mariás, 1949). Through this interaction between the actor and their circumstance, through which affordances reveal themselves, is how the material world such as a tablet within a senior's life, acquires meaning and becomes relevant.

Chapter five reviews the research questions that guided my research, the methodology and the data gathering and analysis techniques I followed. The methodology I employed followed Bent Flyvbjerg's (2001) notion of social science as a phronetic task, thus this is a fundamentally qualitative research project aimed at understanding, not predicting, the issue at hand. It does not aim at finding concrete causes to such a complex problem but at being an input for dialogue. I used semi-structured

interviews as the main data gathering technique and analyzed the data applying tools from grounded theory. Here I also present the main categories that emerged from my data.

Chapters six and seven presents my research findings. Whereas chapter six describes the problems of establishing the ‘senior user of the tablet’ by pointing out the human and technical elements that seniors identified as problems that prevent them from using the tablet, chapter seven describes the perception of the tablets in everyday life. Let us review the main findings:

*Ambivalence* was a constant feature of seniors’ relationship to the tablet (see also Damant, 2015). In spite of a fundamental ‘communication affordance’ that appears within seniors’ circumstance, participants tended to critique the increasing role of technology in human life, as well as they were ambivalent about the policy itself as many of them insisted that they would have preferred an increase in their monthly pension rather than a tablet.<sup>8</sup>

Even though many of them recognized the need for being aware of technological change, the often-heard critique of the policy relates to the lack of use of the tablet and the somewhat lack of perceived usefulness, which is at the same time fed by the fact that my participants tended to state that they have busy lives and that they spend time in activities that do not require the use of the tablet. (Many of them do, however, carry their cellphones or smartphones around.) The tablet often represented a competition with other activities such as looking after grandchildren, running errands, volunteering in different

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<sup>8</sup> This was a common discussion regarding the distribution of tablets. However, one argument against it was that the monetary increase that seniors would receive would be quite insignificant compared to the benefits they would receive from the tablet.

organizations, etc. (see Suopojärvi, 2015). This also points to the fact that, in general, the tablet was seen as device that had a time and place for use; it was not generally understood as something to carry along as one goes about doing their business in their daily activities and was seen more akin to an appliance such as the radio or the TV: there is a time and place to use the tablet.

Moreover, for some, the use of the tablet, particularly the training sessions, interrupts the motions of daily life. For instance, a participant named Jorge<sup>9</sup> has an established routine that includes an afternoon nap that prevents him from attending training sessions and thus quickly lost excitement. He said “When I received the tablet, I was very excited; I even wanted to go to class. But well, they were in the afternoon. At the beginning, this was a new thing to me, but I got over it instantly.” The use of the tablet depends on the utility and also on the routine of a person: if the tablet lessons interfere with your established activities that you enjoy, then why alter your established routine when there is nothing worth investigating in a technology that affords you nothing? Besides, if one’s life is already active, such as Jorge repeatedly mentioned, it seems to be no point in adding other things whose use is unclear. This demands for an examination of the relationship between active aging and technology, as my participants seemed to establish a boundary between the technology and their daily routines.

This was also fed by a critical attitude about the disruptive use of technology, which echoes recent findings by Ball et al., (2017) who note that seniors recognize the positive aspects of technology in terms of connection with distant loved ones, at the same time that it disconnects with those close to them when, for example, their children or

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<sup>9</sup> All the participants’ names in this research are pseudonyms.

grandchildren use their devices during family gatherings. Ball et al. (2017) describe a “physical-digital divide” through which seniors do not feel comfortable in an increasingly ICT-mediated world.

It seems that my participants respond to a techno-optimist ideology, but when inquired about the usefulness of the technology, they point out the limited impact that it has on their lives. This allows a connection between the micro and the macro that could be explained through the concept of ‘sociotechnical imaginaries’, which refers to “collectively imagined forms of social life and social order reflected in the design and fulfillment of nation-specific scientific and/or technological projects” (Jasanoff and Kim, 2009: 120). It could be hypothesized that sociotechnical imaginaries are spread throughout Uruguayan society but not without fundament, given the great degree of connectivity that the country has achieved as well as previous public programs such as the one-laptop-per-child *Plan Ceibal*. The significance of the digital development of the country is also socially stressed when software development and technological services, for example, are positioned as important productive engines of the country. This could feed the seniors’ imagination of the need of technology in their lives.

There is a complex relationship between the uses, the affordances perceived in the tablet, and the *technological mediators* that are often needed for seniors to actually bring the affordances into fruition in their lives. Seniors seem to be aware of what they could do with the tablet (Schreurs et al., 2017) but do not engage with it as expected besides some very specific uses such as looking for recipes or finding some information online for particular activities.

What I call *technological mediators* —mainly family members— seem to be

crucial in order for the seniors to use the tablets besides the little use that most of my participants have for it. I prefer this postphenomenologically-inspired term — technological mediators— rather than others that describe this phenomenon or similar ones such as ‘warm experts’ (Bakardjieva, 2005), ‘faux users’ (Neves and Amaro, 2012) or ‘proxy users’ (Selwyn et al., 2016) because it specifically refers to the *mediating* role of technology in seniors’ lives. The mediators are the ones who generally help seniors achieve what the tablet chiefly affords them, namely communicating with loved ones, and thus are fundamental tools for the co-construction of both the seniors’ agency and the world where they can act, for example, by making those loved ones who are far away be closer to them.

These distant loved ones are the ones who make the tablet (and other ICT) shine forth in seniors’ life as meaningful, because the devices are fundamentally perceived as *things-to-be-in-touch-with-whom-I-care-about*. Recent research has pointed out similar findings (Olsson and Viscovi, 2018; Ivan and Fernández-Adrevol, 2017; Nedelcu, 2017; Luijkx, Peek and Wouters, 2015), and the role of family members has been carefully examined by scholars such as Bakardjieva (2005; 2003), Neves and Amaro (2012), Selwyn et al. (2016). Peek et al. (2017), or Taipale (2019). I develop this literature review suggesting that communication technology makes family appear in a different way for seniors, especially in a context where family relations are currently performed in different fashions, usually mediated by different technologies (Taipale, 2019), and when members

live separated by vast distances (Share, Williams and Kerrins, 2018). This way, technology co-constructs family relationships.

I also discuss how in order to establish seniors as ‘inhabitants of the digital world who harvest the fruits of connectivity’, which seems to be the government’s objective, the actor-network of the senior user has multiple weak links that frequently prevent the network to be formed. Plan Ibirapitá is developing serious, admirable efforts in constructing the identity of seniors as digital citizens, such as training centers, a bus that goes around the cities for people to ask questions, simplified online-information and brochures, a call center, etc. In spite of these efforts, my participants’ do not seem to be translated into the network of the senior-tablet-user because of problems with both human and non-human elements. For instance, their lack of patience with a tablet that is considered slow and breaks down, their own emotions such as fear or nervousness *vis-à-vis* the device, or the fact that they complain that they receive too little Internet with the program. Most importantly, however, is the fact that many of them do not consider the tablet to be relevant for their busy lives, which is complemented with aforementioned critique of the role of modern technology in human life, which again, challenges the need for technological solutions.

Finally, chapters eight and nine provide with a discussion and conclusion, respectively. In chapter eight I situate my research contribution within the existing literature on older people and technology and in chapter eight I bring this research to a close.

One thing has to be made clear from the outset: this project it is by no means a policy evaluation. That is not my intention and is indeed impossible to achieve given the

qualitative nature of this project. Rather, inspired by the phenomenological and existential approach of phronetic social sciences (Flyvbjerg, 2001; see also Bellah et al., 2007), I aimed more at understanding than at predicting or diagnosing. I seek to inspire thought about technological devices in seniors' life. That is why I focus in what circumstances using technology becomes relevant for older people (Quan-Haas et al., 2016) and how both are co-constructed. To this end, I suggest that, rather than being 'casualties' of the digital divide, seniors actively decide the role that new technology plays according to how they appear in the radical reality that is their lives.

## **Chapter 2: OLDER PEOPLE AND ICT: FROM BINARIES TO CO-CONSTRUCTION**

### **2.1 Introduction**

The literature on the relationship between seniors and ICT, both quantitative and qualitative, is vast. Aging and technology are an increasingly researched area for which specific journals exist and special issues in journals are being constantly published. Therefore, it is not my intention to do either an extensive nor exhaustive summary of the literature, as other researchers provide excellent reviews of the state of the art (e.g., Battersby et al., 2016; Richardson, Weaver and Zorn, 2011; Frankel and Bisson, 2008; Blaschke, Freddolino and Mullen, 2009; Kim, 2008; White et al. 1999). In this chapter I will point out how the existing literature has problematized deterministic ideas about seniors and their digital inclusion and how it shows that the relationship between seniors and technology is a complex one. By complexity, I mean moving away from simplistic, binary notions that focus on a user/non-user dichotomy, recognizing older people's agency and nuances of technology use. It is fundamental in this sense taking social context and individual life circumstances into analytical account when studying people and technology. That is why, under this framework, I propose that older people should not be understood as innocent victims of a lack of technological skills, or being classified as laggards, but as individuals who have the critical capacity of using or rejecting technology on their own terms and to decide its role within their lives (Selwyn, 2006, 2003; Knowles and Hanson, 2018).

In this review, I also look at research that criticizes the current attitude of researchers and policy makers who conceptualize being old as a deficiency and older people as incompetent whose needs can be mapped and resolved through technological

interventions (e.g. Peine and Neven, 2018; 2014; Peine, 2019). This research suggests that a better way of understanding the relationship between seniors and technology is through the concept of *co-construction*, which originated in science and technology studies (see Oudshoorn and Pinch, 2003) and refers to the mutual constitution (Wajcman, 2015) of seniors and technology. Co-construction refers to the fact that, rather than analytically separating technology from aging (Peine and Neven, 2018: 1), older people actually negotiate with technology and transform it with their practices (Lassen, 2017), where non-use and rejection are possible valid outcomes of such negotiations.

Broadly speaking, the literature I describe that grounds my argument directly challenges technologically deterministic and paternalistic positions in relation to seniors' use of technology, which basically presuppose that technology impacts seniors' lives making them better, and for which technological interventions are necessary. This way, a difference can be established with impact/interventionist approaches that has widely guided policy (Peine and Neven, 2018) and counterproductively ignored the co-construction of seniors and technology.

## **2.2 From binary conceptions to complex ones**

A significant body of research has tended to acquire a sort of paternalistic and determinist approach to ICT use and adoption by seniors. It has usually been optimistic in relation to seniors and digital technology, noting that technology intervenes in seniors' lives increasing their well-being (Peine and Neven, 2018). It has indicated that in spite of the fact that the use of ICT diminishes with age —what has been called the “grey digital divide” (Olsson, Samuelsson and Viscovi, 2019; Colombo, Aroldi and Carlo, 2015;

Friemel, 2016; van Deursen and van Dijk, 2011; Millward, 2003)—, using computers helps seniors feel empowered and boosts their self-esteem (e.g. Weisman, 1983; Farris et al. 1995; Karavidas, Lim and Katsikas, 2005; Gagliardi et al, 2008; Shapira, Barak and Gal, 2007; Abbey and Hide, 2009). ICTs have been pointed out as factors that helps older people reduce levels of loneliness, stay independent and to increase social contact and well-being in general (e.g. Cotten, Anderson, and McCullough, 2013; Winstead, 2012; Czaja et al. 1993; White and Weatehrall, 2000; Seifert and Schelling, 2016; González, Ramírez and Viadel, 2012; Sixsmith, 2013; Bosch and Currin, 2015).

To an extent, this ‘techno-optimist’ research has focused on determinants of use and non/use of technology by seniors. As such, it presents the problem of reducing older people’s experience to the operationalization of concepts through variables that are then analyzed within statistical models. This approach is indeed useful for getting a macro perspective of the ‘impact’ of technology on seniors’ lives as an external factor, but it presents the problem of supressing the intrinsic complexity of human life, something that cannot be so easily dissected and schematized. The fact is that social life is usually messy and chaotic (Law, 2004) and variables interplay within each other and within peoples’ actions (see Johnson and Kotarba, 2002; Kotarba and Fontana, 1987).

Pointing at these sorts of conceptual problems, researchers such as Dickinson and Gregor (2006) have argued that computer use has no demonstrated impact on the well-being of older adults. These scholars proposed that there is no clear evidence that computer use benefits older adults and that there are several flaws in such previous research. For starters, they argue that previous studies fail in settling who composes the group “older adults”, as usually the participant groups in the literature vary from

independently living seniors to frail people in nursing homes. Furthermore, *well-being* as a concept is not defined and is measured in different ways across different studies.

Dickinson and Gregor (2006) thus criticize the nature of many studies, because a wide portion of the literature consists of interventions where the results may be spurious given that improvements in well-being could be attributable to the social interactions that seniors partake in the interventions themselves, such as through computer training or interactions with researchers.

There could also be a mis-attribution of causality that obfuscates an existing recursive relationship between computer use and life-stress, namely, the problem of whether computer use such as internet connectivity decreases life stress, or life stress decreases internet connectivity. Finally, Dickinson and Gregor indicate that there has been an inappropriate generalization of results that has tended to ignore how heterogeneous the population of seniors is (in this respect, see also Fernández-Ardèvol, Sawchuck and Grenier, 2017; Fernández-Ardèvol, 2014).

Indeed, it is quite complicated separating the structural and individual circumstances of people's lives. For example, Mead and Neves (2018) have described that the relationship between older people's social context and use of technology is recursive, so that it is impossible to separate causes and effects. Similarly, Peek (2017) stressed the complex relationship between older people's dynamic social, physical, and technological context. More specifically, Crow and Sawchuck (2014: 280) criticized aggregated statistical models because measuring that way the abilities of older adults renders the patterns of use as statistically insignificant and therefore as socially irrelevant. It is more useful—these authors argue—describing media use in terms of a 'system

ecology’, ‘continuum’ or ‘spectrum’, thus emphasizing the history, dynamism, and fluidity of a person’s life. Crow and Sawchuck (2014: 280) write that such approaches,

...provide a relational, contextually sensitive analyses of the conditions, practices and motivations for media technology usage in terms that disrupt and displace the binaries that tend to depict younger users as “digital natives” and older users as “luddites.” This approach considers users of all ages as subjects-in-process who are spatially and temporally located, whose lives change, who are in flux, who are born into specific historical periods and into different generations of media, who are extraordinarily diverse, yet are at once a part of a broader set of material, social, and personal conditions that influence media usage at a particular moment. Following this, it is vital to situate the use of any device within a larger “assemblage” of communicational possibilities, as well as in a historical time frame that takes experience with prior media into account whilst eschewing the temptation to make easy predictions about our collective technological future based on a single variable.

This means conceiving of seniors as having agency towards digital mediums rather than being merely defined by structures, understanding that they are active decision-makers about the role that technology occupies in their lives (see also Selwyn, 2004). The fact that ICT use is not a binary but rather is a complex issue where many variables are involved, is evidently understood if we consider that people’s lives are dynamic, and that individuals are capable of making choices given their circumstance.<sup>10</sup> In fact, this has been a conclusion reached by Sebastiaan Peek (2017: 161) in the Netherlands:

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<sup>10</sup> This notion is an important component of this thesis, which I conceptualize later on through the thought of Spanish philosopher José Ortega y Gasset.

Aging is complex, dynamic and personal, and this is also reflected in the use of technologies by older people. Periods of stability and periods of change both occur naturally.... many factors potentially could influence why older adults would continue or change the use of technologies in the home. These include the occurrence of life events, age-related decline, changes in personal goal orientation, and various types of social influences.

Peek is pointing at something that is not particularly surprising: a person's life changes, which consequently has an impact on how he or she relates to ICT. This further stress the fact that use is a spectrum that fluctuates according to the natural changes in a person's life's circumstances. These could lead him or her to adopt, change uses, or stop using technology altogether. Indeed, following this logic, we could say that older people *qua* human beings who have lived longer, rather than being victims who are excluded from the information society against their will, have the life experience necessary to assume the proper value of technology in their lives, find meaning, and consciously may opt to reject them (see Missine and Willeke-Kay, 1985). Thus, technological inclusion should be more of a choice than a moral imperative (Joyce et al., 2016; Neven and Peine, 2014), for which non-use is a perfectly valid decision that does not automatically mean being incapacitated by external forces such as the digital divide (Wyatt, 2014).<sup>11</sup>

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<sup>11</sup> I am not saying that the digital divide does not exist. Rather, I want to stress the often-forgotten individual's responsibility *vis-à-vis* their environment that includes technology. This I will describe in my empirical findings. In this sense, I agree with Selwyn (2006) when he said that we should not project our use of digital devices onto others, and rather examine how the digital divide, as a structural determinant, is experienced by older people (Selwyn et al., 2005).

### 2.3 Seniors and non-use

People's agency *vis-à-vis* technology goes hand-in-hand with *non-use*. Non-use of technology relates to people's decisions about technology in their lives and to the "subtle nuances in different forms of engagement with technology." (Baumer et al., 2015a: para. 2). Acknowledging this relates to the capabilities approach developed by Martha Nussbaum and Amartya Sen (1993) in the sense that technology should be a way of empowering people to live better lives and to enhance their agency. But, following this logic, people have the capacity to reject it, and this is something that should be assumed and respected (Hakkarainen, 2012). Usefulness should not be automatically presumed, rather, it should be "qualified in terms of pertinent uses and contexts, along with the acknowledgment that in some situations, technological situations are unnecessary." (Richardson et al., 2011: 132). For this, it is important to look at people's actual needs and how they negotiate them with technology, namely, their co-construction. This allows us to see the nuances of technology adoption and to conceptualize the use of ICT in general as contingent upon both structural factors and individual circumstances. That is why Selwyn (2006) suggested that the *relevance* of technology in people's lives is crucial, and thus the role of *choice* in ICT use should be according to the individual's needs. If a person is happy and satisfied with her life, why use a computer or access the Internet? Indeed, non-use, then, is not a source of marginality and exclusion as it is usually presumed (Selwyn, 2006). It should rather be analyzed in its nuances and in relationship to people's decisions and needs.

A good way of bringing attention to rejection and non-use is, as Sally Wyatt et al. (2003) puts it, that 'non-users also matter'. In her study of the non-use of the Internet, she

describes how, in general, the default situation is for policy to assume that people *want to become users of technology*. This premise is what has guided most policies in regard to Internet access across the world.<sup>12</sup> To remedy the exclusion from the Internet, policy recurs to cheaper services, education, and training. But what Wyatt et al. state is that, perhaps, not accessing the internet need not be a source of inequality or disadvantage: people in fact are agents who understand technology in different ways and negotiate its meaning rather than being passive recipients whose lives will be solely positively improved by technology (Richardson et al., 2011). This leads them to sometimes reject technology. Thus, Wyatt says that “users should be seen in relation to another even less visible group, that of non-users.” (2014: 69). Wyatt et al. also show that there is a broad spectrum of people who use the internet according to their own needs and others who willingly do not (see also Selwyn, 2003). They are also careful enough to distinguish between the rejection of the Internet as a whole and the non-use of some aspects of it, as some people might happily adopt certain things into their routines while completely rejecting others. This notion of the non-user also shows the need of including them as a category in design processes, because “would mobile phones make such irritating noises if non-users had been involved in their design?” (Wyatt, 2014: 78).

At this point, it could be said that in order to study the impact of technology on senior’s lives a complex approach that seriously includes the interplay between social context, individual choice, and responsibility including non-use, should be considered. In this sense, I will reinforce the distancing from the dichotomous notions by reviewing some specific literature that uses tools from science and technology studies, seeing

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<sup>12</sup> This has certainly been the case for Uruguay.

ageing as a socio-material issue, and further emphasizing the idea of the *co-construction of seniors and technology* as a possible solution to this conceptual problem.

#### **2.4 A Socio-material perspective on ageing and technology challenging deterministic and paternalistic positions**

Scholars influenced by STS analyses have repeatedly criticized the simplistic dynamic of inclusion and exclusion related to Internet access often times described in the literature (e.g. Sourbati, 2009) as well as the conception of technology as an external, independent solution to the problems of aging (Peine et al., 2014; Joyce et al., 2016). Rather, they have emphasized the social shaping of technology by older people (Peine, 2019; Peine and Neven, 2018; Östlund, 2014).

Aging has been largely seen as a part of the life course dominated by physical and cognitive decline, for which technology can intervene and address it as a social problem providing a “triple win” alleviating the social consequences of aging, giving older people a better life, as well as fostering economic growth (Neven and Peine, 2017; Neven, 2015). Seen this way, it appears that science and technology are separate from the experiences of aging. That is why Peine et al. (2014: 199) suggested that older people should rather be understood as “active co-creators of technology” in so far the members of the ‘baby boomer’ generation—who are the current older generation— have been, and in fact are, active consumers of technology given that many different technologies have been part of their lifeworld. Thus, they are “well prepared to use technology as a resource, i.e., to actively select, modify and use technology to give meaning and identity to later life.” (Peine et al., 2014: 203).

Understanding older people otherwise, Peine et al. (2014: 204) suggest, involves a paternalistic perspective that has downplayed “the capacity of older persons to be in charge of their technical environments”, and the risk is that designers’s pre-notions and ideologies may predominate (see Oudshoorn, Stienstra and Neven, 2016). Furthermore, as active consumption has been a fundamental part of the lives of the members of this cohort, it is fundamental to make a shift toward considering older people’s lives in context and to how they give meaning and significance to things. Larsson (2009), for example, described the way older people actively arrange and rearrange their material possessions and how they actively decide about the stuff that they own. This decision often means getting rid of things or refusing to adopt them, and it is a conscious, deliberate decision rather than a problem attributable to ineptitude. Thus, the focus of analysis should be put on the co-construction of technology and older people as they introduce or reject artifacts in their daily lives and on how they put them to unforeseen uses, use them meaningfully, or reject them.

It is useful and innovative, then, to frame the relationships between technology and later life within STS’- inspired notion of the *co-construction* of technoscientific objects and social order (Peine et al., 2015: 3; Östlund et al., 2015). This way, we will be in a better position to understand how material culture and materiality have shaped the constitution of later life, how ideas of aging are constructed along with technoscientific objects, the agency that older people develop in their daily lives in relation to technological structures, and how they create identity and meaning amidst the increasing constellation of technological artefacts that composes their (and everybody’s) lives (Peine

et al, 2015). In other words, *materiality* matters in order to have a deeper understanding of aging.

This is important for understanding seniors as users. Loe (2010) provides an interesting account of how seniors (nonagenarian women in her study —whom she calls “technogenarians”) develop creative uses of everyday technology to construct meaningful lives. This way, in the same line as the above scholarship, Loe (2010) stated that elders could in fact be agents, experts, and negotiators with technology. She affirms that older women indeed negotiate with technology in order to achieve self-efficacy, wellbeing, and connectedness. To examine this, she defined the users and technology as “mutually constructed”, where “both [are] embedded and made meaningful in their social worlds where each reciprocally acts upon and influences the other.” (Loe, 2010: 321). She analysed her upstate New York participants’ mobility and how it includes far more than walking sticks or wheelchairs, but also includes automobiles, rock salt, special shoes, cell phones and so on.

Loe and Joyce (2010: 172), in this sense, further point out the creativity of older people when relating to technology, “old people are not passive consumers of technology such as walking aids and drugs. Elders creatively utilise technological artifacts to make them more suitable for their needs even in the face of technological design and availability constrains.” The relevance of this work is that it stresses the role of agency and strategies of older people to emphasize their autonomy utilizing a wide array of artefacts, rather than being mere victims of technological interventions.

Such examples challenge the fact that, as Östlund (2004: 46-47) puts it, there has been a tendency for assigning seniors the role of *objects* rather than of *subjects* where

technology plays a determinant role. This demand putting distance from ‘technical research’ where the researcher is driven to apply technical knowledge to solve problems, and to focus on practical behaviour and on the context where social relations take place, such as those between seniors and technology. This also entails considering that, when doing empirical research on seniors and technology, the use of artefacts is unpredictable, or, in other words, researchers should focus on the relationship between the structure of daily life and in the ways a technology will or *will not* be integrated into daily routines (Östlund, 2004: 50).

This literature is particularly relevant for looking at Uruguayan seniors’ use of Plan Ibirapitá’s tablets in so far as it suggests that seniors are active agents who decide the role that technology plays in their lives rather than ‘technological idiots’ whose needs are identified in a top-down manner and who otherwise would be fundamentally excluded from society through their rejection of certain technology that is socially constructed as necessary. It also does more justice in understanding the complexity of the relationship, so we can further create a distance from essentialist or paternalistic points of view. By the same token, this way of looking at the problem emphasizes the broader technoscientific world seniors are immersed in which they are actively engaged and make meaningful decisions as Loe (2010) and Joyce and Loe (2010) point out. Given that the Plan Ibirapitá provides a tablet to low income retirees, in the next subsection I will review some literature that puts the focus specifically on tablets and how they have related to older users, pointing out that this interventionist logic, focused on ‘impacts’, has prevailed also when considering seniors’ use of tablets.

## **2.5 Some recent literature on tablets and seniors and the problem of ignoring their co-construction**

Recently, the literature has paid attention to the benefits that mobile touchscreen technology such as smartphones or tablets bring to older adults (e.g. Rosales and Fernández-Ardèvol, 2019, 2016). Several comprehensive reviews of the literature can be found that make a compendium of the ways in which the relationship between tablets and seniors can be improved (e.g. Al-Razgan et al., 2012; Gorce et al., 2017; Werner et al., 2012; Dahn et al., 2014). These studies mainly employed a functional approach, that is, how to improve the technology for senior's manipulation. Fewer studies, however, have focused on the role of tablets in senior's daily life and are more of a relevant background for this dissertation.

An example of such research is Tsai et al.'s (2015), who looked at tablet computers that, in the same spirit as Plan Ibirapitá, were thought to be instrumental toward increasing digital inclusion in a medium-sized city in the United States' 'Deep South'. They focused on the actual use and skills rather than simply on access. Agreeing with most existing literature, Tsai et al. (2015) point out that merely having access to technology does not necessarily mean that it will be used or adopted by seniors. These authors employed the notions of *self-efficacy* and *expected outcomes* as important factor in the adoption of technology. On the one hand, technological self-efficacy relates to the belief in one's own ability to use new technologies, so they developed a qualitative strategy to answer how older adults decide to acquire tablets, how they conquer the barrier of lacking self-efficacy, and what are the impacts of using tablets on their lives. They found that a major deciding factor was the combination of either seeing other users

use the tablet or having a meaningful social network member in their life recommend the tablet. On the other hand, in regard to the question of expected outcomes, most of their respondents said that tablets were easy to use as they could be held in one's hand and taken to a comfortable location. Finally, the authors said that the tablet impacted older people's lives in that it made them feel more connected to the world and their families, feel current, and allowed them to keep up with special interests.

In a more recent research, Tsai et al. (2017) looked at how adults learn to use tablet computers in a region of Southern United States. They found that the willingness to try new things had a large influence on the acquisition of tablets, and that tablets were particularly comfortable to use in comparison to desktop computers. Also, support factors such as family, peers, or professionals to whom they could ask questions, had a strong influence on the adoption of tablets and learning process. The factor of 'playing around' with the tablet was key for gaining expertise with it —although they found that seniors also believed that having structured help would benefit them.

Jayroe and Wolfram (2012) developed a qualitative study in an upscale senior living center in the city of Milwaukee in the United States. They studied the factors that contributed to barriers for retrieving information in electronic form in older adults. More specifically, their research sought to determine whether the use of tablet devices could provide a more efficient and effective means of accessing networked resources than laptop computers, and to establish whether or not tablets could help find and incorporate valuable information and activities into everyday life. The researchers found that their participants struggled with some features of the tablet technology, but overall found the experience to be positive. Some features of the tablet were not intuitive and differed from

the desktop systems the participants used regularly. The size and sensitivity of the display area also presented some usability challenges. The greatest obstacles to search task completion, though, arose more from the design of the websites visited rather than the features of the devices used.

In summary, this recent literature on seniors and tablets tells us that this technological medium seems to be a suitable way for seniors to be ‘e-ncluded’ so they can access the benefits of the digital world. However, I want to extend Peine et al.’s (2015) critique: in these cases, the tablets are essentially understood as an external factor that will intervene in seniors’ lives thus benefiting them. We need to move away from ‘impact’ analysis and focus on how older people and technology are co-constructed.

People are indeed diverse. Many seniors live very fulfilling lives with a minimum role of ICT or just by using their old cellphones, whereas others do see their lives enriched with the presence of such artifacts. In this dissertation I will propose a theoretical approach that stresses that the meaning of devices such as a tablet, depends on a complex relationship between the individual and his or her circumstances. Seniors relate to technology on their own terms, and as such, this relationship could also define the meaning of a tablet as something useless.

## **2.6 Conclusion**

This chapter is the first step toward conceptualizing seniors’ agency toward the material world they are immersed in. I agree with most of the recent literature on seniors’ and technology co-construction in the sense that older people are active decision-makers of the role that technology plays in their daily lives. This means moving away from

binary notions and looking more carefully at those factors that depend on the individual as well as those that are beyond their power. In other words, structural circumstances could certainly be at play determining some people's non-use, but for others, it could entail conscious 'tactics of resistance' through which they assert control over their lives (Selwyn, 2003: 111). Furthermore, it is extremely difficult separating structure and agency (Neves and Mead, 2017). This also means considering seniors' relationship to technology as fluid and dynamic, where they could at some points in their lives find different artifacts useful and at other points not useful or meaningful (Selwyn, 2003: 111-112; see also Peek, 2017). In this sense, Selwyn (2003: 112) is right when he writes:

Above all, commentators on technology and society should avoid the temptation to assume that technology is always (a) available and (b) a 'good' thing.... There is a danger that academic researchers and technologies operate in a wish-fulfillment 'information society' that does not exist beyond their raified, technology-rich work and domestic environments. Middle class commentators often forget the fact that technology is not as societally ubiquitous as it may be in their lives.

Keeping these suggestions in mind, the next step, then, would be to further examine tools to conceptualize the relationship between technology and seniors' lives in terms of co-construction. This leads us to look at relevant sociological literature on STS, which has put the focus on users and non-users of technology.

## **Chapter 3: ANT, SCOT, POSTPHENOMENOLOGY: SOME INSIGHTS INTO USERS AND NON-USERS OF TECHNOLOGY**

### **3.1 Introduction**

Use and non-use of technology, rather than being a dichotomy, are the two extremes of a spectrum (Wyatt, 1999, 2002, 2014; Baumer et al., 2015a; 2015b; Peek et al., 2016). Researchers have indeed paid attention to how people bring different artifacts into their lives, their homes, and how they negotiate its presence within their social practices by using them, practicing selective uses, or rejecting them (Oudshoorn and Pinch, 2003). This is part of an approach focused on how social actors shape technology that has provided evidence against technological determinism (Makenzie and Wajcman, 1999). Media studies scholars, for example, have looked at how people domesticate technologies by bringing them into their everyday lives (e.g. Silverstone and Haddon, 1996). In the case of the Uruguayan Plan Ibirapitá, seniors are given a tablet for free. Thus, analyzing how seniors use, non-use or reject the device is important to shed some light on the circumstances of why approximately half of those who have received the tablet, do not use it (Plan Ibirapitá, 2017). Such an approach is needed to analyze seniors' agency when faced with technology.

Scholars working under the framework of STS have also looked at the dynamics of the use and non-use of technology (Oudshoorn and Pinch, 2003) primarily focusing on the network of elements that need to be aligned in order to establish technological systems (Callon, 1986, 1984) and to make people users of technology (Akrich, 1992; De Laet and Mol, 2000). Postphenomenologists, on their part, have combined STS —mainly actor-network theory— with phenomenology and proposed that technology at the same

time that co-constructs humans and their world, is susceptible to interpretation according to people's contexts (Ihde, 1990; Verbeek, 2005; Rosenberger, 2018). In this sense, users are the ones who willfully or unwittingly see their lives impacted by technology.

Thinking about users and non-users (as well as about everything in between) qualitatively is important for understanding the relationship that seniors establish with technology in order to examine what a technology delivered by a government, such as the tablet, *means* to different seniors. The spectrum between use and non-use opens up new avenues for considering how technology is adopted that goes beyond thinking of non-use as rejection, neo-Luddism or lack of skills, but rather as different ways that seniors relate to a device according to what it means within their circumstance.

In this chapter I will not only describe concepts from ANT, SCOT and Postphenomenology useful to comprehend how technology is used and non-used, but I will hint at how the philosophy of José Ortega y Gasset widely complements STS' and postphenomenology's approach. By focusing on the role of technology existentially, that is, by emphasizing how it appears within *people's life*—which is the radical reality within which everything appears—I will attempt to also demonstrate the relevance of Ortega's approach to the analysis of the relation between technology and seniors. Before that, however, let us investigate the notions of user and non-users through the lens of STS.

### **3.2 Users opening the “black box” of technology**

The social construction of technology (SCOT) has stressed the relevance of social actors and users in technological development. It has argued against a linear model

through which technological innovations go from research and development to the consumption of devices. Rather, it has demonstrated that the process is a more complex one where social factors shape the development of technological artefacts from the outset (e.g., Vermaas et al., 2011; Rogers, 2010; Pinch and Bijker, 1987). Basically, it establishes that nothing is written in stone: technology can take innumerable paths depending on the social actors involved, and that these social actors and users actually shape technological development. The emphasis given to opening the black box is to focus on the social processes that go into the development of technology, which marks a difference to the notion of people as consumers who usually respect the prescribed use of a technology. Through the idea of *use*, as I will describe, people and social actors relate to technology according to broader contexts involving “society and the web of other artifacts in which technologies are embedded” (Oudshoorn and Pinch, 2003: 2).

In this sense, Kline and Pinch (1996) explained that users are ‘agents of technological change’ who can innovate and bring new interpretations to the artefacts that compose their daily lives. Oudshoorn and Pinch (2003: 1), on their part, state that when studying technology, it is fundamental to see “how users consume, modify, domesticate, design, reconfigure, and resist technologies.” The keyword that Oudshoorn and Pinch (2003: 3) bring in their writings is that of *co-construction*, where “users and technology are seen as two sides of the problem.” Co-construction, according to these authors, refers to a dynamic relation where people’s identities shift along with technology. This entails that, when used in people’s particular contexts, technology is susceptible to be questioned rather than blindly taken as a “black box.” Blackboxing, as Latour (1999: 304) explains, refers to

...the way scientific and technical work is made invisible by its own success. When a machine runs efficiently, when a matter of fact is settled, one need focus only on its inputs and outputs and not on its internal complexity. Thus, paradoxically, the more science and technology succeed, the more opaque and obscure they become.

However, through their agency, users are more than mere naïve receivers of technology. As research I will describe below indicates, they have questioned technology and modified it according to their circumstance. This also entails that technological innovations can be rejected or fail to be incorporated into the dynamics of everyday life (Friessen and van Lieshout, 2006: 254-255; Wyatt, 1999, 2002, 2014; Baumer et al., 2015a, 2015b).

There are many examples across the literature about how people ‘open the black box’ using or rejecting a particular technology and shaping it. Kline (2003), for example, examined the resistance of rural inhabitants in the United States to the telephone and to electrification where he observed that rural people were not passive recipients but actually negotiated in their own terms the social transformation brought by modern technology as farmers adapted them into their existing cultural patterns. Thus, Kline argues, resistance is a form of negotiation between producers, mediators, and consumers, which shapes sociotechnical change. In order to parse this out, he coins the term *transformative resistance*, where users contested the designers’ notions of how they should adopt technologies. For instance, the telephone was used by people for playing music and eavesdropping —two practices that the telephone companies objected to because they tied up the lines and wore-down batteries. Incapable of eliminating the

eavesdropping, companies attacked the problem with different applications such as using a battery and charging more if the battery ran out within certain period of time, and by developing systems which locked the use of party lines. The Bell Company, however, eventually decided not to fight this practice but to modify the phones so they could work with these new uses. Therefore, the actual use of the technology fostered its redesign.

Here, Kline brings attention to the agency of users *vis-à-vis* the onslaught of actors such as governments with which users have severe discrepancies. Often times, top-down approaches do not correspond with people's daily practices, which forces governments and users to confront their interpretations of the technology. It is not rare that governments ignore the social context where technology is tried to be inserted. Kline, for example, also showed how the spread of electrification in rural United States was a negotiated product between the agency of farmers with the government's ideals. The poles used to carry the cables, for instance, interfered with field work —a fact which upset many farmers to the extent that they actually chopped the poles down. Furthermore, farmwomen were reluctant to give up coal or wood stoves in favour of electric ones because they served a variety of purposes; they could use them for both heating their kitchens in the winter months as well as to heat water for things such as washing dishes. Therefore, a solution to this reluctance was to combine new and old technology and sell a combination of a coal or wood stove and an electric range which further altered rural life bringing new summer cooking-patterns. What these examples show is that technologies are fundamental elements in the co-construction of social practices, where usually artefacts or technological systems have to face the reality of people's daily life and their agency.

This research shows that people are not ‘technological idiots’ but active decision-makers who decide the role of technology in their lives and take action accordingly. This is particularly relevant when devices go inside people’s homes (Silverstone and Haddon, 1996). Domestication analyses have been founded on the premise that technologies have to be culturally appropriated in order to function. It is a dual process in which both people and technology are changed in their interplay (Oudshoorn and Pinch, 2003: 14). Through domestication, people “take an artifact from the public realm into the private one, gain control, shape or attribute meaning and make it an integral part of their lives” (Nimrod, 2016: 150). Within this meaning-making, people can decide to not use an artefact because it does not provide anything meaningful for their lives.

Moreover, Maria Bakardjieva (2005: 33) provides us with an interesting critical-constructionist way of conceiving this through “situated action.” Here, she sees users not only as readers who interpret technology as a text, but she conceives them as “speakers performing speech acts in which they appropriate the technical medium to achieve their own objectives.” (Bakardjieva, 2005: 26). In other words, users manipulate artefacts that they have not produced themselves and place them meaningfully within their contexts. This way —Bakardjieva argues— they invent uses the same way as we do with language, because even though we inherit language, we apply it and mobilize according to concrete social situations as a tool that allows us moving throughout the world. Therefore, Bakardjieva proposes that “the act of speech use is to the technological system what the speech act is to language.... This circumstance implies that the system, linguistic or technological, may be prone to change originating in the everyday acts of use performed by practitioners.” (Bakardjieva, 2005: 27). What this means, is that users of technology

decide the role of technology within their homes and routines according to their circumstance. Namely, technology acquires its meaning within the concrete experience of people's lives.

Bakardjieva particularly studied the use of internet in Vancouver approximately 15 years ago, but her findings are conceptually relevant for technology adoption today. She noted that the computer, for instance, stipulated a set of rigid operations that do not give much choice to people in many ways, but the concrete situation in which they acquire meaning are different and depending on the user's goals (Bakardjieva, 2005: 32). She builds upon Voloshinov's approach to language, who proposed that words have multiple meanings that are constantly changing and are socially conditioned. Bakardjieva connects the structure of language and the concrete social conditions in which it takes place through the notion of 'little behavior genres' (Bakardjieva, 2005: 29). She then applies this concept to technology:

the actual reality of technology will be found in the concrete acts of its use and, more precisely, in the social events of technologically mediated interaction between the user and her environment... This leads us to the connection between technology use and the social situation in which it occurs, or in other words, to the phenomenon of 'little behavior genres.' The element of little behavior genres of technology use, use genres, would augment a model of technology development with an adequate representation of user agency. (Bakardjieva, 2005: 30)

Bakardjieva is basically describing the actual agency of reflexive users —users who can challenge the preestablished functions inscribed into technology. The same way that users are bound to recur to the structures of language that get actualized and performed in

particular situations, they mobilized artefacts in particular ways in the context of their lives, according to the socio-cultural context in which they inhabit. Through its focus on the situated dynamics of use and non-use, SCOT's concepts are useful for thinking about user's incorporation of technology. This analysis, however, could be enriched with actor-network theory (ANT) as it provides a perspective that includes the network of elements that compose the social. My participants, for instance, at the same time that they decided the role of Plan Ibirapitá's tablet in their lives, also related their use and non-use of digital devices to broader elements such as training sessions, Internet availability, and their own attitudes and emotions. Thus, ANT is an illuminating approach by virtue of its broader lens that includes both human and non-human actors.

### **3.3 Technology, Scripts, Programs of action**

ANT has paid attention to users of technology through the notions of *script*, and *programs of action*. In order to properly comprehend these terms, ANT's core postulates must be clear. ANT basically establishes that the social is intrinsically material and vice versa (Callon and Law, 1997). In his book *We Have Never Been Modern* Bruno Latour (1993) argued that the notion of 'the social' comes from the subject/object dichotomy that has been a modern humanist invention coming from enlightenment, and particularly from Renee Descartes' affirmation of "I think, therefore I am." Descartes' discovery of this indubitable, ultimate truth establishes the presence of an autonomous, immaterial subject who stands and contemplates objects in time and space. Latour, however, argues that the subject's relation to objects is inseparable. Material artefacts have always been part and parcel of our relationship to the world, so it makes no sense to sort of "purify"

subjectivity from its environment.

In this interaction between objects and persons, actor-network theory is adamant in its assertion that it is difficult to avoid the pitfalls of *sociologism* or of *technologism*. We never face objects or social relations on their own; rather, we face chains that are associations of humans and non-humans. Nobody has ever seen a social relationship on its own or for that matter a technical relationship as such (Latour, 1991). Latour (2005) thus differentiates between traditional “sociology of the social”, which takes the social as an independent variable determining phenomena, from the “sociology of associations”, where the social is a consequence of the association of human and non-human entities, and order is what it has to be sociologically explained (Latour 1986, 2005). This way, ANT gets rid of the distinction between the natural or the social, and between micro or macro explanations for the social. It proposes a symmetric treatment of both human and non-human entities where the goal is following the actors analyzing how hybrids between both are formed (Callon, 1986).

Within these chains of associations, artefacts *mediate* users’ relationship with the world and influence how they move in it. In other words, artefacts are “society made durable” (Latour, 1990). They both enable and constrain social relationships. For example, swing doors, which close automatically behind us, are an example of how we delegate and inscribe functions to material objects. Instead of paying a doorman to be in charge of closing the door, or a sign saying: “Please Keep the Door Closed”, this type of hinged door avoids the need of these actors (Latour, 1988). If we see someone walking down the street holding a gun, our relation to the situation and the context will be different than for someone holding a briefcase. The person’s identity is dramatically

changed when holding the former rather than the latter: we see a businessman or a gunman depending on the association human-non-human. In other words, technology mediates *programs of actions*. The person and the gun are translated from two different entities to a “gun-citizen” which has new goals; for instance, mass killings at a University (so tragically common in the United States): “You are different with a gun in hand; the gun is different with you holding it” (Latour, 1988: 33).

ANT’s point of view has great implications for the notion of users. Artefacts may not be as innocent as we think, or just mere tools. Madelaine Akrich (1992) explained that artifacts have a “script” which establishes a “framework of action together with the actors and the space in which they are supposed to act” (Akrich, 1992: 208). Material objects can be actors that can direct people’s meanings, and people can follow the script or not. She comes to this conclusion in her study of technology transfer in Africa. She indicates that it is not automatic that one technology will work as expected in a different place, because designers construct users “with specific tastes, competences, motives, aspirations, political prejudices, etc.” (Akrich, 1992: 208). These scripts *prescribe* what users are supposed to do with the artefact, that is, how users should behave *vis-à-vis* the device.

Putting it differently, technology’s scripts carry a certain way of conceiving people and their relationship to the world. One could ask, for example, why is it sometimes frowned upon when little children use their parents’ tablets and cellphones, when they are mesmerized by screens and are glued to them for hours, while, on the other hand, seniors’ use of technology is socially considered intrinsically a good thing that societies should aspire to through active aging strategies. Sheila Jasanoff (2015: 4)

explains that societies are co-produced by *sociotechnical imaginaries* that “encode not only visions of what is attainable through science and technology but also of how life ought, or ought not, to be lived; in this respect they express a society’s shared understanding of good and evil.” In the case of Uruguay, for example, the government has been championing digital inclusion for the last two decades, and its relative advanced state in the ‘information society’ within the region has usually been in mouth of political actors and a sort of presentation card for the country internationally, especially since the development of the one-laptop-per-child program Plan Ceibal.<sup>13</sup> The ideals of a connected country are inscribed into laptops for kids and tablets for seniors. The idea seems to be that once a senior has a tablet in hand, they will become integrated into the broader network of ICTs thus reducing their social exclusion from the benefits of technology. The question is how these imaginaries play out when “individuals of flesh and blood meet new technology and incorporate it into their daily lives” (Hagberg, 2004: 165).

That is why it is important considering the *real* user in contrast to the presumed one at the same time that we should not ignore the broader environment as a factor specified in using the technology (see De Laet and Mol, 2000). Indeed, users may not accept the script of an artefact using it differently than what the designers had in mind. Akrich (1992) refers to this phenomenon as the *de-description* of an artifact, or what Latour (1990) and Akrich and Latour (1992) define as an *anti-program*. Through these concepts, users are not seen as mere passive recipients, but as agents. Similar to the social construction of technology, Akrich also brings the notion of *co-constitution* as “people

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<sup>13</sup> For example, recently Uruguay has been the first country in Latin America to incorporate 5G technology (Carreño, 2019).

are brought into being in a process of reciprocal definition in which objects are defined by subjects and subjects by objects” (Akrich, 1992: 222), and stresses the need to focus on the negotiation between designer’s scripts and uses:

we cannot be satisfied methodologically with the designer’s or user’s point of view alone. Instead we have to go back and forth continually between the designer and the user...between the world inscribed in the object and the world described by its displacement. (Akrich, 1992: 209)

The ‘sociotechnical imaginaries’ inscribed in a device such as Plan Ibirapitá’s tablets, have to be thus examined in the micro-practices of seniors within their daily lives.

### **3.4 Postphenomenology’s multistability**

Another approach quite similar to ANT that has considered the active role of technology through its scripts, is postphenomenology.<sup>14</sup> The difference resides in its phenomenological approach, as it considers technology as a mediator of human life stressing the impossibility of talking about technologies independently from human beings the same way that it is impossible to talk about consciousness or perception *in itself* (Verbeek, 2001: 133). Postphenomenology conceives subjects and object in terms of a relational ontology, where technologies are not *in themselves* but in relation to how humans relate to them, and it is in in this process that they co-shape subjects and objects.

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<sup>14</sup> Rosenberger (2014) tried to demarcate both approaches and has pointed out that whereas postphenomenology is useful to describe the located and nuanced uses of a technology, ANT is good in describing the effects of the relationship between humans and technology in the larger world. In a sense, while ANT provides with the tools to study how an artifact is established in a network in relation to other actors, postphenomenology provides with concepts to examine the contextual use of a technology (see also Rosenberger, 2017).

Rosenberger and Verbeek (2015) give the example of a telescope. Through the telescope's mediation, people are constituted as observers and the sky as observable. Verbeek (2008), furthermore, describes this issue through ultrasound technology—a technology that changed women's experience of pregnancy and rendered something that in the past was random and only known at the moment of birth, such as the presence of deformities, to a moral decision of whether continuing with the pregnancy or not. This is a decision that parents have to make in the cases where foetuses have malformations.

Philosopher Don Ihde (1990) described four types of ways through which technologies in their use mediate the human-world relationship: (1) *Embodied relations*, in which technology is a means for knowing the world, such as a pair of glasses. Ihde (1990: 73) explains: “My glasses become part of the way I ordinarily experience my surroundings; they ‘withdraw’ and are barely noticed, if at all. I have then actively embodied the technics of vision”. Embodiment relations such as this have a particular feature: a magnification/reduction structure. For instance, a microscope augments our sensorial perception of microscopic organisms, but it also reduces our perception of the environment as seen through the naked eye. (2) *Hermeneutic relations*, technology represents something that is out of the subject's sensorial reach and for which specific knowledge is needed in order to read a code or a symbol, such as with a GPS. (3) *Alterity relations* refer to when technology is experienced as an Other or quasi-Other and appears to be the focus of our attention and commitment in the moment that we utilize it, such as some uses of internet, or a GPS that speaks out loud the directions. (4) *Background relations* involve technologies whose presence is unconscious, such as air conditionings or the algorithms that guide our internet searches.

In spite of being ubiquitously mediated by technology, postphenomenology gives space for people's agency considering the context where technology acts. Philosopher Don Ihde writes: "I claim that technologies are *multistable*, that is, they have structured ambiguities that allow what first appears as the 'same' technology to be differently situated and have different trajectories" (2010: 126). In other words, technologies do not have an essence beyond what they are *in-context*, and the notion of *multistability* aims at explaining this idea. It refers to the context dependency of human-technology relations (Ihde, 1990, 1993; Rosenberger, 2017).

In the video about the older man with his daughter in the kitchen I described in the opening of this dissertation, he is using the tablet according to his context and the materiality of the device: within his daily life the tablet does not mean anything as an information and communication technology, but it does as a cutting board. Conceptualizing such phenomena, Rosenberger (2014: 377) highlights two points of multistability: "(1) multiple relations to technology are always possible, and (2) this potential is at the same time limited by the technology's materiality, i.e., the particularities of its material composition". Therefore, *qua* multistable, artifacts at the same time, can have unforeseen interpretations by different users. One sort of interpretation that has been largely ignored, however, is when there is *a lack of interpretation*. SCOT has somewhat addressed this issue by focusing on how actors reject, do not use, or stop using technology (Wyatt, 2014), and ANT has described how sometimes actors fail to be inscribed into networks (Callon, 1988, 1984). However, there is a deeper case to be made in so far as they ignore the existential experience of humans *vis-à-vis* technological structures. I believe that the philosophy of Ortega provides a

complementary approach from an existential-phenomenological perspective that I describe in the following chapter.

### **3.5 Conclusion**

SCOT, ANT and Postphenomenology bring useful tools for this project through their focus on users, on the relationship between elements that establish technological devices as such, and through the possible contextual interpretations of technology, respectively. However, they do not do enough justice to the role of devices in people's lives as the fundamental realm where things *happen*. Things in themselves are meaningless away from the concrete reality of a person's life. Julián Marías (1996) proposed that a person is a 'radical innovation of reality', namely, the individual is a project that is essentially the one who grants and negotiates the meaning of things within her or his life according to his or her projects in relation to his or her circumstance. In other words, a social, cultural and historic context indeed determines a person's horizon where he or she interprets reality, but things also acquire their meaning in interplay with a person's life project, needs, and attitudes.

Therefore, I propose next that the relationship between older people and technology can be further comprehended within the thought of philosopher Ortega. His philosophy, I will suggest, allows understanding of how conscious, responsible decisions can be made from an existential-phenomenological standpoint. For instance, for my participants —the same as the old man using his tablet as a chopping board— the tablet was largely unnecessary within the radical reality of their lives. Ortega thus provides analytic ideas about the relationship between the individual and his or her circumstance,

which are particularly revealing when thinking about use and non-use of technology. I will build upon his idea of *life* as radical reality and as a combination of self plus circumstances. This framework, which has been ignored in social constructivist views on technology, I suggest further allows understanding about how artifacts are involved in people's lifeworlds and vital projects, and how they make sense of the technological world they are living in. To Ortega y Gasset's thought I turn next.

## Chapter 4: AGEING, TECHNOLOGY AND CIRCUMSTANCE

### 4.1 Introduction

In this chapter, I will try to demonstrate that the philosophical anthropology and philosophy of technology of the Spaniard José Ortega y Gasset, and its application by his contemporary followers, provides a robust perspective on human existence and its relationship to technology that can be revealing when applied to the relationship between seniors and devices such as Plan Ibirapitá's tablet. Particularly, Ortega's thinking on technology provides some insightful indications about how technology gets defined within people's life, and thus used or rejected. Ortega's thought provides a perspective that is focused on the role of the individual as an actor who deals with things within his or her concrete life where he or she has particular needs, interests, and projects that define what things are. In other words, concrete life is the *radical reality* within which things, such as artefacts, appear and *matter*.

Ortega was one of the first philosophers to pay attention to the issue of technology as a fundamental aspect of the human condition (see Mitcham, 1994). For Ortega, human beings do not have a nature but a history. Humans are historically and socially determined beings whose lives entail projects co-constructed along with their circumstances —circumstances that encompass technology— and for whom it makes no sense speaking of subjects in abstract. The main principle is that of human life *dealing* with things. The inseparability of self and circumstance are the radical reality of human existence; we are intrinsically *co-implicated*<sup>15</sup> (Alonso Fernández, 2018) with our

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<sup>15</sup> This term has the same meaning as co-construction but with phenomenological connotations. Co-implicated refers to how we are *complicated* (*complicados*, in Spanish) *vis-à-vis* things referring to the fact that we have to inexorably deal with them in our circumstance (Marías, 1991). Harold Raley (1997)

technological circumstance at the same time that we are critical actors who can decide what to be. *Human life* is for Ortega the radical reality where everything appears, but it is a reality that demands agency, authenticity and responsibility from the individual.

Ortega's ideas will be important tools for this investigation as they will help in analyzing how seniors deal with technology in their lives, therefore, I will provide a superficial and broad introduction to his philosophy.

I will also note that Ortega's view is quite similar and thus a precedent to the psychological notion of *affordances*, which already contains the meaning that originally J.J. Gibson (1979) gave to it (see Ovejero Bernal, 2003). Ortega's view of human life allows both for a metaphysical and an empirical analysis of the role of material circumstance within human life that can be fruitfully applied to the meaning of artifacts in old age.

#### **4.2 Technology within life as radical reality**

Ortega's main presumption was that of the primacy of *life* as radical reality. Concrete human life is the unquestionable starting point; it comes before any possible reflections—which in any case, take place within *my* life. The self, the "I", *is* in interaction with his or her circumstances forming an inextricable whole (Ortega y Gasset, 1985). Life is the fundamental reality where things appear. Namely, other realities appear in *my life*, and we, as, humans, are burdened with the responsibility of having to do something with them. Human life is a constant becoming for which we have to take issue

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similarly explains that the etymology of the word object *ob* (in the way of) and *jacere* (to throw) refers to how we find things in our circumstance and consequently we have the task to face them, doing something with them.

as responsible beings.

This way, Ortega is developing a philosophy that looks to overcome both materialism and idealism, as his most recognized follower, Julián Marías, explains:

Radical reality is our life. And life is what we do and what happens to us. To live is dealing with the world, be directed to it, acting in it, taking care of it. Hence, things are not prior, as realist perspectives believed, nor does the self comes prior to things, as in idealist perspectives. The primary and radical reality, where I and things are only abstract moments, is the dynamic task that we call our life.

(Marías, 1980: 435)

Whereas materialism assumed the reality of an out-there objective reality, idealism affirmed that reality was a product of the human mind that projects inwardly. What Ortega proposes is that things cannot be independent of the subject who perceives and for whom the external reality is significant, but neither can be pure self-consciousness. The true radical reality is that of a subject (*I*) and objects (*circumstances*) which are inseparable and mutually constituted; circumstances, thus, do not define life but constrain it (Atencia-Páez, 2000). At the same time, however, the *I* has to *make* his or her circumstances. By virtue of inhabiting a world not of our own making, we are forced to actively make decisions and to project our-selves onto the future. Reason, therefore, is rooted in life, so that self and circumstance are co-dependent. This is tantamount to saying that reason is essentially historical and thus biographical, only understood through the narrative of what happens in a human life. Julián Marías (1982: 66-67) explains this idea by noting the differences of three very different realities:

On other occasions, I have compared what a dictionary says of three very different realities: for example, ‘pentagon’, ‘owl’, ‘Cervantes’. Of ‘pentagon’, an ideal object, the dictionary gives a definition; of ‘owl’, a real object, a thing in the usual sense of the word, it gives a description; of ‘Cervantes’, a personal reality, it tells a story. The dictionary gives the ‘essence’ of the pentagon: a five-sided polygon; it says what the owl is, how it is, what it does, how it behaves - it is understood as *the* owl, as every owl. But when talking about Cervantes, it tells us a story; it tells us where and when he was born, where he traveled, where he lived, who he married, what he wrote, where and when he died.

A person, then, is what *happens* to him or her; how he or she deals with the circumstances that he or she had to live. This entails an inextricable relationship between humans and their world that Ortega encapsulated in his famous book *Meditaciones Del Quijote* (1985), summing up the core of his philosophy with the phrase *I am I plus my circumstance; and if I do not save it, I do not save myself*. Human life is made by two equal components, *I plus circumstances*. Whereas the first component is the core of Ortega’s metaphysical anthropology, in so far as the subject whose existence is a “shipwreck” —a fundamental biographical problem in which the I has to effectively deal with things— the second component is the environment in which the “I” finds her-self, a circumstance of which she is an active constructor and conductor.

In this sense, human beings are ‘novelists of their own life’, or what Ortega even more poetically defines as ‘ontological centaurs’: the world we live in does not coincide with what human nature is; it is a being whose half portion of it is immersed in nature but with the other half transcending it (see Marías, 2000: 22-46). In fact, nature and the environment are strange to humans, and in this alienation, we have the pressure to fabricate our circumstances, that is, the task of dealing with them. The core of this

necessity is the fact that humans live at the same time here and now, but also in the future as a project. We have a given biological life that happens to us —actuality— as well as a biography that we have to fabricate —possibility; we are beings whose life is a constant task and this fact makes us responsible for our being and thus of our historicity, but in order to fabricate circumstance and therefore ourselves, we need *technique*.

Ortega has a metaphysical view that gives primary importance to the technical involvement of humans with the world. Technique, for him, is our ‘orthopaedic member’: humans fabricate their world, humanize it, shape it, and make it reveal itself (Atencia-Páez, 2003: 82). Humans can live in very basic conditions as long as we have food and protection from the natural elements, but that is not enough. It is part of our nature not to conform to that type of life. Humans, in their circumstances, fabricate their conditions of living, through different technical means, according to what they think is *living well*. Thus, everything we do to make our life more comfortable is superfluous for Ortega because it is not an absolute necessity to strictly maintain human life, it is a *sobrenaturaleza* (over-nature) (Ortega y Gasset, 2015). In fact, Ortega proposes that technique is an essential component of human life, and without it, there is no such thing as *human* life. Human essence resides in the fact that existence is a project essentially in interaction with its circumstances. For snow, a carrot or a horse, for instance, their existence coincides with its essence: being snow, carrot, or horse. But the fundamental existence of humans implies the fabrication of their own life-project, for which technology is a second nature.

This primordial need for technology resides in that human beings live in a world that is not neither completely benevolent nor hostile, but in which we certainly are not

satisfied. If we want to live well, we need to fabricate our means of life and environment in order to achieve the circumstances we want to live in. It is a task that requires constant activity in order to stay afloat within the ‘shipwreck’ that is human life. Humans, as *homo fabers*, manufacture their own circumstance rather than being merely identified with its immediate environment. Instead of adapting to its environment, humans adapt the environment to themselves through introspection and asking, *how do I want to live?* (see Diéguez-Lucena and Zamora-Bonilla, 2015). As a consequence of that reflection, humans fabricate their world. Thus, human being is fundamentally a constant projection into the future that has to self-fabricate within a pre-existing world, or, in other words, be “novelists of their own life” (Ortega y Gasset, 2015).

What this also means is that technology is not neutral but is rather laden with values and interpretations of what it is to live well (see also van den Hoven, 2012), given that humans are thrown to pre-existing circumstances. As Marías (1980: 445) explains, human life is made out of its own time: “Whereas a tiger always is a “first tiger” that premieres tiger-being, man is the heir of past human experiences that condition his being and possibilities.”

This interpretation of technique as creator of a historically-determined circumstance responds to Ortega’s concerns with modernization that was taking place in Europe in by the mid 20<sup>th</sup> century (Ortega y Gasset, 1979). In those modern times (or better said, *these* modern times, given the current validity of Ortega’s analysis), technique was taken for granted and thus humans failed to take their own responsibility in a world increasingly technologically constituted before them. As Atencia-Páez indicates (2003: 67), Ortega noted that there was a kind of technological inflation taking place which hid

the natural components of life and which made a man ignorant of his limits (see Mitcham, 2000; Echeverría, 2000; Diéguez-Lucena, 2017).

Ortega defines the *mass-man* as the incarnation of the spirit of an epoch that is the result of these circumstances. The mass-man lacks ambition, sacrifice and personal overcoming; its capacity of desiring is anaesthetized—all of which is guided by the faith on pure technical reason that leaves man immersed in a fundamental uncertainty; man's life is voided of all meaning when technique is the only thing he has. The technical capacity of man allows him to be anything he wants, and thus anything in particular. In other words, technique cannot tell us how to live our lives; it leaves us in the realm of pure possibility (Ortega Gasset, 1979). This is what Mitcham (1994: 48-49) notes about Ortega's philosophy of technique: humans withdraw from imagination, and the reign of technics makes them unable to determine the content of life:

In the past people were mainly conscious of things they were unable to do, of their limitations and restrictions. After willing some project, a person had to expend years of energy in solving the technical problems involved in its realization. Now, however, with the possession of a general method for discovering the technical means to realize any projected ideal, people often lose the ability to will any ends at all.

This proposition enunciates two latent risks of technology: the loss of meaning in life and our responsibility to address this problem. It is a proposition that indeed acquires a new significance in a context of ubiquitous information and communication technology that is a new sort of circumstance, or, better said, a "techno-circumstance" (Mermall, 2010; Echeverría, 2013). Let us recall that Ortega understood human life as the radical

reality composed by *I* plus circumstances. In our current techno-circumstance, we have to fabricate our lives amidst circumstances largely composed by digital technology. In fact, Spanish scholar Javier Echeverría (1999) defined this ubiquity of digital technology (cellphones, laptops, internet, ATMs, etc.) as a ‘third environment’ superimposed over the ‘first environment’ (natural entities such as our bodies) and over the ‘second environment’ (that which humans manufacture, such as cities). This third environment is intrinsic to human being, but it has increasingly changed our circumstance by adding technologies that are indispensable for living apparently ‘normal lives’. Technology appears between subject and world Echeverría (2015), as a fundamental component of circumstance that we have to deal with. It radically changes our-selves but not necessarily in a desirable fashion. Echeverría (2000: 20) wrote:

The main novelty of the 20th century is that technology transforms society, not only nature, and not always for the better. Since many over-natural modalities (e.g. electric light, roads, railways, airplanes, television, telematic networks, etc.) are part of our circumstance, contemporary man feels more dominated by technology than by nature.

The key, however, is to understand that this rather discouraging claim by Echeverría demands responsibility *vis-à-vis* our technological world, and Ortega’s philosophy of technology clearly establishes a relationship between the unavoidable role of technology in people’s lives as part and parcel of their circumstance, as well as the critical agency that they can have *vis-à-vis* technology as *saviors* of their circumstance. Things acquire their meaning according to how we, as responsible actors, reveal them within our lives. That is why Ortega’s philosophy is interesting to consider in relation to

the use and non-use of technology in so far as it allows putting emphasis on people's agency and decision-making. Philosopher Ramón Queralto (2015), for example, argues that it is rather pointless framing the discussion in technophilic/technophobic terms, but rather, we have to stress the second portion of Ortega's famous sentence 'I am I and my circumstances; *and if I don't save it I don't save myself*'. In other words, part of living an authentic human life is being critical about how technology mediates our lives (see also Verbeek, 2011).

Use or non-use of technology, then, depends on people's circumstance and on the meaning created from it. What is particularly useful from Ortega's standpoint is that it resolves the problem between technological realism and social determinism in its conception of I plus circumstances. In other words, things do impose certain existential constraints, but these constraints have different meanings according to how the individual acts and projects him or herself within his or her circumstance. He or she reveals things within their lifeworld according to how they decide to live their lives. Vega Encabo (2015) states that Ortega's notion of circumstance has a biological origin that indicates a complex network of facilities and obstacles where only what *matters* for the animal is significant. Things, then, should not be conceived of in terms of substance but of usefulness for our projects. As such, human beings elaborate an artificial over-nature which we inhabit by virtue of our need to not merely survive but to live well. That is why one fundamental component of human-being is imagination: we have to imagine how we want to live, and existing technologies are always part of the circumstance where we imagine ourselves and develop our life projects.

One concept that corresponds with this quite nicely is the psychological notion

of *affordances* developed by J.J. Gibson that has been incorporated into the social sciences. If we understand the actor as the one who gives meaning to the world in an inextricable relation with the circumstance, then, things acquire meaning and *afford* according to this radical reality that is human life. Things will mean different things in relation to a person's projects within his or her circumstance. That is why next I review the notion of affordances and how different scholars have explained it. Ortega's notion of human life as radical reality can be interestingly connected with this notion to reveal how use and non-use of technology matters within a person's life.

#### **4.3 Seniors, affordances, and the technological lifeworld**

To understand the meaning of things within individuals' circumstance, it is necessary to look at the concrete experiences of people as opposed to focusing in life-less abstractions. As Ortega's follower, Thomas Mermall (1996: 183) claims, it is incorrect conceiving un-localized truths:

Orteguian philosophy departs from the concrete, what is given, immediately present, that is, my co-existence with things, and this fact constitutes the fundamental reality.... In "Adam in Paradise", from 1910, we read that the life discovered by science is an abstract life, while, by definition, life is concrete.... Now, the Orteguian method consists in what I may call a rigorous science of experience.

This method of 'rigorous science of experience' invites thinking about the concrete experience of actors within their world. Philosopher Atencia-Páez (2000: 25-26) suggests that through this approach things can be considered in their true complexity and

relationship to the actor:

Things, then, do not possess a being-in-themselves: unarticulated, being for-themselves, are mere abstractions; they are fictional characters I presuppose when I pretend not taking issue with them. In their being-for-me, within the plexus of my circumstance, and thus in their original being, they consist on “a plan to care” .... If the being of things is its interpretation, life is the interpreter. Man is a sort of demiurge that causes chaos to become cosmos and reality into system.

What Mermall and Atencia-Páez are pointing at is that the self is the fundamental element that is co-defined *with* things; we interpret things within our lives, shining light upon them giving them meaning. Ortega’s statement ‘I am I and my circumstance; and, if I don’t save it, I don’t save myself’, precisely reveals that things are brought forth to relevant experience throughout our action in our circumstance guided by our life-projects. By ‘saving’ our circumstance we make things *matter*. Charles Guignon (2008) provides us with an illustrating example using his own experience as a philosopher:

So, in being a philosopher, I give some form to the socially defined undertakings of philosophical activity. Through this activity, I define the meaning (i.e., being) of the books, pencils, laptop, and so forth that surround me, and I do so as a representative of a community of practitioners. In this way, my ‘existing’ manifests and defines the structure of human temporality.

When book, pencils and laptops co-define being a philosopher, it means that our projects *qua* human beings and artefacts, are inseparable, and thus, co-constructed.

Guignon can conceive of himself as a philosopher in so far as many material elements

essentially *form* his circumstance. In other words, his self and the materials are recursively related. Within a particular life's circumstances (one where books, pencils, laptop exist) a life project (being a philosopher) exists and gives meaning to things. But his active concern and life projects as a philosopher defines things as tools or obstacles toward the end of being a philosopher.

We could also pose this by saying that the world we inhabit is not a set of objects with determinate properties, but rather a totality of *affordances* (Mark Wrathall, 2017: 19; see also Vega Encabo and Muñoz Serrano, 2018). Psychologist J.J Gibson defined the affordances that an environment brings as “what it offers the animal, what it provides or furnishes, either for good or ill” (1979: 127). Gibson further explained:

An affordance is neither an objective property nor a subjective property; or, it is both if you like. An affordance cuts across the dichotomy of subjective-objective and helps us to understand its inadequacy. It is equally a fact of the environment and a fact of behavior. It is both physical and psychical, yet neither. An affordance points both ways, to the environment and to the observer. (Gibson, 1979: 129).

For philosopher Mark Wrathall (2018: 20), an affordance depends on an end goal and the equipmental context that the actor inhabits. By equipmental, he refers to

the other affordances that can be brought to bear on this affordance. Thus, it is with nails that the hammer is for fastening pieces of wood together. As the equipmental context changes (the with), so do the purposive contexts (that end or goal for which the affordance can serve)”.

That is why the affordances that show up to the actor depend precisely on her and her particular circumstance, or life, that makes it unique: “When I bring into a setting my aim or goal, the affordances that serve my purpose coalesce more clearly, gaining weight and exerting a pull on me. Those that detract from my purposes withdraw themselves from consideration” (Wrathall, 2018: 21).

This is why Maria Bakardjieva (2005: 19) explains that, naturally, things are susceptible to being reinterpreted according to the social context of the actor in which they are immersed. For her, an affordance is:

What a technical environment offers the person or group to interact with their environment. This suggests that individuals and groups located in different contexts of activity may be capable of recognizing different affordances in a technical system or device. Thus, the use of technologies in specific local projects by private actors could make sometimes unpredictable potentialities of technology appear.

According to Bakardjieva, then, the idea of affordances relates to the fact that users have the potential to find new uses for artifacts, according to their projects, where the actor thus plays a fundamental role in establishing its meaning. Vega Encabo and Muñoz Serrano (2018: 12) summarize this: “In short, affordances constitute, so to say, the potential of mediation the artifact opens for an agent. They guide agency through the artefact.” They define artefacts as: “item[s] within a constellation of objects that hold stable relations among them and enable shared cultural practices.”

Therefore, there is a profound relationship between the networks of affordances that define the cultural world where the actor lives, and his or her motivations and goal-

directed actions (Peterson and Flanders, 2002). Even though we exist in a culturally interpreted world, our projects give meaning to the circumstance we inhabit. As such, objects do not have established boundaries; there is an infinite number of ways that we can perceive things. As Peterson (1999: 435) writes: “In the absence of a specific goal (...) the universe does not reveal itself as structured, or it reveals itself as too complexly structured.” It is thanks to our goal-oriented actions that we reduce the complexity of the environment and are able to define specific objects. Objects are thus not reducible to a specific set of properties. That is to say, the cognitive model through which humans are separated from a realm of objects that we perceive, represent in our minds, and act accordingly, is false.

As humans, we are primordially engineers rather than scientists, because we see *the use* of things in order to accomplish goals within our lifeworld rather than its objective reality (Peterson, 2013). Objects’ essence is bounded by the effectual relationship to a goal, and, as a consequence, we perceive meaning, not objects *in* reality (Peterson, 2013). To an extent, this view is latent in Ortega’s thought (1980: 68, in Encabo, 2015: 54) when he defines the existence of things in the following way:

Their existence is in terms of facilities, difficulties, advantages and disadvantages so that each self can be; they are, in effect, instruments, tools, equipment, means that serve me —their being is a being for my purposes, aspirations, needs— or they are encumbrances, faults, obstacles, limitations, hardships, obstacles, obstructions, pitfalls, hindrances, obstacles that are the result of pragmatic realities.

That is why Ovejero Bernal (2003: 381) proposed that Ortega was actually a predecessor

to social constructivism when he wrote things such as: “The world is a set of entities with which I may have to do this or that —it is a set of means or obstacles, facilities or difficulties with which I ran into within my life” or “The coexistence of myself and things does not consist of the fact that this paper I write on and this chair I sit on, for example, are objects for me (...) Things would not be what they are if I wasn’t who I am for them, that is, the one who needs to write, the one who sits, etc.” The fact that the actor gives meaning to things according to how he or she relates to it stresses his constructionism.

Another way of seeing this is that the meanings we perceive respond to motivations that establish the current state of being with its boundaries and values. The world, simplified to the perceived meaning, establishes the functional domain for the perception of objects (Peterson, 2013). As Peterson (2002) explains, quite similar to Ortega, affordances can be utilized to increase the likelihood of reaching an end-state, or else be an impediment to reach it. In this sense, an affordance is a tool to reach a certain objective that the agent is motivated to reach; the world appears as usable tools that facilitate the accomplishment of something. Actors see what they are aiming at or what is relevant to them in what they are looking for, for which things can be either tools or obstacles (Peterson, 2002).

In spite of being surrounded by things that have been designed with a function, the notion of affordances challenges the idea that we are condemned to the conventional uses of our material world. As philosopher Asle Kiran (2012) suggests, through the potentiality of its materiality, technologies transcend social conventions for use:

Using a regular living room chair as a ladder when I hang a picture on my living room wall, is neither a use that is governed by the chair's social role, nor is it an inventive use that was entirely discovered by me. Instead, it is a potential use that is revealed in my interaction with the chair's materiality; being a ladder is a virtual readiness-to-hand of the chair (Kiran, 2012. 88).

However, it cannot be ignored that the artefacts that compose our lives “configure the manners of our being-in in the “physical world” as well as the “social world” (Kiran, 2017: 8). This technological mediation transforms how can we project ourselves, our agency, and our possibilities:

In a similar manner to how technologies magnify and reduce phenomena in the world, technologies impact on our physical and mental properties, skills and capacities by activating and accentuating some and relegating others to the background.... We can plan our daily chores—go to work, withdraw money, watch TV, go to the cinema, cook, stay in touch with friends, because of the technological presence in our lives. We recognize —tacitly— our own possibilities through the technological possibilities existing in our environment. This holds for short-term planning —I buy three cartons of milk at the store because I have a refrigerator at home, and for long-term planning— I save money to travel the world in my retirement days because I know that there will be planes (or some more eco-friendly means of travelling) in the future. In other words, we do not simply use technologies to reach goals, but we are able to set these goals because technologies configure our relation to the world in a manner that discloses their possibility. (Kiran, 2017: 8)

By the actions of people who carry out projects, technology's actuality, then, does not provide a comprehensive account of the significance of technology in the lifeworld;

thus, we need to put our attention not only on the use of artifacts but on what Kiran calls “technological presence” (2012: 79), because that way we can consider technology’s influence in its potentiality rather than solely on its contextual actuality. This refers to the fact that technologies carry ‘virtual’ actions which are side effects of what they were designed to do. Technology affects our lifeworld through the possible mediations it provides: “We become the kind of subjects that we are through throwing ourselves into projects. The projects we regard ourselves to be able to undertake, throw us into, is very much related to the technological possibilities we recognize in our lifeworld” (Kiran, 2012: 80). In other words, our projects define how we perceive reality showing us the affordances for our goals, at the same time that our projects are constrained by a pre-existent world (I plus circumstance).

Within our techno-circumstance is that our projects make sense (Echeverría, 2015); our material world co-shapes our possibilities as human beings at the same time that we establish the meaning of things in our practices through our projects and motivations. An example will help grounding this. I use a laptop to type a dissertation, where the laptop only makes sense when we consider a whole network of other elements such as internet, servers, tertiary education, a PhD program, my supervisor, Western culture, etc. (see Dreyfus, 1991; Blattner, 2006; Wrathall, 2018). My world of PhD student makes sense for my goal of eventually being a scholar, researcher, or for getting another job that I consider good according to my circumstance and personality, for my goal of doing something I enjoy and earning a good salary, for my goal of being able to provide for my family and those I care for, to live the life I want to live within my circumstance. This world of being a PhD student in Canada in the beginning of the 21<sup>st</sup>

century is the one that structures my activities, shapes my aspirations, projects, and the material entities I engage with; it is how I *understand* my world: I am familiar with the different things that compose my world amidst a context of significance in which things make sense to each other in so far they make my world as a doctoral student in Sociology right here, right now. That is how I *save* my circumstance: by taking full responsibility of my actions as a person who decided to do a PhD. This world also sets my limits, because my chances of being a physicist at the CERN in Switzerland or a professional football player are virtually nonexistent.

The material objects of the world appear in *my* life and acquire their meaning accordingly. For instance, as I write these lines, I do not see an object in the form of a screen or a laptop, but something useful to write a document called a dissertation that will be approved by a group of Professors, so I can finally get the degree of PhD. This value (i.e. my life-project, entailing obtaining the degree, taking care of a family, etc.) guides my perception of this laptop and of most entities around me. It is the fundamental principle that structures my identity and reality. My thesis supervisor (in so far as my supervisor at Carleton University) is a tool, so to speak, for achieving this particular goal, but when we played soccer together in the same team, he was a teammate with whom I cooperate toward the goal of winning the match. But again, my life-project entails playing sports for the fun of it, but is part of my more profound existential horizon, which relates to de-stressing while I write my dissertation, having fun and being healthy in order to achieve my end goal of living a good life according to the historical circumstances I have to live in.

Going back to Ortega we can affirm that we see the world through our history (I

plus circumstances), as persons with a biography. And within these biographies, objects are multi-dimensional, as they might acquire different meanings all along; their effects cannot truly be predicted. Ortega says that “things or entities comprise that which one encounters, while being or essence comprise that which one looks for” (in Dobson, 1989: 113). As such, objects constitute a world of potential where we pull things into being through our actions in the world as saviour of our circumstance:

Things do not in themselves have a being. Being arises from a necessity which man feels with respect to things. What necessity? The following. (We insist on it.) Man is nothing other than life. To live is to find oneself shipwrecked among things. There is nothing one can do apart from grab on to them. But they are fluid, vague and contingent...behind the appearance of things as given at any one moment, man constructs the “permanent, changeless thing” —in other words, the Being of things. (in Dobson, 1989: 113-114)

Ortega understands human existence as radical reality and as a constant doing —a fabrication in our co-existence with circumstances. This is the fundamental pre-theoretical reality: “a never-ending to-ing and fro-ing between the world and me: a relationship within which consciousness and objects become apparent and on which they depend” (in Dobson, 1989: 138). This links to one of Ortega’s philosophy’s main tenets: that of the unique perspective of the radical reality that is human being —a reality that is affected by our feelings toward the world. In his essay *Vitality, Soul, Spirit*, Ortega describes the feelings of a friend of his in reaction to the absence in Madrid of his beloved Soledad, a feeling to which we can all relate and that clearly explains phenomenology. With Soledad gone, Madrid stays the same, but Ortega’s friend’s

perception lacks a dimension of reality. For him, Soledad was the spatial centre of Madrid, its center of gravity. The city structured around her, so that his love spread throughout the city (in Dobson, 1989: 146). This means that there is a reciprocal co-constitution of individuals and things determined to a great extent by a perspective guided by affect and values (Peterson, 1999).

We always have a vital perspective; in other words, we always have a perspective from the point of view of our radical reality that is life that renders things meaningful to us within our circumstances. Things are *in* my life, where the world is a mixture of tools and obstacles; they make sense within my biography. Thus, things have no essence but refer us to a story of reality. A table could be a three-dimensional object, cellulose, a collection of atoms, but for Ortega, the table,

has no being in itself: it is there as an element in my life making it either easier or more difficult. It is either useful to me or an obstacle to me; it either helps me or deviates me from my aim. It might be said that the being of this table lies in helping me. However, what if I have to run because there is a fire? The table gets in my way. And even that being – i.e. as a facility or a difficulty – is not the table itself because its being depends on what I have to do: writing or running away, for example. (in Dobson, 1989: 166)

Ortega understands human life as a drama, as a having-to-do for which we are responsible. Therefore we are obliged to look for the being of things. This being of things is a theoretical construction we make in order to deal with them, which is at the same time inherently related to an individual's circumstance and his agency within it.

#### **4.4 Seniors, use and non-use of technology, and life as radical reality**

Conceiving that devices' meaning appears in relationship to people's projects allows us to put the relationship between seniors and tablets in an interesting and innovative way that focuses on human experience and grants the individual the responsibility to relate to artefacts in their own way, making them matter in their own terms. What do the tablets mean for seniors? How do they matter for them? How are both co-implicated? What new dimension of their lives do the tablets open? For what are they tools or obstacles? What do the tablets allow them to achieve? What is the identity of the tablets within seniors' biographies? At the same time, how does the materiality of the tablets shape seniors' lives? These questions inevitably refer to the role of a device in concrete human lives —a device that is susceptible of meaning different things to different individuals in so far as each individual has an irreplaceable perspective, or in other words, a unique *I* within their circumstances.

Framing the issue in this way, also allows a better comprehension of the non-use of technology. To the extent that seniors have certain life projects and ways in which they understand their lives, technologies may matter or not. In other words, according to how they understand their lives and what they want to be, they bring things into light, they make things matter within the relationship of self and circumstance.

This is a life-centric way of understanding use and non-use that has been rarely attended to so far. Peine and Neven (2018) propose something similar with their notion of co-construction of aging and technology, as well as Joyce and Loe (2010), when they conceptualize seniors as savvy interpreters of their material world who actively use different technologies, thus questioning external technological interventions aiming at

impacting on seniors' lives.

Within this framework, I claim, Ortega's ideas allow an understanding of non-use of technology. Whereas SCOT and ANT enable seeing the relationship between seniors and technology from a sociological perspective, they ignore the concrete experience of users from the point of view of life as radical reality and thus the phenomenological-existentialist perception of technology. Postphenomenology, on its part, provides interesting tools through its notion of multistability (how a technology is interpreted by an actor thus mediating their experience), but it ignores the role of individual's projects *vis-à-vis* their circumstance, and thus how they can be responsible agents living their lives for which some devices are perhaps useless.

#### **4.5 Conclusion**

In this chapter, I described Ortega's proposition of concrete humans co-constituted with their circumstances, as well as the idea of the affordances of things according to goal-oriented action within the pre-existing social context of human life. Generally speaking, as specified in chapter 2, research has indicated that the pathways between personal and contextual factors that determine the dynamics of technology by older adults are complex. In fact, scholars have developed models to explain and predict technology acceptance such as the Technology Acceptance Model (Davis, 1989) that includes variables such as perceived usefulness, perceived ease of use, among other demographic variables. These sorts of models have been developed to include more variables, such as the unified theory of acceptance and use of technology (UTAUT) (Venkatesh et al., 2003). However, these models are limited because they try to

encapsulate the life of older people defining it through variables in a way that strips them from its nuances (see Peek et al., 2016) as well as treating older people as if they were an homogenous mass (Neven and Peine, 2018; Fernández-Ardèvol, 2014). Human life is essentially an interplay between the self and circumstances, being both co-constructed in their relationship. The meaning of things depends on the individual with her life-projects coping with her circumstance.

Uruguayan seniors who received the tablet are part of a generation who lived within a particular techno-circumstance (Echeverría, 2017). The technological world that seniors live in is changing through programs such as Plan Ibirapitá. However, insofar as things have meaning according to people's motivations, outlooks, and projects, new technologies can be used and rejected accordingly. Only by looking at the concrete circumstance of people we can account for this.

So far, we could say that seniors' use of technology is complex and far from being a binary use/non-use. As the literature described in chapter 2 points out, older people indeed show agency in relation to the role that technology plays in their life and many times they reject technology. Some seniors reject it for good, others learn to use it and use it sometimes, others use it through other people, and other seniors effectively use it and see their lives meaningfully changed by the technology. To empirically test this, it is fundamental to pay attention to seniors' as users of technology within their social context and examine how things matter within their circumstance. At the same time, we have to look at what is inscribed in the tablets, and what they demand from seniors to establish them as tablet-users. This is to say that in the case of Plan Ibirapitá, seniors are translated into a network made up of tablets, chargers, training sessions, family members who aid

them in their use, family members who are in different cities, applications, etc. Tablets are translated into a network of routines and established practices, and the artefacts have to fight in order to domesticate users as well. In this context, tablets are multistable, that is, they mean different things to different people; some seniors find it useful and others reject it according to their circumstance.

Summing up, the relationship between seniors and tablets cannot be comprehended abstractly, but as part of a *vital reason* where technology plays a role in a specific life. Seniors react differently within their techno-circumstance and take up the task of their lives *with* technology differently. The tablet, then, means different things according to the person's goals, namely, it affords different things. For some it is a piece for communication or entertainment that works to enhance their own interests, for others it is a piece of junk to keep in a drawer, and for others a potential gift to their grandchildren. Techno-policies such as Plan Ibirapitá determine that it is important or even a necessary condition for seniors to be digitally included; but is that so?

## Chapter 5: RESEARCH QUESTIONS AND METHODOLOGY

*[E]sa realidad móvil y a la vez con firmes estructuras, cambiante y duradera, individual y social, presente y pasada, y sobre todo futura, circunstancial e irreductible a ninguno de sus elementos, transparente y radicalmente opaca, esa realidad dramática que llamamos la vida humana*

*That mobile reality that at the same time is firmly structured, that is both changing and lasting, individual and social, present and past, and above all future, circumstantial and irreducible to any of its elements, transparent and radically opaque, that dramatic reality we call the human life*

(Marías, 1978: 277)

### 5.1 Background information, research questions and rationale

I seek to interpret the meaning of Plan Ibirapitá's tablets within the social context of seniors and how it translates into the spectrum of use and non-use. Both seniors and technology are *co-constituted*, namely, they have to negotiate with each other. Technology shapes human decisions, projects and actions, at the same time that humans define technology in their practices. On the one hand, SCOT, ANT and postphenomenology offer some interesting tools to think about the relationship between seniors and technology in relation to users and non-users. On the other hand, Ortega's principle of ratio-vitalism, that is, of human life as radical reality, allows seeing how people 'save' their circumstance by deciding what is relevant for them according to their projects as persons, which unavoidably includes the material world of the times and their individual lives in. These approaches help reveal what the tablets afford for seniors, if they afford anything at all.

Furthermore, things appear as part of an ‘equipmental’ reality (Wrathall, 2018), that is, as functionally and culturally connected with other things (Vega Encabo and Muñoz-Serrano, 2018) that carry prescribed norms of use, or what Akrich (1992) described as scripts. For instance, the tablets seem to carry a script that is normative and establishes that in order to live a good life, seniors should use such a technology and be part of the information society. Plan Ibirapitá has indeed made great efforts in establishing a network of human and non-human actors such as training sessions, trainers, manuals, a phone number to call when users have problems, among others, to try and configure seniors in this way, namely, as sort of ‘cyber-seniors’ who would benefit from ICT.

To reiterate, three questions guide this research, based on this theoretical framework:

- (1) What is the role of the tablet in seniors’ lives?
- (2) How do seniors change their social practices with the digital medium?
- (3) How do the tablets of Plan Ibirapitá mediate and shape seniors’ reality and their identities?

In light of these questions, this research is intrinsically qualitative. The objective is by no means to generalize to the population nor to predict, but to understand the meaning of the Plan Ibirapitá tablet in some seniors’ lives to see whether it changes their realities and social practices, and how. I position this research according to Aristotle’s notion of *phronesis*, or practical wisdom, which defines social science as a situated, contextual, and hermeneutic task, oriented by value-rationality rather than by the search for laws that can predict reality.

One of the main proponents of phronetic social sciences has been the Danish sociologist Bent Flyvbjerg in his book *Making Social Science Matter: Why social inquiry fails and how it can succeed again* (2001). Here, he describes the need for this sort of approach as problem-driven rather than methodology-driven, through which the complexity of human life is unraveled—a human life that contains all those elements that Julián Marías mentions in the opening quote above. Under this framework, I seek to understand the role of tablets in the radical reality that it is human life, in other words, how such a device appears as relevant within the life of a group of seniors, paying attention to the different elements that are involved in making a digital entity mean something for them in their daily lives. For this, a phronetic, qualitative approach as proposed by Flyvbjerg, is justified. This approach is ideal when developing an STS and Orteguian framework based on identifying the network of entities that help co-construct the meaning of the tablet within the radical reality that is life, or vital reason, as Julián Marías (1980: 440) writes:

Life is, then, the organ proper for comprehension. This is why it can be said that reason is human life. A human reality can only be comprehended from life referred to the totality in which it is rooted. Only when life itself functions as reason we manage to grasp something human. This is, briefly said, what vital reason means.

That is why, as Bent Flyvbjerg (2001) proposed, social science needs not emulate the natural sciences—an emulation that has been pernicious because they are intrinsically different. The former is good in reflexive analyses and deliberation about values whereas the latter seeks to achieve general predictive theories. The social sciences, however, must

aim at value-rationality and engage in the discussion of what is desirable, for which it is fundamental to pay attention to the context in which social life develops rather than go looking for a-contextual social laws in the natural-scientific way.

Looking at how things matter within seniors' lives, then, is fundamental, as Creswell (2013: 24) notes,

in social constructivism, individuals seek understanding of the world in which they live and work. They develop subjective meanings of their experiences—meanings directed towards certain objects or things... The goal of the research, then, is to rely as much as possible on the participants' views of the situation.

Within such a constructivist approach, one fundamental thing to keep in mind is that context is impossible to generalize as Flyvbjerg (2001: 42) explains:

The problem in the study of human activity is that every attempt at context-free definition of an action, that is, a definition based on abstract rules or laws, will not necessarily accord with the pragmatic way an action is defined by the actors in a concrete social situation. Social scientists do not have a theory (rules and laws) for how the people they study determine what counts as an action, because the determination derives from situationally defined (context-dependent) skills, which the objects of study are proficient and experts in exercising, and because theory—by definition—presupposes context-independence.

What Flyvberg (2001) proposes is that human life cannot be reduced to following rules, and we certainly have not arrived at any predictive social theories yet; hence the need to *understand* rather than to *predict*. I seek to understand the meaning of the tablet in seniors' lives rather than predicting its use as many technological adoption models have proposed (e.g. Davis, 1989). The context in which people are immersed simply cannot be

formalized nor systematized in general predictive theories. This is because the relevant context of social action is human beings' everyday background skills, and the skills that determine the social context are based on judgments that cannot be understood in terms of concrete rules. To put it differently, there is no theory for human judgement because it cannot be reduced to a theoretical formula (Flyvbjerg, 2001). Phronesis is thus about values, practice, context, and for discussing what actions are good or bad. For these tasks, qualitative studies such as those used in this research are fundamental in so far as they help developing "a nuanced view of reality, including the view that human behavior cannot be meaningfully understood as simply the rule-governed acts found at the lowest levels of the learning process and in much theory" (Flyvbjerg, 2006: 223).

The goal is, Flyvbjerg (2005) suggests, for the social sciences to produce reflexive analyses of values and interests and of how these affect different groups in society, which are then fed into the process of deliberation and decision-making. They should provide "food for thought" guided by particular problems rather than by methodology (Flyvbjerg, 2005: 39-40). That is why I aim at providing concrete examples and narratives and suggesting some problems with how the relationship between seniors and technology is understood. This should be done, however, keeping in mind that we cannot find ultimate or definite answers; rather, the goal should be to produce input to dialogue and praxis in the social affairs (Flyvbjerg, 2005).

In this research I also follow Maria Bakardjieva (2005: 44) in her interpretation of Alfred Schutz's notion of "emphasizing the human capacity for projecting, planning and striving despite, and often times against, the formal rationality of bureaucratic institutions structuring subjective existence." This is a phenomenological endeavor that seeks to

reveal people's agency's *vis-à-vis* structures where seniors actively decide their engagement with different technologies. In this sense, Loe (2015: 145) writes:

Perhaps the answer to questions about caring for an ageing populace is not simply new biotechnologies, assistive technologies or design strategies, but a renewed emphasis on elder agency, and an awareness of existing technology repertoires and daily strategies to emphasize continuity and autonomy.

She further asks about 'technogenarians'' relationship to technology (2015: 145):

If autonomy is a common goal, when is paternalism justified, and who gets to define well-being? Given that elders are living longer and healthier than ever before, we must continue to talk with elders about what they want and need, until that conversation is no longer possible. The more elders are involved in policymaking and design, and the more their experiences as active agents and technogenarians are acknowledged from the outset, the closer we will get to truly honoring their complex lived experiences and preferences.

In this tension between seniors' agency and the structures of a technological society, it is important to find how these structures are expressed in the daily events that make up seniors' lives, and how we can relate to that. That is why a phenomenological description that tries to capture people's experiences is useful. Aagaard (2018: 43) explains that

a good phenomenological description resonates with life and evokes phenomenological recognition. The concept of resonance means echo or reverberation. The goal of phenomenology is not so much to surprise, but to touch a string of familiarity with readers. When a text resonates with the reader, it excites, stimulates and puts the person in motion. Move the reader.

As Bakardjieva (2005) does in her research on the internet in everyday life,

phenomenologically, the goal is to see what comes to the fore as relevant in the interplay between the person's interests and contextual use of technology. I agree with her on her suggestion that the creative appropriation of technology "occurs in problematic situations, in which users have to come up with new understandings of its relevance and involve it in novel patterns of action with a view to mastering their situation" (2005: 46). This entails thinking of people as being responsible for their lives, and as such, they can use or reject technology in their own terms.

That is why I propose that, methodologically, Ortega's notion of vital reason (*razón vital*) as a framework that could allow an understanding of people's agency. As I described in chapter 4, with vital reason, Ortega developed a philosophy that looks to overcome both materialism and idealism, as Marías (1980: 435), explains:

Radical reality is our life. And life is what we do and what happens to us. To live is dealing with the world, be directed to it, acting in it, taking care of it. Hence, things are not prior, as realist perspectives believed, nor the self comes prior to things, as in idealist perspectives. The primary and radical reality, where I and things are only abstract moments, is the dynamic task that we call our life.

Through the method of vital reason, the true radical reality is that of a subject (I) and object (circumstances) which are inseparable and are co-constituted; circumstance does not define life but constrains it. The agent has to *make* his/her circumstances. By virtue of being in an pre-existent world, he/she is forced to actively make decisions and to project their-selves to the future. Looking at seniors' social reality as a situated life, as a biographical narrative, could be tantamount to focusing on it in its complexity and uniqueness, and to fleshing out the richness of their reality and the conditions under what circumstances the tablet becomes relevant. Thus, in order to find out why people do what

they do, namely, why seniors use or reject the tablet, the best approach under my possibilities was asking them directly. This is another reason that using semi-structured interviews is justified. These allowed me to probe and go deeper in my participants' meanings of the tablet and to examine the nature of their (dis)engagement.

## 5.2 Techniques, the field and participants

My fieldwork took place in one larger city —Minas— located in the center-Eastern region of Uruguay, and in a smaller town —Pirarajá— located approximately 100 km North from Minas. The reason to do the interviews in Minas was convenience, as I had a contact in the city —a well-known retired schoolteacher and school-system inspector— who offered to connect me with a wide array of people who had received the tablet. I spoke with 26 participants. Furthermore, I also counted on the assistance of undergraduate volunteer students from the Universidad de Montevideo who carried out interviews with 10 seniors and two trainers in the town of Pirarajá, located a short distance from Minas (see Appendix C).

The assistance from the undergraduate students came *ad hoc* when I was already back in Ottawa after my fieldwork in Minas. As I am a research Associate at Universidad de Montevideo Economics Department's Center for Applied Research, a friend and colleague told me that some undergraduate Economics students were going to do volunteer work in Pirarajá. He asked me whether they could do something useful for my research, as he knew I did fieldwork in the Department of Lavalleja.<sup>16</sup> Therefore, I asked the undergraduate volunteers to speak to local seniors about their use and perception of

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<sup>16</sup> Lavalleja is the *Departamento* (the 'province' in Canadian terms) of which Minas is the capital city.

the tablet, for which, after extending my ethics clearance at Carleton University, I sent a representative of the students an interview script and instructions about how to go about doing interviews. We maintained constant contact through email. Their interviews with seniors were not very rich given the volunteers' lack of experience in doing qualitative research—they were Economics students, so they lacked the scholarly preparation for the task—but they gathered some valuable information nonetheless, especially in the conversations that two of them maintained with trainers.



Image 2: Location of Minas and Pirarajá in the map of Uruguay

Before recruiting participants to interview, as soon as I arrived in Minas, I attended to a 'third-age' club on two occasions, where seniors can participate in activities such as gym or yoga. I also dropped by the Association of Retired People of Lavalleja (AJUPEL, for its Spanish acronym) when they were having a consultation session with staff from Plan Ibirapitá who had come from Montevideo. This was a way for me to

introduce myself into the field and develop a ‘feel’ of what I would encounter in my interviews, for which I developed unstructured observations.

Unstructured observations are particularly useful in the first stages of a research (McKechnie, 2008) because they allow the researcher to get a first impression of the subject and start relating to the field. According to Mulhall (2002: 307), these types of observations are used to understand and interpret cultural behaviour. Thus, I entered the field, as Mulhall points out, “with no predetermined notions as to the discrete behaviours that [I] might observe.” (2002: 307). In this regard, McKechnie (2008: para. 1) explains:

In unstructured observation, the researcher enters the field with some general ideas of what might be salient, but not of what specifically will be observed. Therefore, observation is holistic, unstructured, and unfocused, with the investigator attempting to document as much as possible about the setting and its participants in order to discover themes of interest. Unstructured observation is not constrained by checklists and coding schemes; rather, the researcher reports in narrative style about observations that are relevant to the research questions.

In the third-age club I had several *impromptu*, informal conversations with groups of seniors who received the tablet. As these were not planned—and the seniors there tended to speak all at the same time—I did not record them, but these helped me get an initial sense of some older people’s relationship with the tablet. I walked into the club and introduced myself to the person on the reception desk who kindly indicated that a group of seniors were getting ready for a gym class in the next room. As I walked into the room where about 10 people were talking among each other, they went silent, so I introduced myself and told them that I was doing research on older people and technology,

particularity on how they use Plan Ibirapitá's tablets, and that I would love to talk one-on-one to whoever wanted and had the time to talk to me. When I mentioned Plan Ibirapitá, they spoke at the same time. A couple of them stated, for instance, that they gave it to their grandchildren, and all of them made me understand that they did not use it much. My timing to walk in the third age club was not the best, because they soon went into a different room for their class. However, a woman accepted to be interviewed and we coordinated a day and time for our meeting.

In AJUPEL, as soon as I sat down, several seniors came to me and started asking me different questions about tablet applications and asked me to solve different problems they had with the tablets. I insisted that I was not part of the Plan's staff, but I assume they did not care because I looked about the same age as the staff, and thus I would be knowledgeable with technology (which is actually false as I consider myself a neo-Luddite of sorts); I did my best to answer questions and solve problems. Most of the questions I received related to Facebook, and as I explained procedures in this site, I got the sense that those who asked me were not really understanding and that it would be unlikely for them to do it on their own. As I indicated them the steps to respond to messages or to upload pictures, the two people I helped replied "yes, yes..." but I noticed in their facial expressions that it was unlikely they were able to do it once they left. This, I believe, stresses the crucial role of 'warm experts' —what I will later on describe as technological mediators— as those guiding and helping seniors in their use of technology.

All in all, I did semi-structured interviews with 26 seniors where I followed an interview script to provide the interview with some direction, but I allowed a great degree of freedom for interviews to flow in any direction that my participants took me. As Güber

(2011: 74-75) points out, this lack of directivity of interviews may help in reducing the imposition of the researcher's schemata and it allows being more responsive to the clues that give access to the participants' cultural universe. This way I was able to examine how my research participants "identify with, resist, and transform the systems of meaning that structure their experience of the world (...) and in so doing they make the people, the objects, and the events they encounter comprehensible and sensible" (Weaver et al., 2010).

This type of interview, furthermore, allows for exploring fields that the researcher may not even know existed, as Creswell (2013: 25) indicates:

In terms of practice, questions become broad and general so that the participants can construct the meaning of a situation, a meaning typically forged in discussions or interactions with other persons. The more open-ended the questioning, the better, as the researcher listens carefully to what people say or do in their life setting.

Another interesting aspect of my fieldwork was that a few participants asked me questions about their tablet's applications and other technologies when I went to their homes to do the interviews. I presume that they also saw me as a relatively young person who therefore is familiar with 'modern' computers, so I did my best to help them with their devices as well. These sort of interactions also gave an interesting look into seniors' relations to such technology, such as what they wanted to do with it.

My participants were quite diverse, a few of them being retired schoolteachers. The reason for this was because my contact in Minas was one herself, so she used her own network to help me recruit participants. However, I specified to her that I needed a

diverse sample of people of different ages and education levels, so the people she connected me with were heterogeneous, coming from different paths in life and living in different social and economic circumstance. Obviously, my participants were not representative of any population by any stretch of the imagination, but it was an interesting qualitative sample from a mid-sized city in Uruguay. For instance, the heterogeneity of my population is evident in the fact that some of them did not live in low-income households, because even though they were the ones receiving low pensions, their husbands or wives had significant incomes. Most of them had received the tablets two years prior to the time of the interview in 2018, whereas some of them received it one year from the time of the interview.

The participants varied considerably in age: some were recent retirees in their early 60s and several of them were in their late 80s and 90s. They tended to have lower educational achievements, and apart from a few exceptions, they were people who did not use information and communication technology such as computers during their time in the workforce. Those who did, used computers for a short period of time before retiring, so their knowledge was not deep nor had they developed relevant skills.

Besides school teachers, my sample was composed mainly of municipal public servants, retail employees, a few farm workers and labourers in industries such as mining. Most of them were married and had children who lived both in town, close to them, as well as in different cities. Several of them had children or grandchildren who migrated to different countries such as Argentina, Spain or the United States. All of them had cellphones and many of them owned smartphones and laptops. A few of the interviews took place with husband and wife at the same time, and a few of the women I interviewed

had a guest at the time of our meeting. I presume that because even though I went recommended by someone they knew, they did not want to be alone during the interview with an unknown person. That is understandable in a country where the sensation of unsafety and crime has been increasing dramatically. Thus, a few of the interviews involved two people at the time, which actually enriched the interviews as seniors who were friends or neighbours conversed amongst themselves about the tablet too.

The interviews ranged from approximately half-an-hour to more than two hours. Some seniors wanted to speak and express their opinions whereas other ones were quieter and practically did not use ICT and their responses were succinct. The interviews usually took place while having English-style of tea or the traditional Uruguayan tea, *mate*.

The inclusion criteria to participate in my research was having received the tablet at any time. I did not consider a particular age and I did not ask my participants their age given that it is considered very rude asking evidently older people their age—and lying about one's age is normal in Uruguay—as well as it is offensive asking other variables such as their income (however, some of this information came up as I gained my participants' trust during the interviews). Besides, if they received the tablet, it presupposes that their individual income is relatively meager. Thus, receiving the tablet and being able to speak to me were the necessary conditions for an interview.

Apart from the help provided by my local contact, I also gained access to some participants by observing tablet training-sessions at Minas' Centro MEC, which is an office from the Ministry of Education and Culture that works as “a space to construct citizenship” and it is the office in charge of developing the National Plan for Digital Literacy. Here I also maintained several informal talks with the trainer. This Plan is part

of the country's effort to universalize the access and use of ICT, for which they offer free workshops. Their general objective is to enable participants to “acquire skills and knowledge in regard to the tool [ICT] as well as to foster awareness and critical attitudes.”<sup>17</sup> Their specific objective is to provide basic skills that would allow workshop participants to obtain information, complete official paperwork, or communicate and participate through the web; in other words, it aims at making older citizens part of a current society that is strongly immersed in a digital environment, and increasingly transitioning toward it.

The interviews I conducted mostly took place in participants' homes, but a few of them were at Minas' Centro MEC. The interviews done by the undergraduate students from University of Montevideo, took place both in the participants' homes and in the Centro MEC of Pirarajá.

A note of caution is necessary regarding intervieweing older adults about matters related to technology use. Researchers such as Quaan-Hasse and collaborators (2018), through their experience, have warned about researcher reactivity when younger people are doing interviews because older people may compare their skills with younger generations. In their research on older people's skills, they point out that “because younger adult, tech-savvy student assistants interviewed the older adults, their self-assessments could have been unfavorably biased” (2018: 1225), which is also framed within a negative rhetoric about older people falling behind younger generations in terms of ICT use, and that these are not senior-friendly (Schreurs et al., 2018). That is why strategies consisting of tracking seniors' use of digital devices (see Fernández-Ardèvol et

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<sup>17</sup> <http://centrosmec.org.uy/innovaportal/v/19627/31/mecweb/que-es-centros-mec?breadid=null&3colid=19625>

al., 2019) would be ideal to counteract interviewer reactivity, and a task for further research.

### **5.3 Interviews and data analysis**

I asked the interviewees about many dimensions pertaining to the tablet, transcribed the interviews verbatim, and used tools from grounded theory to analyze them. According to Strauss and Corbin (1998: 12), grounded theory is defined as theory that is inductively derived from data, systematically gathered and analyzed through the research. This entails “not only conceiving or intuiting ideas (concepts) but also formulating them into a logical, systematic, and explanatory scheme” (Strauss and Corbin, 1998: 21).

First, I familiarized myself with the data by reading all the transcriptions to identify possible patterns (Braun and Clarke, 2006). Then, I analyzed the data through coding, which entails developing concepts and categories in a way that goes from the concreteness of the data toward an abstract connection between them (Strauss and Corbin 1998: 22). Coding is the process of dividing the data into meaningful units and giving those units tags which help to catalogue concepts; it is the “bones” of the analysis (Charmaz, 2014) that allowed me to simplify the data and focus on specific aspects of it (Nowell et al., 2017). I coded line by line to identify the topics, issues, ideas, or concepts that arose. Charmaz (2014) identifies two main phases in coding: an initial one in which the researcher names each word, line, or segment of data, followed by a focused phase that uses the most significant or frequent initial codes to sort, synthesize, integrate, and organize large amounts of data. Initial coding was my first approximation to the data

through which I used emergent labels. Then, I used focused coding through which I abstracted from concrete pieces of data from my initial coding. These focused codes are the themes that organize the next section, where I present my empirical findings narratively.

Figure 1 below summarizes my findings. These categories emerged after I reached saturation, namely, when I found redundancy in the information, in other words, when the informants did not indicate anything different from what has already been said (Castillo y Vásquez, 2003: 167). The main category that emerged from my data was that of 'Contradictory Discourses', because seniors automatically said at the start of the interviews that they thought that 'modern' digital technology is essential for living in today's world. However, as I dug deeper with my questions, except a few exceptions, seniors tended to say that they did not use the tablet very much and approximately half of them said that they did not actually need it within their lives. But, in fact, many seniors did find value in some applications from the tablet such as Facebook for looking at pictures of family or using it for finding some information they wanted. This affordance, which relates to the perceived usefulness of the tablet, for instance, usually needed the presence of a technological mediator to be actualized, because pretty much all of my participants told me that they usually had problems with the applications they tried to use. At the same time, there was a constant ambivalence between the affordances and usefulness perceived in the tablet with a critique of the role of technology in human life as well as of Plan Ibirapitá itself. Seventeen of my participants tended to agree that technology is disrupting social practices that they value such as family conversations, as well as they tended to state that they would rather have received an increase in their

pensions than a tablet. Adding to this, 10 of my participants—who did not have any major health issue— mostly mentioned that they had very active and busy lives, and that they usually did not have time for the tablet. For all of my participants (except for those who did not use it at all), when it was used, it usually was for short periods of time and at specific moments of the day when it did not interfere with daily chores and activities.

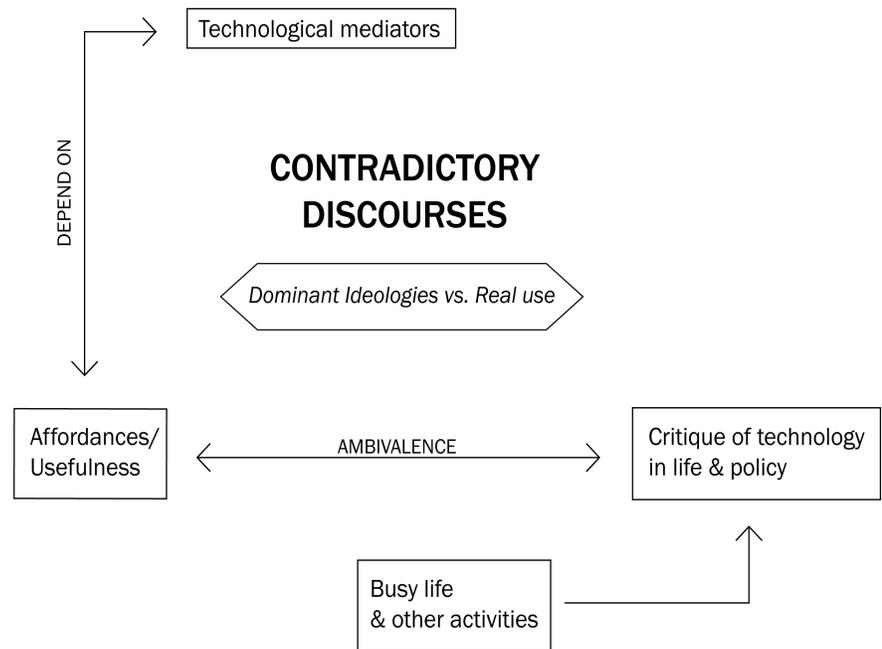


Figure 1: Main categories of the findings

All things considered, I basically agree with previous research in that both the structures framing seniors’ lives, as well as their agency, interplay in their particular contexts of technology use and rejection (Neves and Mead, 2018; Quan-Haase et al., 2016). As the literature has repeatedly stated, older adults are a very heterogenous group and some embrace technology while others avoid it (Francis et al., 2019; see also Peek et al., 2017). Thus, what we could say is that the use of the tablet is dependent on the person’s social circumstance and on her relationship toward it. In the next chapters I flesh

out these findings.

## **Chapter 6: THE CHALLENGE OF ESTABLISHING A SENIOR-TABLET USER**

### **6.1 Introduction**

In this chapter and the following one I present the data I gathered and my interpretation of the relationship between my participants and how they received the tablet into their daily lives. I will use ANT's sociotechnical perspective to examine different elements—both material entities such as the manual as well as non-material such as seniors' attitudes and their self-perceptions of living busy lives—that my participants mentioned to play a role in defining the tablet in their lives. These elements seem to hinder the establishment of the network 'senior-user of digital technology' that the Uruguayan government, through a policy such as Plan Ibirapitá, tries to assemble. It seems that through its technological policies such as Plan Ceibal and Plan Ibirapitá, the government has a sociotechnical imaginary (Jassanoff and Kim, 2009) that defines ICT as necessary for the development equality within Uruguayan society (Agenda Uruguay Digital 2020, n.d.).

The tablets are inscribed with the idea that 'seniors will benefit by being part of the information society' that seems not to fit within their circumstance. Except a few cases where they did not use the tablet at all, approximately half of my participants constantly mentioned that the tablet is a good thing but that they do not really need it. The other half mentioned some uses and potencialities in the tablet. In addition, in many cases any early enthusiasm further declined as many elements that form the network of Plan Ibirapitá did not work properly for them. Plan Ibirapitá, on its part, has developed a network of resources for introducing the tablets into seniors' lives; it provides training

and gives 1 GB of internet to its beneficiaries. However, there were some problems for enrolling seniors as users of the tablet they themselves define as important. The problems mentioned by participants were: they do not find the tablet to be very useful; they have problems with the training resources and manual; the tablets break down and require updates; and seniors themselves state that due to their busy lives, they do not find the tablets as an essential necessity.

Establishing the tablet as useful within a seniors' circumstance from the top-down, so to speak, is difficult in so far as many elements have to be in place for the affordances to be perceived by seniors. Researchers such as Tatnall and Lepa (2003; see also Tatnall, 2014; Lepa and Tatnall, 2006) in Australia noted that it would be more effective if seniors are shown the value of specific applications according to their interests, given that technology gets enrolled into their lives not by any intrinsic characteristic of the technology but according to their sociotechnical environment. The challenge then, is to translate technological innovations into their lives that would require personalized training.

I want to stress that I am in no condition to evaluate Plan Ibirapitá as a policy in itself, but the fact that over half of those who received the tablet do not use it is a reason of concern about the cost-effectiveness of the policy.<sup>18</sup> Here I aim at exploring and describing the qualitative experience of some seniors to theorize about seniors' relationship with technology. At the same time, however, researchers have pointed out that interventionist logics aimed at impacting seniors' lives are problematic (Peine and Neven, 2018; Neven and Peine, 2017; Neven, 2015). It is also a rather obvious assertion

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<sup>18</sup> However, I recognize that this research is a snapshot, and longitudinal research would be necessary as well. That would be the next step of this research.

that providing personal training, as Tatnall and Lepa seem to suggest from their Australian observation, is not something doable for any country with limited resources. Thus, here I limit myself to pointing out the experiences of a few seniors about the problems they say they find when the government tries to incorporate them into a sociotechnical network such as Plan Ibirapitá.

## **6.2 The fragile network of the senior-user**

Through a policy such as Plan Ibirapitá, the Uruguayan government aims to establish seniors as digital tablet-users who inhabit the information society. Previous research fundamentally inspired by STS approaches, has paid attention to how technologies act as agents that re-arrange the dynamic of the homes of older people in so far as they demand certain accommodation from them in order to function (Neven, 2015; Aceros, Pols and Domènech, 2015; Sánchez Criado et al., 2014; Oudshoorn, 2011). Indeed, devices need to align actors according to their own goals (see Akrich, 1995, 1992).

In order to tackle this issue, the questions I asked my participants were general ones — Has the tablet changed your life? Has the table changed your routine?— followed by probing questions, depending on their answers, which would allow them to express their thoughts and thus investigate how they negotiate the presence of the tablet. My participants' answers, however, tended to indicate lack of a significant impact of the tablet on their lives given that they gave it little use. Their answers to my question about how they saw the tablet in their lives were automatically positive and 'ideological' in most of my participants, reflecting more what they felt about technology abstractly than to their actual use-practices. Their answers tended to be rather abstract as well. For

example:

Even though there is a distance of thousands of kilometers, you can communicate and see a lot of things that would be impossible otherwise.

I can't say whether my life is better; at least it is more practical in many ways mainly because of communication.

Those sorts of general, politically-correct answers were a constant. My participants in general referred to 'communication' and 'entertainment' when talking about the tablet; it seems that these are the values that they primarily in digital devices. In a way, these were the sort of abstract appreciations of the tablet. Except one person, they all used cellphones and many of them smartphones, and the tablet seems to fall into the category of 'digital technology = communication', so that could be what is reflected in their answers. I could further speculate that the reason for their abstract answers could be that my participants did not want to appear as 'old' or unknowledgeable in front of me as a relatively young person who perhaps they associate with 'modern' technology. But when I improvised a group discussion with approximately twelve seniors at a Third-Age Club in Minas who knew each other, there was consensus in that they did not use the tablet at all, that it was not needed, and in fact several of them insisted that they gave it to their grandchildren. Hence, in a way, it was quite a challenge discerning uses that actually make changes in seniors' lives from responses that echoed abstract, techno-optimist discourses. That is why, besides a few of them who directly told me that they did not use the tablet because they do not need it, as I dug deeper they told me things such as:

It would be the same for me if I had it [the tablet] or not.

AC: Do you feel your life has improved with the tablet in any sense?

No. My life is the same.

AC: Does the tablet allow you to be more in touch to what happens around the world?

I don't know... I don't think so.

AC: What could stimulate you to use the tablet more?

I don't know. I don't think I can be more interested in it. Not more than now. It is the same for me [if I have it or not].

To me [the tablet] is not essential. I just use it as entertainment. But it is not that I say, "I'd die if I don't have it", no.

To me it is the same. I work in my little farm and I don't stop working because of the tablet. If I have to work, I go out and work.

These are just a sample of quotes indicating that the tablet does not seem to necessarily grant seniors with a new sort of agency. Many of them did mention some uses and things they enjoy doing with the tablet (usually with the help of family members or from people they trust). Besides a generalized lack of any relevant shift in worldview that most of my participants stated about the tablets, there were other elements that did not allow forming a strong network of senior-users. The elements that came up in the interviews were: training resources, the tablet's manual, the seniors' own patience, the lack of sufficient internet access, and the fact that tablets need to be updated, and repaired when they break down. I examine each of these next.

#### *Training resources and manual*

The lack of a significant shift in worldview that many of my participants pointed out could partly be due to the fact that the existing network of resources such as training

centers, the manual, or telephonic assistance aimed at seniors utilizing the tablet and transforming their identities to tablet-users has many weak links that prevent it from being properly established. For starters, my participants, in most cases stated that they found little help in the available resources, as well as the fact that their busy lives and lack of time sometimes prevented them going to training sessions or walking in to the government office where they can ask questions. There is a combination of human and non-human elements that prevents some seniors from using the device and work against the fragile network of the senior-user that the Uruguayan government seeks to establish through its digital inclusion strategy. For example, a participant named Rodolfo, even though he seemed to have some intention to learn, told me that there was nothing new they taught him in the training centers, so he was frustrated and quickly lost interest:

The thing is that I am managing it (the tablet) by myself, and I haven't learnt yet. I haven't had a class for me to learn properly. The other day they told me that I should sign up and I did, so when I went, they started by explaining what the tablet was. I already knew that, and I wanted to learn something new.

Rodolfo does not have the desire to learn the generalities of the tablet. Although it was not clear what he refers to as 'learning something new', it could be the case that he wants a more pragmatic use of the tablet for issues such as communication with family members, which appeared in pretty much all of my interviews with those who saw some use of the tablet or who had some opinion about it. He does not want to sit in a training session for a couple of hours listening to things that he does not care about. Even though the training sessions offered at Centro MEC have weekly topics such as 'Email', 'Browsing' or 'Facebook', that could be useful, for Rodolfo there is an unsurmountable

barrier where he does not want to waste his time in things he is not concerned about.

Estela echoed this:

The problem is that perhaps the classes do not provide a full instruction of everything that interest us. There are many things, not only the Internet, but also communication, talking through the telephone, some calls you can make for free.

As I said above, this seems to indicate that perhaps the best approach would be concentrating on the concrete needs of specific persons, as Tatnall (2014: 563) suggested, where the best tactic to engage seniors with technology would be by convincing them of the value of a specific application/s that may be of interest to them, but for which a combination for intergenerational interaction with children or grandchildren could be more useful.<sup>19</sup> Indeed, group training could be a problem. Lucia, another participant, told me:

(Talking about training) When they give it to you, they tell you “here you take pictures, here you do this or this other thing.” But you get out of there and you know nothing. You forget about everything.

Another issue for a participant, Jorge, was that he has an established routine that includes an afternoon nap that prevents him from attending training sessions at Centro MEC and thus he quickly lost excitement. He said:

When I received the tablet, I was very excited; I even wanted to go to class. But well, they were in the afternoon. At the beginning, this was a new thing to me, but I got over it instantly.

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<sup>19</sup> I will specifically to this in the next chapter when I discuss the role of technological mediators.

Even though Jorge's case, evidently, cannot be generalized, his attitude is revealing in the sense that he does not seem willing to put the effort to learn about the tablet. The use of the tablet depends on its utility and also on the routine of a person: if the tablet lessons interfere with your established activities that you enjoy, then why alter your established routine when there is nothing worth investigating in a technology that affords you nothing? However, other participants such as Washington, told me that he took the tablet to his son's house when he had to babysit his grandson, which indicates that some people incorporate it as part of their practices in some occasions.

When I told my participants that there were classes available at Centro MEC and that there were drop-in hours, and asked why they would not go, their responses tended to be rather contradictory, because it seems that they would like to learn but on their own terms. For example, Miguel told me after I asked if he used Google:

No, I don't know. I have to learn. I'm waiting to go to a class, so they can teach me all that. But, honestly, I don't know.... I would like to learn more. I lack information and lessons. I even was finding out whether it was expensive to get someone to come here and teach me, but I couldn't find anyone.

And Raul said he was demotivated because he cannot manage it properly but that he would like to have training. However, the need to use it not enough to put out the effort:

I used [the tablet] two or three times a month. Sometimes it runs out of battery merely because of the non-use inertia. I barely use it. I don't have the motivation. I don't say "I'm going to do this on the tablet, no". Sometimes I don't even remember that I have it.... I don't use it because I don't find it motivating, because I know that I'll find problems. What I should do is talk to somebody, bring he or she over, or meet somewhere, and ask for he or she to teach me (...)

we [the wife and him] lack motivation. We don't expect much from it because we crash with the fact that we do not move forward in what we want to find.

There were also other issues when they delivered the tablet for the first time and provided the mandatory training session, such as Silvia, who said, "I got lost because I'm kind of deaf, and there were many of us and it was raining."<sup>20</sup>

The request for private lessons was a constant, given that many of my participants largely said that the initial training session was not fruitful, that they did not sign up to the ones offered in Centro MEC, or that they signed up but had not been called to attend yet. Trainers Lola and Esther, on their part, noted the request for private tablet lessons:

Lola: That's also something, they want you to go to their house to explain to them how the tablet is used, and they cannot understand that we have to be here (in Centro MEC) and give them the workshop here, because we have everything here and they do not understand that we cannot go to their homes.

Esther: And the persons who want you to go to the house, do not want you to follow the workshop's guidelines. They want you to do it quickly; if they want Facebook, they want you to teach them only Facebook. They do not want to take the time for you to explain to them from the beginning. Once, a woman came here and said that her tablet did not charge, so I asked her the question, "when you turn it off, do you turn it off or block it?" And she said: "I do not know how to block it." Of course! You barely touch the turn off button and the screen is black, that does not mean it's off, and that's why you're wasting the battery. But you see, she was not able to come here and ask it quietly; they gave the tablet to her, she went home, and that's it.

Many of my participants seem to be interested in learning more, but apparently it has to

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<sup>20</sup> Here she refers to the noise made by rain on the roof.

be on their own terms, at their own times. Indeed, Sergio claimed that they liked the tablet, but that his lack of knowledge was a hindrance for using it, for which he blamed his lack of training:

I like everything about it, but there are things that I would like to learn more because I see it has many applications that I can't use. I don't know them, or I don't understand them, or they haven't been explained to me yet.... I don't know what else I could do... Maybe there are other things I could do but I'm not aware yet.

This lack of knowledge prevents seniors from doing things that they want, as Sergio continued:

Someone wrote to me through Facebook and I want to reply, but I don't know how, I haven't been able to get in. It changed (Facebook)... I don't know how this is.

Esther —the trainer— in fact complained that people did not attend the training sessions but rather received questions when they came across each other in other parts of town (Pirarajá):

Esther: (We receive) consultations everywhere, you leave your home for the class, or you are sitting in the square or walking, drinking *mate*<sup>21</sup>...there are consultations everywhere. You explain to them that you can give them a class or a workshop, that they should come and participate with us, but they (the seniors) never come. You sit there waiting for them, and nobody shows up. Lately, I'm not waiting for anyone! At first, I expected them anxiously, because it was good for some people.

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<sup>21</sup> Mate is the traditional Uruguayan tea served as shots in a cup with a metallic straw called *bombilla*.

Interviewer: And why do you think that people do not come?

Esther: To me it is because they (seniors) lack interest.

According to what Esther said, it seems that many of my participants do not have the stimuli to go and sit in a class for two or three hours. They need someone to guide them in specific uses for what they want to do in concrete circumstances. Lepa and Tatnall (2006: 11) noted that for the different people they interviewed in Australia, “in each case the adoption decisions of these people had little to do with any supposedly innate characteristic of the technology, but rather in specific uses of this technology that related to their social interactions and environments.” Kuoppamäki (2018: 67), on her part, concluded that Finnish seniors are selective users who “want to participate in meaningful digital environments that support their personal needs, goals, desires and aspirations.” Selwyn (2003: 378) indicated something similar from his research in Wales:

...older adults were more likely to be using a computer for a specific “project” or use—be it emailing one or two specific individuals or cataloguing or digitizing collections of photographs, music and books. In this way, the computer was a specific and purposive event.

Another issue that was repeatedly mentioned was the tablet’s manual.<sup>22</sup> I would say that this manual is clearly written in plain language. For me, a person in his early 30s for whom managing a touchscreen and a keyboard on an interface, or for whom terms such as Wi-Fi are second nature, the manual is crystal clear. However, I could see how for

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<sup>22</sup> Available online in Spanish at: [https://ibirapita.org.uy/wp-content/uploads/2017/03/manual\\_ibirapita\\_2017.pdf](https://ibirapita.org.uy/wp-content/uploads/2017/03/manual_ibirapita_2017.pdf)

older people perhaps it would not be as straightforward in so far as it brings a few acronyms, terms, and detailed steps that could make people lose motivation, especially for those for whom digital technology is a new thing, who are not tech-savvy in general, or for when it is not worth the effort. Surely, the senior who takes his or her time to read the manual carefully and practices how to do different procedures such as connecting to a Wi-Fi network, would understand it; but perhaps the perceived usefulness and perceived ease of use (Davis, 1989) play a role here. Connecting to the internet, browsing or using Facebook are definitely not as straightforward as pressing a button on the TV's remote and changing channels, or dialing a number in a cell phone and pressing the green 'talk' button. In fact, while some participants sometimes consulted the manual, others did not pay attention to it and relied primarily on family members (which as I describe in the next chapter, I call 'technological mediators'). Several participants did mention that they look at the manual when they have questions and had written things in it from the three-hour training session they received when they first went to pick up the tablet such as passwords, whereas others did not find the manual useful: "I haven't used the manual because I don't understand it very much. It is tough for me", a participant, Diego, told me. This indicates that individual, personality characteristics may play a role here, which is something that recent research has indeed suggested (Reisdorf and Helsper, 2013).

Furthermore, when I attended the training sessions at Centro MEC, of the four or five seniors who regularly attended, half of them took notes in their notebooks. Then, when I interviewed them, they showed me their notes, or when they wanted to show me something from the tablet, they opened their notebooks to follow the steps they had written down. In a few cases, for example, my participants asked me questions about

some functions of the tablet. One participant asked me to help her take a picture of her dog that she wanted to put on Facebook, whereas another one asked me to help her access her Skype account to speak with her son who lives in England. In those occasions, the participants asked me to slowly tell them how I had done it while they took notes, or directly asked me to write it down for them.

The training sessions and the manual are problematic issues for some of my participants. In addition to these issues, many of them mentioned some attitudinal barriers that I describe next.

#### *Patience and lack of internet*

The tablet also demands behaviors (see Akrich, 1992; Callon, 1986) and requires something from seniors that they do not usually have: patience. In fact, one common complaint I often heard was that the tablet is slow, so seniors lost interest in it: “You see, the tablets are slow”, Laura complained, while Estela said, in regard to speed, “They are not tablets that you say, Wow! (in relation to their dynamism)” Sofia —the daughter of a participant, Violeta, and who was the spokesperson for her mother—stated: “She (her mother) gets anxious because the tablet is slow.” Graciela, for instance, described this lack of patience *vis-à-vis* the tablet as a personal flaw: “The problem is that the tablet is slow, and I am impatient.” Issues related to impatience certainly came up repeatedly, which also involved family members blaming their older relatives of being impatient, as Graciela said:

The problem is that I forget about stuff. My daughter in law told me “the problem is that you are impatient”. You have to wait for a while. She told me that this tablet is slow. After you turn it on, it works. My son told my daughter “just leave

her because I have explained it to her several times (laughs).”

And Selva made a valid comparison with her cellphone, which she finds much more agile:

[The tablet] suddenly shuts off and you don’t know what to do, or Internet shuts down. It is slow, and you have to wait. Whoever drinks *mate*, would probably drink three of them while he waits things to appear. I find it obnoxious and I have found it since the beginning, since I went to AJUPEL where they gave us the tablets. Why would one have to wait so much whereas your cellphone is instantaneous?

Indeed, Selva makes a valid point. If the main use for ICT is for communication as most of my participants insisted, then a tablet perhaps is not the best medium. Cell phones or smartphones are usually way more effective when it comes to communication, and Uruguay has experienced the rise of WhatsApp as a primary way of communication (Uruguayos en Internet, 2018).<sup>23</sup> Smartphones provide quick access to WhatsApp in a format that is more directly accessible given that it is usually one of the first buttons in a smartphone’s interface added to the fact that with many service provider’s contracts data is included. With the tablet, the user has to press the button ‘Social Networks’ and then access WhatsApp. In this sense, smartphones are more practical, and if they have data, there is no need to connect into Wi-Fi, which is also cumbersome.

This relates to another issue identified by seniors, which is the problem of the lack of sufficient internet access for the tablet. They stressed that there is no point in using the tablet without Internet access, and, interestingly, they claim that the Internet that they

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<sup>23</sup> I can personally attest to how WhatsApp is the essential communication channel for my family, something that Rosales and Fernández-Ardèvol (2016) noticed on their research in Spain.

receive for free with the program (1 GB that can be recharged for a fee) is not enough. This means that some seniors indeed try to use or want to use the tablet, and non-use comes from a different kind of frustration, as participants mentioned:

The giga that they give you is not enough for me. This seems to be terrible business because that way they oblige older people to put themselves on a monthly program. Some retired people like me do not reach 20,000 pesos, how can you pay 900 for Internet? That can't be. Why would you give away something that would generate that? That's why so much people simply stored it.

Another problem is my Internet.... I have the Internet that comes with the tablet, but it doesn't have the power or the duration. It is limited.

They should do a plan through which Internet would be less expensive. In our case, we don't pay for Internet because between the giga they give us and the fact that we can access internet through the school... But when I learn properly (how to use the tablet), I'll pay to have free Internet. We haven't done it because we don't know how to use it properly, so it makes no sense for us to pay for a service that we don't use.

They told me that Internet was for free, but that's a lie. I think it is two or three gigas for free. One or two days a week. Finally, I'll put Internet through ANTEL<sup>24</sup> because I ran out of Internet very quickly.

Perhaps the people who don't use it are people who cannot spend money because they ran out of gigas and you have to add money to it.

One GB is the minimum and if people receive the tablet it is because they don't make much money, and if they don't make much money they can't buy more GB!

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<sup>24</sup> ANTEL is the Government-owned telecommunications company.

In regard to this need for Internet to use the tablet, trainers commented:

Esther: Supposedly, ANTEL was going to put WIFI for free in the homes, but they did not comply.

Lola: A man came once, he brought his tablet. You see, he had never taken it out of the box. He asked: “how does this work?” And I said “look, you have several applications that the tablet brings, such as books, many things, but most of them are for the internet, the newspaper is for the internet, the BPS things, for the internet.” Then the man said: “then if I do not have internet, *m'hija*,<sup>25</sup> I cannot use it?” And I said: “No, sorry, if you do not have internet you cannot use it.” Then he said: “If I want to read the newspaper because my TV sometimes has the cable cut off, I cannot...” I said: “No, without the internet you will not be able to.” Then people got a little angry with that also because if they told you about the giga (that they would receive with the tablet) and it never came, at the end of the day, us, trainers, are the ones who put our faces out because you are the one who delivers it (the tablet), you are the one here, they know that you work for Plan Ibirapitá, they find you in the street and they say: “What about the internet that ANTEL was going to give us?” And you tell him: “did you call the number?” Now you cannot tell them that anymore, because you do not want people to insult you; it's better not to say anything about the call, right? Because it's like that, people get tired, because they think you're lying to them, and it's not that you lie to them; you follow the rules (...) When we (the trainers) arrived, I asked “do you have internet in your house?” They said “no” and ANTEL had to come and give it to you, but it never came, you're not going to tell a person to call. If he insults you, then you shut up and leave because you cannot lie to him anymore, if you know that they will not come. I called a thousand times, and my father has a tablet too.

The conversation Lola had with the senior is quite illustrative of the issues brought by the

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<sup>25</sup> *M'hija* is a common expression in Uruguay and other Latin American countries that could translate as *my dear*.

lack of internet access, especially when it was promised to seniors and sometimes felt that the government did not deliver. It also points out the ambivalence that many seniors demonstrated between the perceived usefulness and affordances in the tablet and the fact that many of them said that their use was very scarce, or that they did not need it. Perhaps, unlimited internet and smartphones would be more effective than limited internet and a tablet, but evidently would be a very expensive policy and therefore almost impossible to implement.

#### *Broken tablets and required updates*

Another issue that several participants encountered was that of the tablets breaking easily or requiring updates. For instance, the tablet requires seniors to be careful with the charger, which is not always the case. It is common that tablets end up being sent to Montevideo to be fixed, as Lola, a Centro MEC trainer, said:

The problem is that they do not know how to plug the charger in, so they plugged it upside down and broke the input. I witness that repeatedly; they brought the tablet and you realized that they plugged in the charger. For me, it was that they plugged it upside down and they forced it, so I told them like two-hundred-thousand times the same thing: do not force it; if you see that it does not go in easily, you turn it around. But no...

In addition to how slow some of my participants find the tablet and the limited Internet, the broken tablets have to be sent to Montevideo to be fixed, which usually further discourages its use because it takes time and costs 500 pesos and it is perceived that information could be lost. For instance, Graciela said:

Gloria: [Internet] is only 1 GB. I don't have the tablet now because I don't have GB. It was broken, it doesn't work, I can't use it.

AC: Did you send it to Montevideo to have it fixed?

Gloria: No, because my friend sent it and it costs 550 pesos. And she says that she didn't receive the same tablet because all her contacts were erased...all the pictures. That's why I don't want to send it when it is broken because I have some beautiful pictures with my grandson. If everything gets erased, I'd rather not send it.

And Selva recognizes she does not take it to get it repaired because she does not use it much, so why spend 500 pesos even if according to her sometimes it does not even get fixed?

Often times it doesn't work properly, so I have to take it to an office where they repair it or sometimes they don't. Sometimes one has to take it to the post office and pay for the repairs. It is not my case, because I barely use it.

Another problem often mentioned was the required software and application updates, which usually led to decreased interest in the tablet. Selva mentioned this problem as well as she summarized issues such as her tablet breaking down, being slow, how complicated she finds using Google, the fear of sending it to be fixed and having it changed, and the frustration of seeing her grandchildren managing technology while she cannot:

It shuts down on me. It is very slow too, something that is not right. That something is for older people such as us—I'm turning 79 in a few days—and it is not right. I am OK, thanks God, but there are many people who do not have the speed or touch to write properly. The tiny numbers are not right, and I do not know how to enlarge them... But when I sent it to Montevideo for repairs, I had

to learn everything again a month ago because it is different from what I was used to. I can't handle the email any more. I have a cousin in Palma de Mallorca and I contacted her perfectly but since I got it back I could not contact her any more. I can't, nor do I want to go every day to get help because that's abuse. There are many things I don't know, and going into Google and all that to me is like going into a foreign country: Icons, messages, arrows start popping up and that's not suitable for a 79-year-old... It can't be that a 9 or 10-year-old child like my grandchildren can, and myself, with my age and the tools that God gave me for everything I do and teach, cannot do it. I should be re-born to be able to learn everything that is available... Every three minutes it shuts down and a note pops up asking me to input my password. And it is so slow! And I don't have an option but to do what the machine tells me to do, but people our age cannot remember all those numbers and letters.

Other participants were more concise in their answers pointing at the problems and confusions brought by updates:

Now (the tablet) is not working very well because a message pops up that says, "Google application stopped". I don't know what's wrong. I have to go and fix it and see what's wrong with it. I barely write two letters and that message pops up.

What drives me crazy is that one has to update it constantly. I don't want to be on top of that, but when (my nephew) comes, he updates it, gives me advice and I ask questions.

The fact that tablets break down, need updates, added to participants' lack of patience and lack of usefulness of the manual and training sessions all hinder seniors using the tablet. Another important element was their self-perception of living busy lives. To this I now turn.

### **6.3 Little room for tablets within already busy and active lives, competition from other entities, and structured times of use**

A number of scholars (e.g. Llorente-Barroso et al., 2015; Baecker et al., 2014; Cotton et al., 2013) and multinational institutions (e.g. World Health Organization, 2017; Commission of European Communities, 2007) have suggested that information and communication technology (ICT) can help older individuals improve their quality of life and stay active. However, most of my participants stressed that their lives were very busy, and that, in fact, that they did not need further technology to make their lives active. Let us also recall that one of the two main reasons for not using the tablet indicated in Plan Ibirapitá's Third-Use Survey (2017) is not having time for it (the other main reason is not having internet or problems with internet connection). There pretty much consensus among my participants in that they understood their lives as very much occupied as they are, and retirement does not necessarily mean free time for them. Let us review what some of the participants said:

We [the wife and him] don't have much time; we have many other activities. We generally use it [the tablet] at night.

If I spent more time at home, I would use it more. But I have other activities that take a lot of my time, so I use it whenever I have free time or for some specific issue.

AC: Does [the tablet] take time away from you?]

No because I am always busy. I have to work on my projects, because I go to a workshop. I painted for many years, but I don't paint anymore but I go to marquetry classes and I am currently drawing a picture. So, if I'm doing a picture, that comes first. Or if I am knitting, that's what I'm doing.

My son told me to go to Centro MEC, but I can't walk too much. At noon I take a nap because I can't exhaust my knee. My son told me to go and learn other things, but no, no... Besides, my ex-husband and I were people who went out a lot; we had fun.

I don't use [the tablet] much. I have a laptop, but I don't use it much. Every now and then I receive emails, I read them, and reply. But I don't like technology very much. I'm from a different time... It isn't that I don't like it. I do other things. I knit, I make woodcrafts... Sometimes I grab it to play solitaire, to take some picture I may like if I have it at hand.

Even though many participants recognized some of the utilities of the tablet, they still established a boundary between their activities and its use (something also noted by Suojöparvi (2015) in her Finnish research):

Some days I use it [the tablet] two or three times a day, and other days I don't use it at all. Because I am retired, I have other activities. I go to ceramics class, the third-age club, and the choir. Sometimes I don't use it. I do take pictures at birthdays. I take a lot of pictures and have them in the tablet and my daughter will put them into a USB port, so I can see them.

I use the computer because I can pay my bills through the Internet... And I like looking for information. If you want to do anything, you see how you can do it, crafts, things like that. But not now because we are very busy. It (digital technology in general) is necessary, though, because before you had to go and ask a person, but now you can just directly go in the Internet... The football scores, newspapers, all that.

Silvia, for example, even contradicted the ideas that her family had about her being

bored, which actually stresses the demands for further investigation about what do seniors themselves understand as being active:

[My daughters] bought it [a pouch that she uses for the tablet]. They were glad I have it [the tablet]. But I'm telling you, when I'm alone I can't [use it]. They tell me "Mom, you'll be bored otherwise!" but there's nothing I can do about it.... I don't get bored because I cook, I nap, I get up, watch TV.

One participant in particular, Jorge, described the tablet as a threat to his mental abilities because he said that people tend to delegate too much to technology. Even further, using the tablet could actually present a risk to his wellbeing:

I have to carry everything here (he points at his head). If this (his head) fails me, I'm done... You see, I have a tablet in my mind. That is why when my head starts failing on me, I will go back of everything that I did not do before; I'll go back to the tablet and I'll use it... Today I went to pick up bread and to take some forms to AJUPEL, then I took a nap in the afternoon. If I don't have that sort of activities... I have to do something. If not, I couldn't take being old any more.

Jorge who is a volunteer at the local retired people's association (AJUPEL) added:

Yes, I was very into the issue (of Plan Ibirapitá), and I saw that a lot of people went (to pick up the tablets). Many people went, I think they delivered around 2000 tablets, so I helped with that... I learnt how to use it but afterwards I lost interest. I'm telling you, I need a lot of time to spend at AJUPEL. I go there in the morning that is when Dr. (X) comes; he is a homeopathic doctor, and I always go because there are moments were 80 or 90 people go so I help by finding space for them. I give them directions. So, I'm telling you, I'm very busy. In addition, I'm in the theater group, in the choir (...) I have a computer, but I never dedicated

time to it or the will to work with it; which I obviously recognize that it is an essential tool. But I could never manage it. Even the computer or the tablet. I'm not sure whether it is because of the lack of time, of ability or dedication, but it never really mattered to me...It is very simple, I don't have the motivation to use it.

And, as I will further discuss in a section below, seniors consciously reject the tablet and technology in general because they don't want it to interfere with their activities, as Graciela pointed out:

I think that it should be used properly. In my case, even though I like social media, I don't want it to take time off from other things. You see, sometimes you have an addiction to be always aware of your cellphone. My daughters nag me when I do not answer my phone, but I won't go and hang out the laundry to dry with my cellphone.

Esther, the trainer, also added her perspective related to the nature of life in a smaller town in Uruguay. This further challenges overarching, abstract definitions of active aging with technology (see Lassen and Moreira, 2014; Lassen, 2017):

Perhaps a retiree who is in the city uses it more, don't they? But for a retired person in the interior, who gets up in the morning... We all know each other here; the person gets up, works on their vegetable garden, milks the cow, sees if he has some *changuita*.<sup>26</sup> They have to entertain themselves, they are not going to sit down with technology when they never touched them before. But in the city, since they spent years behind a desk, they retire and then they sit in their houses. The tablet may be an entertainment for them, but for a rural person I disagree with giving them a tablet, because you ask, and they tell you, "I have it stored in the closet and I never touched it again" or they gave it to their grandchildren. For rural areas (the program), it was pointless.

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<sup>26</sup> *Changuita* means paid work under the table.

Other participants also stressed the fact that they prefer the traditional media that they are familiar with and which demands little effort, as well as newer technology that they find more useful. They would rather stick to TV, radio, or smartphones:

(How many hours a week do you use the tablet?) I barely use it because, unfortunately, TV takes most of our time. I have time when I return from the farm, which is not very much, and unfortunately, the television, with the news or whatever sucks you in; one is lazy when it comes to grabbing the tablet.

In my times you were asked something about history and you had to go to your neighbor's house to see if they had a book to do a summary and take home. Now you just press a key and you have the newspapers, social media, music. I don't do it because when I'm at home, I like listening to the radio.

I think that the cellphone is more of a necessity, not for those jokes that they send (through) WhatsApp. I use it only when there is a need to communicate. That's when I use it.... Now I have a new smartphone. I am still fighting to learn how to use it, and WhatsApp, because I have a lot of family everywhere, so it's useful.

An important affordance of the tablet is entertainment of sorts, which is negotiated within busy lives:

When it is cold outside, I sit next to the fireplace with the tablet, less than an hour. I may grab the tablet and see some stuff. I don't plug in as kids do all day, because one has their stuff to do around the house.

It is indifferent to me. But now that I don't have it, I miss it. Sometimes, in the afternoon, I use it because it is quiet, but it is not a matter of life and death,

because I am always busy. I spend a lot of time with my family. I help my daughter, my granddaughters. They take a lot of time from me; I'm never bored. I don't have time. I'd rather be useful to someone.

I don't use it during the day because I always have things to do at home. I am not used to sitting down during the day. But at night I do. I listen to music.

Some participants, even though participants recognize the affordances in the tablet, they would rather do their activities in the traditional fashion or with the technologies that they already know, in addition to the fact that they are sufficiently occupied already:

I could use it (the tablet) for reading books, but in reality, I like to read the book in paper, and I like reading rather than using the tablet. If I'm at home, I don't use the tablet, I use the computer or read a book. To be honest, I only use it to take pictures.

The tablet is useful for many things, and especially in this little town. My problem is that I have other activities, so I don't have time to use it. But if I didn't have other activities, it would be ideal. I own a little store, so I have to take care of the store and of my house, and I'm by myself. So, I don't have much time.

What the participants largely indicated is that their lives are already active. Some of them (5) even still work part-time under the table, which is something fairly common for retired people with low pensions in Uruguay. Thus, a tablet does not seem to be particularly necessarily useful for increasing activity nor it does not seem to add anything essential to seniors' daily life. It is more as an appliance used for communication and entertainment, and as I will describe in the next chapter, for communication. This fact does not help in establishing a solid network of the senior-user of the tablet further. In

fact, sitting down to use a technology such as the tablet could be even considered a nuisance to actually living a busy life. It could be argued that, perhaps, the notion of technology for active aging comes more from an Anglo-American or Western European context that cannot be straightforwardly translated into a Latin context, where the practices of aging (Laz, 1998) are different. Lassen and Moreira (2014: 44), in effect, noted the necessity of paying attention to cultural contexts “if active ageing is to become more than a policy dream”, there is a:

...need for openness toward local adaptation and existing forms of specific everyday practices. Perhaps this would allow people to mould active ageing into their everyday lives and to accommodate alternative versions of the good life that are not centered solely around health, longevity or productivity.

Indeed, there could be a gap in the literature on active aging that does not consider other sociocultural contexts such as the Latin American where seniors are not as affluent as in the developed world, and for whom many people being active through working after retirement or taking care of grandchildren is an economic necessity rather than a choice.

### *Structured use*

The notion that seniors live busy lives is associated to the time of use that seniors dedicate to the tablets and other devices when they are by themselves. They tended to say that they have particular times of the day to use the tablet when they are not busy. The tablet, as well as other already incorporated technologies such as laptops and smartphones, are not understood as fundamental devices to carry around when doing daily life, but rather as devices to use at home at specific times, or for special occasions

such as when one travels for taking pictures. This reinforces previous research's findings such as Quan Haase et al.'s (2016: 702) where they note hybrid practices in which seniors "seamlessly combine traditional habits with new ones emerging from their use of ICTs."

My participants explained:

The time I dedicate to it is at night...I love being with my computer at night. It is when I spend most time with it. I watch the news (on the TV) and then I spent a couple of hours at it.

I have Internet in my cellphone too, but the tablet is more comfortable when I'm home, at night or at the evenings, because the screen size is more comfortable for my eyes... We don't use it regularly, but we know that we have that tool and we go to it whenever we want it.

I use it at night at least for half an hour, at night or at the time where I have free time at home. I am not here very often, but I use it for distraction and to get my mind off things.

Mercedes, who still works as a private math tutor, told me about her laptop:

I use it during my free time, in the mornings, between 6 to about 8:30 and after I finish teaching, between 7 and 9. I use it mostly on the weekends.

Another participant, Washington, told me that he uses the tablet on particular occasions, such as when he has to help his son taking care of his grandchild or when his wife is watching TV:

I use the tablet when we have to go and look after my grandson at my son's house. He has Internet. I go with the tablet; I read the newspapers, look for information. At home, I usually look at Facebook and check things out that I think

of in the moment [in his laptop]. I use [the laptop] a couple of hours in the night while my wife watches the soap opera.

Another couple, Inés and Juan Alberto, told me:

Inés: It is not every day that I use it. I can be with it an hour tops, because I have a vision problem and because I use it at night, but not more than an hour.

Juan Alberto: I don't use it more than 20 or 25 minutes. She uses it more than I. I read the newspaper generally in the morning ten minutes. I look at the headlines; it is faster that way.

Alejandro, who even though he is retired runs a tire-repair shop, stresses that the tablet is useful for certain things and thus installed Internet in his home, but given that he is from a 'different generation' he does not use it 'all day':

I live by myself and I use it at home. I don't bring it (to work) because I don't have Internet, but it is great in so far as you can access information by yourself. If you want to know about a Peugeot 504, it tells you.... But I'm not all day with it because I'm from a different generation. I don't have that of being all day with it. I use it for specific things. I put Internet in my house now, so I can use it at any time. When I traveled to Europe I knew how all the places that we were going to visit.

This structured time of use further shows that there is a sort of boundary established between the technology and seniors' daily life. In general, the tablet seems to be more of an appliance that is used at particular times of the day when one is free, for leisure, similar to the TV. For those who see some value in it, the tablet is more of an element that has a particular place in the dynamic of the home and in the spectrum of their activities. In that sense, it is similar to the laptops that many seniors already owned; when

used, it is used for specific things at specific times.

*Fear, nervousness, lack of knowledge and age as problems for managing the tablet*

New devices produce fear and make seniors nervous. Age is used as an excuse not to use new technology, which is usually attached to a lack of knowledge (Knowles and Hanson, 2018; Neves and Amaro, 2012; Richardson et al., 2005). This should be added to the fact that, for example, the things one can do with the tablet are not intuitive for the new user who does not have previous contact with computers or had very little (which is the case for many beneficiaries of Plan Ibirapitá, as noted by the 2017 Use Survey from the program). Different participants pointed out that when they get nervous using the tablet, the easiest solution is to leave the tablet aside. For example:

[The tablet] requires many movements that are complicated to me. I find it hard getting what I'm looking for and I start getting nervous. So, the solution I find is to turn it off and store it in the cupboard.

I find it hard reaching what I want to. I have problems managing it. But, I repeat, I haven't put much effort to reach it. The most practical solution I find when I have problems is to shut it off. I had the same issue with my computer. I thought that the tablet was easier, but no.

AC: How much do you use it, would you say?

Very little, because my head no longer takes it. My daughters come and teach me, but when they leave me alone, I can't use it. When they leave, I have the manual, but perhaps I don't even remember how to turn it off. I know there are many things, but I haven't been able to use them, because I don't know what they are.

Fear of doing something inadequate was also deemed as a problem that often leads to

non-use, as Rodolfo said when I asked him about previous technology:

I had a cellphone and one of those computers but once I turned it on and stopped using it because they told me “Be careful because if you press there you’ll make a purchase.” So, I didn’t use it anymore.

Teresa also mentioned the fear she sometimes feels when she used the tablet:

How would I look in Google if I don’t know how? I can’t search. My daughter tells me: “how come you don’t know?” but I don’t because many things start popping up that I don’t know anything about and I’m pressing the keys and I’m scared of messing the tablet up and have to pay each time. Because I had to send it to have it fixed and I had to pay 500 pesos. And it took almost a month. And I am paying for Internet.

Sara, for instance, excused her limited use with her age, added to the fact that the tablet broke down. She was also rather confused about why the government gave seniors something that they did not know how to use:

I’ve been unlucky because it broke down, it doesn’t work. They gave us the tablet and we didn’t know what we were supposed to do with it. It was a new toy about which we didn’t know anything about. They taught us to turn it on and off when we went to where they gave it to us. Then I went to a course that my husband suggested at UNI3.<sup>27</sup> We learnt something there. But I’m telling you, it is broken. I have taken it to have it fixed, and it has been useful...I don’t know...to get in touch with my classmates. But I’m telling you, I can’t manage it very well.... They gave me this tablet, but I don’t know how to use it. Perhaps it is because of my age.

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<sup>27</sup> UNI3 is a place where seniors can go to take different courses that interest them, from languages to general history.

Indeed, there is a need for mediators to solve their non-use even though they have the manual available, as expressed by Silvia:

There are many things I don't know how to do. Going in to know what I can plant, to what plants I can add sulfate to, those things I don't know, and I don't use (...) My neighbor's daughter, who is from Montevideo, one afternoon told me: "I know why you are coming: because your tablet doesn't work." I was so embarrassed, and it was because I didn't remember my password, which you can find in the booklet (manual). Everything is in the booklet (manual), but I didn't remember.

Silvia's feeling of embarrassment represents a negative emotion attached to the use of the tablet given her lack of skills and knowledge. Rodolfo also brought up embarrassment connected to his age and little use—even though he owns a laptop and smartphone—when he said:

To be honest, I use it almost exclusively to take pictures. I am embarrassed to say it. As I have my cellphone, camera and laptop, I don't really think is useful to add one more device that does the same. Besides, I started with this technology during my 'third' age.

The same as Juan Alberto:

I don't use it much. But I search on the Internet about the little they taught me, not because they didn't teach me, but because of my age. But I like it.... I look into Facebook, newspapers.

By largely blaming their age, these participants, in a way, reveal that technology is something that seniors must adopt (see Lüders and Gjevjon, 2017), and the failure to do so relates to a personal flaw. The reason for this could be a dominant sociotechnical

imaginary (Jasanoff and Kim, 2009) in Uruguay, a country that has been proud of its connectivity as well as its policies such as the one-laptop-per-child *Plan Ceibal*.

According to this imaginary, seniors will intrinsically benefit from technology, and thus it is a moral task including them in the benefits of the information society.

#### **6.4 Conclusion**

The network of senior-tablet users has several weak links: The lack of utility that some seniors perceive in the tablets, the seniors' own impatience *vis-à-vis* a device they consider to be slow, the limited Internet that they receive through the Plan, the fact that the tablets break down and need updates, as well as their lack of skills, fear, and self-recognition that they are old. Furthermore, the self-perception that seniors live already active lives for which digital technology such as a tablet is not necessary further hinders the establishment of the network of the senior-users.

It is true that the program makes outstanding efforts to establish the network, such as the training sessions available to those who sign up in different locations such as the Centro MEC in Minas and Pirarajá, the call-center they can reach, and the possibility of sending the tablet to Montevideo to get it fixed for a fee (see Memoria Annual, 2017).

What we can see in the data, then, is that seniors sometimes have problems being translated into the actor network of the '*senior user of digital technology and thus included in the information society*' that the government wants to assemble. Even though Plan Ibirapitá is a very interesting policy with noble goals, such top-down approaches may not work properly because both of technical and human elements, as pointed out repeatedly by existing research (see, for example, Peine and Neven, 2018; Neven and Peine, 2017; Neven, 2015; Givskov and Deuze, 2018; Richardson et al., 2011).

Moreover, other researchers such as Tatnall and Lepa (2006: 58) also stressed that a more useful approach to understanding why some older people use some digital technologies while others do not, would be to conceive of them in terms of

innovation translations.” With this concept they argue against the classical notion of innovation diffusion “which concentrates largely on characteristics of the technology itself, while innovation translation looks at the formation of networks of human and non-human actors and how these networks interact (62).

They point out that it is important not to ignore the influence of the non-human actors involved and how they negotiate with humans, thus they stress that it is necessary to distance from innate characteristics of the technology in order to understand senior’s uptake.

The key is to look at the complex sociotechnical negotiations that seniors engage in as users, and how ‘innovations’ such as the internet are translated into senior’s lives according to what they need, such as the creation and maintenance of interpersonal networks (Tatnall, 2014). For this, more personalized training such as one-on-one would be necessary, but it is rather impossible as a public policy.

At the same time, my data shows that many seniors actually perceive the affordances that the Internet offers. That is why in the next chapter I describe the role of the tablet within seniors’ circumstance, focusing on the potentialities perceived through the tablet and how technological mediators are essential for bringing them into fruition. I will also note how, within my participants’ lives, technology is experienced as a sort of

threat. In fact, my participants largely had ambivalent thoughts about technology where the sociotechnical imaginary collides with their day to day life.

## **Chapter 7: BEING IN TOUCH WITH FAMILY AND TECHNOLOGICAL MEDIATORS: THE MEANING OF THE TABLET IN SENIORS' LIVES**

### **7.1 Introduction**

Phenomenologically speaking, devices 'shine forth' (Dreyfus and Kelly, 2011) to seniors as they acquire significance within the radical reality that is their lives. In chapter 4, when I presented the thought of Ortega, I described how things appear as tools or obstacles within an individual's circumstance according to how he or she 'saves' it, where the circumstance forms the other half of a person (Marías, 1970: 362). Ortega defined the essence of things in their relationship to the person's project within his or her life as a having-to-do (*que-hacer*)<sup>28</sup>. Marías (1947: 249) explains: "...things appear to me forcibly covered by their interpretations: between them and I there is, necessarily, my vital (life) project; in other words, I project over them my living-anticipation, through which they will 'be' this or that, something determined." In other words, things become relevant depending on how the individual decides to relate to what is around him or her, according to which "the significance of the object for our existence lies in its service" (Marías, 1970: 358). For seniors, the tablet and other ICT's service, namely, how they appear as significant, is primarily as communication with loved ones.

In this chapter I will explore the experience of my participants in their daily

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<sup>28</sup> In the translation of *que-hacer* as 'having-to-do' I follow Gonzalez (1995), given that this term has broader implications than other possible translations such as, for example, 'keeping busy', which would be misinterpretation of Ortega's theoretical endeavor. This becomes clear when we consider the profound existential meaning of the term *que-hacer* for Ortega, as Gonzalez (1995: 69) explains: "The moment that man comes into the world his task is laid out for him clear and simple: How does he assert his subjective being in the material world? In other words, one needs to fashion a way of living for oneself. This having-to-do that is man, Ortega views as not only inevitable but also as the foundation of what man is. This is the basic stratum in the constitution of the being of man" (see also Gonzalez, 2005, chapters 1 and 2)

dealings with the tablet. They used different ICTs such as smartphones, laptops or Plan Ibirapitá's tablets mainly for communication and also for 'entertainment', but mostly mediated by what I call 'technological mediators.' I identified two kind of mediators. One kind is made by the people close to them, such as children or grandchildren, who are necessary for seniors to bring the affordances that they perceive in the tablet and other ICT to fruition into their lives (such as for communication). A second kind is made by loved ones who are far away, and these are the ones who render devices such as tablets relevant in seniors' lives. These mediators make ICT such as the tablet mean *something* within many seniors' lives rather than a piece of technological junk, and they provoke seniors to ask for the help of those mediators who are close to them.

I must say, that, *per se*, my idea of 'technological mediators' is not particularly new. In fact, across the literature the role of the older person's social support has been defined through terms such as 'warm experts' (Bakardjieva, 2005), 'faux users' (Neves and Amaro, 2012) — namely, as those who use digital technology through others— or as 'proxy users' (Selwyn et al., 2016) —how people within the seniors' social networks go online on their behalf in "situations where an individual might not directly use the internet themselves" (Selwyn et al., 2016: 6). However, as I note in my analysis, I propose the postphenomenologically-inspired term *technological mediators* to conceptualize the significance of not only the direct social support of people who are close to the senior, but also of distant loved ones who are in fact the ones who reveal the communicative affordance of the tablet, which is the principal meaning that my participants attached to the device. In other words, it seems that at a stage of their life (one that does not generally involve affluent retirement), my participants' life greatly

involves being concerned about family and caring for them, thus the tablet has value within their circumstance as a something-to-be-in-touch-with-family.

Furthermore, my participants rather than being luddites or complete ‘technophiles’, seem to make conscious decisions about how to use or not use the different new digital technologies that compose their lives (see Quan Haase et al., 2016), even though they seem to respond to a prevailing social discourse that emphasizes the need of ICT for living in the current world. In this sense, I echo a recent way of understanding this relationship, as Peine (2019: 56) states, “older persons are not just passive respondents to their social and physical environments, and the norms and symbolic values embodied in them, but also pro-actively interact with their environments to reconstruct them in the light of changing life circumstances.” My participants, for example, automatically stated that ‘modern’ technology such as tablets are wonderful and necessary, but when I inquired about their use in their daily lives, such technology is not essential except for communication.

My participants also demonstrated a constant ambivalence in relation to technological devices. Seventeen of them repeatedly stressed that ‘modern’ technology was a risk to family life, for example, and that they were not dependent on any form of ICT. They also criticized Plan Ibirapitá itself saying that, even though technology is unavoidable in our current times and that they need to adapt, they would rather receive an increase in their pension. That is why their discourse was at times ambivalent and even puzzling, because it constantly fluctuated between the usefulness of technology, their lack of use or need, and the risks of encroachment it brings.

I will then propose that use and non-use of the tablet responds to what it affords to

seniors within the active, dynamic relationship of their selves with their circumstances (Ortega y Gasset, 1984). Mostly, for my participants, the tablet is fundamentally understood as a tool to communicate with distant loved ones (see Genoe et al., 2018; Olsson and Viscovi, 2018; Ivan and Fernández-Adrevol, 2017; Nedelcu, 2017; Peek et al., 2017; Ivan and Hebblethwaite, 2016), but it also perceived as a way to be entertained, and a mode of accessing information about particular activities such as cooking or knitting, even though they tend to need help accessing it. To an extent, this indicates that some of my participants' activities are perceived to be complemented by the use of digital tools (see Quan Haase et al., 2016).

Furthermore, several of my participants also directly told me that they had the tablet but never used it, and it seemed that they did not feel particularly excluded or marginalized from society. Thus, in this complex spectrum between use and non-use (see Loe, 2010), I propose that seniors should not be conceived as a homogenous mass of people or as 'objects' (Östlund, 2005) whose needs are determined from the outside by ideologies about active aging (Peine et al., 2015). Rather, they should be seen as people whose life has involved many communication technologies such as landline phone or cellphones (see Peine and Neven, 2018) and who actively engage with technology to live their lives as they see convenient (Loe, 2015) and according to what it provides for them in the task of living their lives. Thus, the most accurate way to understand my participants is as responsible agents who actively decide the role that technology plays in their lives<sup>29</sup> according to their circumstance, for whom digital technology could be

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<sup>29</sup> I must clarify once again that I am not saying that the digital divide does not exist. My goal is to focus on people's agency and challenge, according to my participants' responses, the notion that ICT is inherently necessary to live a good, active life (see Borgmann, 1984).

completely irrelevant.

I start describing the potentialities and usefulness perceived in the tablet as well as other devices, then I move to describe the role of technological mediators, and then I present the ambivalent nature of the tablet expressed in a critique of technology in human life.

## **7.2 “A problem of the individual”: Abstract potentialities and usefulness of the tablet**

Participants frequently stated that the tablet is a good way of being entertained, even though many of them specified that they did not use it very much. A constant in my research is that it is hard to separate what is ‘real’ and what is a sociotechnical imaginary (Jasanoff and Kim, 2009) that seniors are reflecting in their speech.<sup>30</sup> In other words, they tended to recognize the tablet and communication technology in general as things that could indeed be useful, but it is difficult to determine whether they actually used them as they said, or rather, they are merely aware of some things that can be done in the Internet.<sup>31</sup>

Sociotechnical imaginaries are “at once descriptive of attainable futures and prescriptive of the kinds of futures that ought to be attained” (Jasanoff, Kim and Sperl, 2007: 2). Through sociotechnical imaginaries technologies are shaped, they “have the power to shape technological design, channel public expenditures, and justify the

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<sup>30</sup> A different data-gathering technique that would track seniors’ activity would be required to sort this out (see Rosales and Fernández-Ardèvol, 2016).

<sup>31</sup> Schreurs et al. (2017) described the knowledge state of technology in three distinct types: (1) awareness-knowledge, which refers to understanding the purpose of a device or application; (2) how-to knowledge, which is knowledge that allows them to use the device appropriately and troubleshoot problems; and (3) principles-knowledge, which relates to the understanding of how the system operates. My participants largely had awareness-knowledge, in other words, they perceived some affordances in the tablet.

inclusion or exclusion of citizens with respect to the presumed benefits of technological progress.” I frequently heard from my participants that even though they knew that tablet could be useful, they didn’t use it much. For example, Sergio told me, “I recognize it as a medium that facilitates many things” even though he acknowledged that he doesn’t use the tablet at all when I probed into his uses. There seems to be a contradiction between a dominant techno-optimist discourse that the seniors ascribe to, and their actual use of the tablet. Uruguay is a country that has had great development in the spread of connectivity, being the one-laptop-per-child program one of the leftist government flagship policies. Thus, this type of progress is part of Uruguay’s identity and could be what seniors are responding to in their discourse.

Even though most of them said that they did not use the tablet or their laptops very much, seniors recognized that currently technology is fundamental and that they need to be on top of it in order to be functional members of society (see Richardson et al., 2005; Lüders and Gjevjon, 2017). For instance, Lorena, even though she barely used it, said:

For those who can use it, the tablet is a way of entertainment.... If you currently do not know about computers, you are not living in the current world. You have to keep updated, and I am not that old. And now everything is through computer, even the electricity bills. [The tablet] is a tool that you have to learn how to use.

And Raquel told me:

Sometimes I feel sorry (that she doesn’t use technology very much herself) because you are left out. For example, (the researcher’s (AC) contact in the city of Minas) contacts everybody through a WhatsApp group, but she has to contact me

independently.

In this sense, it is interesting noting how Raquel feels she is missing out without WhatsApp. Indeed, many of the people I interviewed tended to have WhatsApp on their smartphones, so they weren't necessarily 'digitally excluded.' They used it for what they need it for, which is communication. It seems that rather than being technologically incapacitated, seniors do incorporate technology for what they want (Peek et al., 2016)—or at least perceive abstract affordances in devices for what they want to achieve:

I have nephews in Atlanta. In that sense, you can look at each other, you can talk. There are very good things. That's very important. There are no distances with these devices.

Estela (talking about her husband Raul's use): At first, he was a little bit reluctant, but gradually he felt more confident and progressed. What he likes, for example, is that if he is going to dig a hole, he could check whether there is a quicker and more effective technique. He likes it, he is curious about it. There is so much information.

Raul: The tablet and the Internet have the great advantage that you can get well informed about what people talk about... To me it would be very useful in the countryside. I work with animals and I suppose that there is plenty information that I may need. But I don't use it. And I don't blame the tablet either; it is, rather, a problem of the individual (...) If I had problems with an animal or something like that, I would look in the tablet to see how I could solve it. And I think that the same is for everyone who works in the rural sector. If you have a problem, a professional practitioner perhaps is too expensive, or it is cumbersome go and pick him up. Perhaps you can solve the problem through the information available in the tablet (...) If I used it more, I could be more aware of the benefits that it provides. I'm curious, and I like to know stuff. If hear about some information, I like to chew on it a bit and analyze it.... My daughter was going on vacation to

Punta Cana and I didn't know where Punta Cana was. It was in Mexico, so we looked for it and we found it... I think that if there was a system that people who spend time in the countryside could use, that is what I would use the most.

However, Raul, who spends a lot of time in the countryside working on his piece of land, said that he did not use the tablet because of his life being busy with his work on the land:

It is not useful for me because in the countryside I don't use it. I have electric power, but I don't watch TV, I don't need to. So (the tablet) is not a useful thing to me nor can I use it.

He stressed the fact that seniors other than himself should use it as a tool to remain active, and that is the individual's responsibility to find a function for it:

It could have a utility, but one has to find it. The tool is there, but one needs to know how to use it. I think it is an extraordinary way of communicating with the world (...) It gives you a different perspective—a different perspective to know, to travel through the tablet even though you are sitting down here. I think it is something wonderful (...) To me (the tablet) means discovering new things. Things that we don't know, and we have the chance to learn provided that we have the curiosity to learn them, to know what happened. For example, what happened in World War I, who fought, etc.; or what happen in the stock market. When one reaches a certain age, what one wants...what we tell people at AJUPEL is that they should remain active. They must retire but remain active; because it is the only way to live longer (...) I think it is an opportunity to keep one updated. That's what we have to do, because now we have social media for example. If people don't adapt, one has to take risks. We thought that that people would benefit greatly from the tablet because it would keep them accompanied, for those who live alone. They won't have a gossipy neighbor; they'd rather have a tablet to access what they want to.

The abstract ‘necessity’ of being online appeared frequently, even though they did not use the tablet very much, as pointed out by Luis, who noted its communication-affordance:

I would like to do more things, of course. And even, after the tablet, I might do a computing course... I don’t know whether the computer has much to do with the tablet... but to know more. Internet is very good. It is necessary for modern life. You can communicate with people, and that is very important. Instead of picking up the phone, you communicate through the tablet.

The idea that the tablet is useful for other people ‘but not for me’, so to speak, was often stated, as Mercedes put it:

I should’ve gone to class, but I didn’t have neither time nor will. But I’m telling you, I recognize that the tablets are benefiting many retired people maybe on their free time, people who are alone. There is many old people and I’m sure it as a way for them to feel accompanied.

Mercedes (who even though is retired still works as a math tutor) was aware of specific applications that the tablet would be useful for in her life, as she explained:

What I would like the most is going into Google because they told me I can find things there, or things for work. For instance, GeoAlgebra is an application for math that they told me the tablet does not carry it, that only cellphones have them. So, I ask my students to download it on their phones, so we can see the graphs.

As the case of Mercedes shows, my participants perceive the affordances in the tablet, are aware of them, but their know-how is not deep (Schreurs et al., 2017). There is a social discourse around ICT that is hard to escape, and my participants naturally respond to it.

Ortega (1957) noted that social practices and customs are part of the individual's circumstance. People inhabit an impersonal, mechanized social world dominated by 'what it is being said' ('lo que *se dice*', in Spanish). Thus, seniors, by echoing a discourse related to the importance of technology are responding to the social time that they live even though in their practices they seem to be more selective on their use and highly critical about the role of technology in human lives. There is a great deal of awareness but limited actual use. Within this abstract perception, technological mediators are the stimulus and bridge between awareness and uses of sorts. Next, I describe seniors' perception of the tablet mainly as a device for communication and how the role of technological mediators in their use.

### **7.3 Technological mediators: close and distant people as mediators of use**

One of the most important uses or interests in the tablet that my participants stressed was that of being in touch with family members who are away, such as children or grandchildren (Ivan and Fernández-Ardèvol, 2017). In other words, the tablet primarily meant something within their circumstance as *devices-to-be-in-touch-with-distant-loved-ones*. 'Technological mediators' were needed for seniors to bring that affordance into fruition in general. The conversation I had with 97-year-old Violeta and her daughter, Sofia, who was present when I interviewed her mother, was revealing in this sense. As a matter of fact, Sofia was a teacher on her 60s, and herself functioned as a 'senior technological mediator' for an older relative, which shows the complex arrangements of technology-use within households. Sofia told me she was an avid technology user and had a laptop and smartphone in front of her while I tried to talk with

Violeta. She acted as the spokesperson of her mother. Violeta limited herself to adding a few comments to Sofia's responses. Sofia told me:

She [Violeta] does not like the tablet too much. She said, "I'll pick it up because I get it for free so I'm not going to lose it" and "I'll use it because they gave it to me and it is a pity having it stored." But it is not a thing that she... she didn't become addicted to it like I did with technology.

Sofia also told me that Violeta's nieces created a Facebook account for her, and that with her guidance (Sofia's) she uploaded some pictures. Violeta does not write on Facebook because "her fingers slip away, and she gets nervous." She added, "She uses messaging (on Facebook), that I write for her. I ask her, what do you want to write?" and Violeta said, "She (Sofia) has to always be there to guide me". Indeed, being in touch with family is crucial for people to create meaning for the tablet. Violeta told me: "I know how to turn it on, but not much more...I look at pictures of my nephews (on Facebook). I have a nephew in Spain who sends me pictures", while Sofia explained that Violeta saw the picture of her great-grandson's ultrasound on Facebook and that "She loves all that." But in order to access all these images, a technological mediator has to be around and in case any problem comes up:

Once she turned it on and I was taking a shower. She pressed on a video, and she tells me: "this thing is talking to me and I do not know how to make it stop." She needs a guide, no doubt about that.... If there is anything she wants to know, I go online with her and find stuff. That, I do.

Another function of the technological mediator appears to be to encourage the older

relative. The use of the tablet was interpreted within the family circle as a tool for staying active. For instance, Sofia explained to me that “[Violeta] is old, and don’t forget that she only went up to fifth grade at school. She likes reading very much, and I tell her to use the tablet because it is useful to keep the mind active.” She continued:

I think it is good for her, to being able to turn it on, knowing that it has arrows to go back and forth. In that sense it is good for her because she keeps her mind active, the same as reading. I tell her to keep doing anything that keeps her mind active, because at her age a lot of people are lost (referring to mental capacities). But I believe that this helps her in that sense.

Technological mediators are also needed for overcoming the initial fear:

Sofia: (Violeta) uses it quite a lot, but she does not like it very much, she is kind of afraid of it. If it shuts down she goes crazy, and I tell her “don’t worry, it can be turned back on again” (...) She takes pictures. At first, she was very nervous. She told me “my stomach hurts” because of how nervous she was, because, you see, these devices have an effect on them; but not now. She takes pictures now. But as it takes some time to capture the picture, they end up out of focus (...) Sometimes we upload pictures to Facebook. The other day she took a picture of a beautiful peacock. She presses like this (she mimics the movement), and the picture moves, obviously, but it takes its time (the tablet) in taking the picture.”

Violeta: I had never taken pictures, but I like it.

Perhaps Sofia said that Violeta ‘uses it a lot’ is an exaggeration and is indeed a projection of a sociotechnical imaginary. Our conversation went on discussing uses:

Sofia: She doesn’t send emails. If we have to send, I send them for her. For her, it is too much. At first, she was really nervous. She told me “this is not for me”, and I told her “don’t be afraid, touch it”. She has gone a long way, but we cannot be

too demanding with her. It is not easy to send an email. I know younger people who do not know how to send email, so how am I going to push her?

Violeta: If I understood it better, it could be useful, of course. I already do too much for my age. I'm too old.

This combination of encouragement and mediated use also relates to the difficulty and length of the introductory training session that is offered when seniors receive the tablet for the first time (see chapter 5). Sofia explained to me—in a way justifying her mediating role—that Violeta “went to the course but she came out with a headache because it was like two hours long.” Indeed, many of my participants said that the opening training session or the manuals were not very useful to them, so that the role of mediators is crucial. That is why mediators guide and facilitate seniors’ use of the tablet, as well as they reveal to them what they can do with it (see Olson and Viscovi, 2018).

Another participant, Sandra, said that she and her husband Jorge relied on a nephew “who is good with technology.” But, fundamentally, they pointed at the presence and absence of children and grandchildren as a stimulus or limit for using the tablet and other devices in general. Family plays a significant role in the technological landscape of seniors (Hagberg, 2004), as these are the ones who largely stimulate ICT adoption. Indeed, as Olsson and Viscovi (2018) describe, ‘warm experts’ help older people domesticate technology. They write:

The warm experts, typically a son or a daughter (sometimes a grandchild) help identify potential ICT needs that the parents might have. While doing so, they also help identify potential areas of usage. They initiate discussion about ICT with their elderly parents, arguing for its usability and explaining opportunities for acquiring it. (Olsson and Viscovi, 2018: 337)

Luis, for instance, described how important it was having people he trusts to help him compared to those who do not. These, according to his logic, would not even need the tablet:

I don't like it because it breaks down and you must have Internet. I am lucky that I am not that old and my neighbor, my grandson or daughter help me with it. But there are people that I say, "why would they need the tablet?"

In this Uruguayan case, however, it is clear that family members play both a direct and indirect role. By direct role I mean that they play a role when they are physically present helping the older person in using the tablet, in the way that Olsson and Viscovi (2018) describe. But there is also a phenomenologically indirect role based on how the seniors fundamentally perceived that a device such as a tablet as *a thing-for-communicating-with-distant-loved-ones*. It is on these terms that they justified their possession and use of many ICT. For instance, Luis said: "I have a cellphone because I have a son in Montevideo" while Inés told me "(I use technology) to communicate with my grandchildren. The girls set it up for me. I speak. But when they leave me alone, I can't." Julia stated, "I like watching to and be on top of what happens to my nephews, my grandchildren; I use it to speak to my granddaughter who is in Montevideo." And Mercedes told me, "I have my family in Buenos Aires, my sister and my nephews are there, and I talk with them. I send them messages."

This way, the tablet (as well as other ICT) reveals itself essentially as a communication device within the circumstance of seniors. Its value depends on their loved ones who live far away. From an Orteguian perspective, things get their meaning as tools or obstacles, facilities or difficulties according to an individual's life project within

his or her circumstance, as Andrew Dobson (1989: 163) explains: "...things in their radical reality cannot be discussed apart from the subject for whom they exist (...) they are nothing without the subject for whom they 'are' (...) a definitive feature of the object is, precisely, its relationship with and towards a subject."

For my participants, this entails a second level of mediation through which the technology co-shapes seniors' agency within a world where people relocate to different countries, cities, etc. Not so long ago, the postal system or telephone were key technological systems that people relied upon to communicate with distant relatives. Currently, ICT permit new ways of communicating that are more instantaneous and cheaper; and given that letter-writing or landline phones are not as common anymore, seniors have to migrate to the technology that other people use if they want to stay in touch with family and friends. Thus, these loved ones who are far away work as technological mediators in so far as they are the reason that the affordance for communication appears in many devices, in other words, *they are responsible for the meaning the digital devices have within seniors' lives.*

That is why the lack of technological mediators is also a problem for many of my participants, as Olsson and Viscovi (2018) observed for older Swedes. The lack of warm experts can be very detrimental to technology use. Similarly, for my participant Jorge, not having distant family far away, or anybody he necessarily wants to be in touch with, occludes any possible meaning for using the tablet. His circumstance does not make it significant. I interviewed him with his wife Sandra next to him, who said: "He hasn't had any daughter or grandson leave, so he doesn't need it." However, Jorge does carry his cellphone—an older and familiar technology—in his pocket in case his family living in

Minas, close to him, can reach him at all times: “I have my cellphone in my pocket, so she (his wife) can call me, my son or my grandchildren.”

Indeed, the lack of having family away and of having family close that would teach, was an excuse for not using the tablet, as Graciela pointed out:

(The tablet) is not necessary. There are people who use it to be in touch with people abroad, but I don't because the people I care for are here (in Minas). If I had grandchildren here, they would tell me. But I don't have them here. My son works a lot and my daughter in law too, so I can't.

At the same time, Silvia, for example, recognized that abusing of her technological mediator could be a problem, so one has to practice a sort of censorship sometimes:

If they were here (referring to children and grandchildren), things would be different, very different. I ask my daughter very often over the phone and she clears some doubts I have, but I can't bother her all the time.

It is also interesting that Silvia mentions the role of a previous technology—the landline phone—as a channel to access a mediator such as her daughter. In a way, this participant uses a technology that is totally incorporated into her daily life to ask directions about how to use a new device such as the tablet. In order to be up to date and be able to communicate, she has to try and adopt newer technology, for which the family is fundamental. In this sense, it also seems that seniors are familiar with some applications out there even though they are not really sure what they are; but because their close family members operate them, they would like to operate them too but usually unsuccessfully. In effect, this relates to the networked character of many technologies.

When a technology reaches a certain usage threshold, then it becomes even mandatory to

use it for communication. This was the case with mobile phones—which were expensive at first but have now become widely accessible—so one has to carry a mobile phone in order to stay in touch and up to date with the family. Using a landline exclusively is now considered strange. This was stated by a participant, Irene, when I asked her how she learnt about email and Twitter. She learns about technology by,

...asking the kids and my grandchildren. The manual is not useful, it doesn't explain well. A girl who lives next door told me to go over and that she'd fix it, and in three seconds she fixed it without looking at anything. But she knows, obviously. For example, I would like to have Twitter, but I can't even manage Facebook, so I won't even try Twitter.... I don't know how Twitter works, but I think that it is broader and has more interesting stuff. I don't care whether Tinelli<sup>32</sup> had a fight or whatever. I like it because I like to know about my family. I have a granddaughter who is a fan of Facebook and Twitter.

Similarly, Gloria, told me about what motivated her to use Facebook and about her knowledge of Instagram:

Gloria: My grandchildren put a lot of pictures with the family and my friends who are on Facebook. They (the grandchildren) now also use Instagram. They have invited me, but how would I use it if I don't know what it is about? I also communicate a lot with my grandson and with my daughter.

AC: Through what program?

Gloria: I don't know, they tell me "press here, grandma."

Then, she continued:

If you don't have somebody to guide you, you store it. I know a lot of people who have it stored and wonder "why do I need it?" Because if you do not have

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<sup>32</sup> Marcelo Tinelli is a famous Argentine TV presenter who is usually on the cover of tabloids

someone to guide you.... Same with the cellphone. Because, you see, you press something, and it goes over there or over there. At first, with the tablet, I wanted to look at some pictures from my cousin and I pressed in Facebook and asked, “What did I do?” I ended up in a mess. You have to ask someone who knows.

Jorge, echoed this:

I go to Carlos Gutierrez’s<sup>33</sup> page but I always have to be with someone else — with my grandson asking him what to do, what do I press.

The same as the private tutor Mercedes, who relies on her high-school-age students:

I don’t know the tablet very much. The little things I know I learn because I ask my students. They dominate it, so I ask them how to upload pictures, how to write. At first, I thought I was one of those who would store it, I wasn’t interested. I didn’t have time and I wasn’t interested. However, I was curious, and I started seeing what I could do... So, what I found most difficult was getting to know the icons. Are they called like that? I have trouble with that until today. There are many that I do not know how to use. And I see things that pop up in the tablet and I’m completely ignorant. I have no idea.

Technological mediators, thus, play a role in the development of how my participants engaged with technology and how they switched back and forth through different devices, or what Fernández Adrèvol, Sawchuck and Grenier (2017) define as “technobiographies”. Raquel, for example, who used her laptop instead of the tablet, explained how her family encouraged her to use the technology:

I never had a computer before. I didn’t even want fiber optics or anything like that and refused everything related to technology because I knew I wasn’t able to manage it. But they told me “you’ll get used to it”, and my daughter and

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<sup>33</sup> Carlos Guitiérrez is an appliance store in Uruguay.

grandchildren wanted me to buy a computer.

AC: Do you find the laptop easier than the tablet?

Raquel: It indicates what you have to do. Here (in the tablet) it doesn't tell you.

And Estela (whom I interviewed with her husband Raúl) told me:

I didn't have a tablet at first because they were really expensive, and I thought that I wouldn't need one. But later, my daughter gave me her (computer) tower because she has changed hers. So, I adapted it to the TV screen that is bigger, and we used the computer there. There I learned some more. Afterwards, we received the tablets and later we got better cellphones.

As Estela described, within their techno-biographies, close family members were also mediators of seniors switching to different technology (Jacobson, Lin and MacEwan, 2017). This is important for many participants because they feel that they have to be on top of technological changes mainly for communicating with their loved ones, as Ana explained:

My grandchildren taught me about my digital cellphone, because I had one of the old, big Nokia bricks (referring to the phone that resembles a brick). I used that one perfectly, to call my daughter, who between 2002 and 2004 was in the United States. The digital ones...it was tough for me, and so was the computer. I rejected them, but at one moment one has to 'actualize' oneself. If we reject technology and do not train ourselves a little bit, we do not exist; we can't communicate.

The feeling that seniors have to 'actualize' themselves was a common, underlying belief. They should adapt to the communication of their current times, so to be up to date with their loved ones. The role of children and grandchildren in this sense was pointed out by Verdún:

[My grandchildren] teach me! When I bought one of these digital cellphones...I previously had one of them with the buttons that I loved, but they started telling me that I had to have the other ones with camera and other things. She (referring to her granddaughter) was teaching me WhatsApp and all that, and she had just turned ten!

Sometimes, there seems to be a sort of distribution of technological responsibility for actualization, or delegation of technical roles within the household. For example, Graciela and Jorge, with whom I talked at the same time, described how she is the one who is more technically savvy, especially with the use of the smartphone. That way (as in the case I described earlier of Sofia with her 97-year-old mother Violeta), a technological mediator can also be a more technologically savvy wife or husband who him or herself is a senior too. Jorge mentioned that if he has to contact family, for example,

Jorge: I rely on her (Graciela).

Graciela: If I find anything that would be of interest to him, I'll call him right away. "Look at this or that". Sometimes he stays watching a movie here and I go lie down for a while and I call him "Look at your nephew here".

Jorge: If she feels any kind of pain, she goes to Internet right away to look what could be the cause.

To summarize, research has demonstrated that close relationships are particularly fundamental for older persons use of technology (e.g. Luijkx, Peek and Wouters, 2015; and Lüders and Gjevjon, 2017) noted that older people benefit from both the help they receive in using the technology as well as in the direct interaction with the helper. The fact that seniors want to communicate with those they care about gives the tablets a specific meaning for seniors (see Bosch and Currin, 2015). In fact, what the tablet,

cellphone or laptop are, largely depends on its ‘communication-with-family’ function; they are seen as tools that afford being involved in children’s or grandchildren’s lives (Ivan and Fernández-Ardèvol, 2017). Indeed, research has noted that looking at pictures of family members is a stimulus for grandparents using ICT (Harley et al., 2012), and this affordance appears through the direct and indirect role of family members. Researchers such as Luijkx et al. (2015: 15479) stated that “Computer devices provided opportunities to interact with grandchildren via, for example, video telephony applications or social media.” At the same time, my participants who saw that the tablet afforded something, indicated a clear pattern of dependence on the physical presence of direct technological mediators to help them as well as on the indirect presence of technological mediators, that is, family living away as a stimulus for using the tablet that reveal its communicative affordance.

From an Ortegaian perspective, we could say that from the point of view of my participants, digital devices seem to acquire significance as tools for communication with their loved ones. Let us recall from chapter 4 that phenomenologically, things can be obstacles or difficulties according to an individual’s circumstance and how he or she relates to it. This is to say that he or she makes things shine forth according to his or her life projects. My participants seem to understand the role of new digital technology as something to be closer to those who they care about, which echoes the social circumstance of people migrating to other countries or moving to the capital city for work or education. ICT, when perceived as valuable communication channels seem to be ‘technologies for affect’, in a way. However, seniors demonstrated a constant ambivalence towards it. Next, I turn to its perceived deleterious effects.

#### **7.4 “The gift of the family is being lost”: Negotiations and critical reflections over the use of technology**

Most of my participants perceived the affordance of communication for which they largely needed mediators close to them to be in touch with those loved ones who are far away. But at the same time were very critical of the role of technology in contemporary life. They tended to point out that the technology is probably good and useful for many people, but not for them (see Richardson et al, 2010). In a way, they see ‘seniors using technology’ as an abstract category that may apply to others but not necessarily in their own lives. My participants were also very critical about the increasing encroachment of technology in modern life and did not like the fact that technology was in many ways interrupting family life, for example (see Ball et al., 2017).

Furthermore, some of them manifested their disagreement with Plan Ibirapitá in general, because they would have rather received an increase in their pensions than the tablet. This sort of criticism was frequently heard before the policy was developed and was discussed in the Uruguayan media (see Cotelo, 2015). A clear expression of this ambivalence between the potential use of the technology and its actual role in life is what Jorge said:

I think I turned it (the tablet) on when I brought it home (he did not turn it on since). I will manifest a social and economic sense to this. I thought that the government, instead of giving us retirees a tablet, I would’ve preferred the 2,000 pesos that I think a tablet costs. Because in this country we have 200,000 people who earn less than 9,000 pesos. I agree with the plan, yes, because I know it works. I know it works because many people use it. I could assure that 90 to 95% of people use the tablet. I don’t, despite that I support technology. In my case,

besides being retired, I have many social activities. I am member of the group (AJUPEL), I'm part of the directive commission...I'm busy with that. In addition, I like football and the talk shows about football; I dedicate a lot of time to that, and also here at the apartment buildings. I help with a lot of things here; I put up a fence, I mow the lawn. I have free time, so I spend it... And to be honest, I don't like that people spend all day.... I have an expression: *como teru teru de bañado*<sup>34</sup> searching for worms all day. That bothers me.

And Gloria told me:

I don't see it is positive that people have it who do not use it, because this costs money to the country. People preferred to have their pensions increased even with 1000 pesos instead of receiving the tablet. I was one of them, because my pension is low. And the tablet has made me spend money.

Inés echoed this criticism:

I would have preferred, as it was a gift exclusively to retired people, that the cost of the tablet would've been directed to our pensions, which is quite meager.

Adding to these perspectives, the trainers said:

(Interviewer: Do you think it was a good thing giving seniors tablet?)

Lola: To be honest, I don't think it was good at all.

(Interviewer: Why?)

Lola: It was a waste of time and money, there they spent money that could have been used in something else. Not all receive 15,000 or 16,000 pesos, there are others who receive 7,000 or 8,000 pesos. Perhaps they could have given an increase in retirement.

Esther: I totally agree with what you said. I think that it would be more productive an increase in retirement money than a tablet, because most of them are not

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<sup>34</sup> This expression means that the person is constantly looking down to his or her device. *Teru teru* is a bird common in the Argentine, Uruguayan and Brazilian pampas— the Southern lapwing— and a *bañado* is a swamp.

interested in a tablet.

Selva, furthermore, referred to how technology was disrupting family life, something that irritated her in general, as well as she stressed the fact that she is busy enough to use and does not need more technology:

I like more direct type of communication, more instantaneous. I read my email – it takes me some time...well, I don't know. As I am retired one has more free time for more direct communication, so I don't really use it. I have it because it is necessary because sometimes you need it for information and communication, but I don't use it...I mostly use Whatsapp in my cellphone (...) One of the negative things about technology is that we increasingly communicate with people who are far away, and we have lost the communication inside the family because each one is.... well, I live alone. The other day my daughter and granddaughter came here for lunch and she was constantly on her cellphone. She is a baker who works at home and gets messages and questions and orders (through her cellphone), but I had to tell her "X, we don't see each other often and we can't talk because you are with your phone". She answered, "it is for work, mum", and I said that the person that messaged you doesn't need anything urgent that you have to read and reply right now. People develop a vice where they are always aware of whether the cellphone rings, receives a message... or, if not, is always aware if her messages were received. That's bad.... I also see it as disrespectful, and communication is lost, the moments for dialogue, of discussion, of talking about your day, what have you been up to, what your projects are, how you feel, what your projects are. I see that within the family each one is with a cellphone, with a game, etc. In the same room, the family is communicating with people from outside, but inside the home there is no dialogue and no time.

In a very similar way, Graciela also stressed how it impacts negatively on the moments

she shares with her husband and with her friends. She says that it is a sign of respect and part of the social etiquette not using the technology when it is not required:

I don't want to be a slave. I think it is a positive tool, but not to be all day on it. I recently changed my cellphone because I had an old one. So now I can use WhatsApp, and (my husband) got angry with me because at first you want to do everything and reply to the messages, and he told me that "now it is *mate* time, leave the cellphone alone." And he was right, why would I be with the little device? One has to be respectful, so we want to be out in the open air, we like doing other stuff. I often go out and don't even carry my cellphone. When we meet with my friends, we sit around the table and place our phones on it, so I joked and told me that it reminded me of Western movies when people left their pistols on the table. I don't want people to rob from us that joyful moment by being attached to our cellphones. So, I take it and leave it in my purse now. Besides, a person has trouble with turning it off. For instance, here in Minas in the theater they ask people to turn off their cellphones and I think that's great. They should do the same for buses. Nothing bothers me more than when a cellphone rings in the bus. We have a daughter in Montevideo, and we travel there often, but at some points (the bus ride) is unbearable. Everyone is talking on their cellphones.

Estela echoed this concern, also using the excuse that she is 'from a different time', so her practices do not involve technology and rather enjoys personal contact:

I went to pick the tablet up to see. I learnt instantly, because I kind of managed my laptop already. So, I learnt, and they told me "then do some other thing" and I started taking pictures and that's pretty much it. But I don't like machines very much. I like writing, picking up a pencil, pen, and the crosswords. I'm from a different time, but not because I resist technology. It is by custom, rather. I'm not interested. I was just knitting sitting under the sun (...) Sometimes I am sending a

message in WhatsApp and I grab the landline to talk. I prefer talking. I enjoy the direct contact with the person or talking through a landline more than WhatsApp.

Furthermore, technology interrupts her daily chores or activities that she enjoys better:

If I have to knit, I knit a lot. Not large fabrics because what I make are socks for babies that I send to the hospital. When I make a lot of them, I get them ready and send them to the hospital. And you see, I am knitting, and I don't put the knitting down for picking up the tablet.

However, she also recognizes that access to the Internet, for example, could be useful, but she still rejects it:

It useful in some ways. For instance, I started knitting a scarf the other day and my grandson told me "look for it on the Internet and you'll find it right away". I see that they use it a lot. In the past, I would say, "I'll prepare rice pudding" so I looked at the recipe book. Now I see that my daughters-in-law look for it in their phones... I do it traditionally, but it depends on your age.

After saying that, she quickly returned to her critical discourse, stressing that there are significant differences between people her age and the younger generations:

The other problem I see is that there is a different type of communication now between the youth. Not between the elderly and adults, but between children and youth. Kids access cellphones or the tablet since a very young age, and there is a different kind of communication among them. They don't play anymore. I could never say "I'm bored" and either could my children. And now kids are bored.

Jorge also complained about the current role of technology, emphasizing the relevance of engaging with the community and the relevance of family moments:

We are not part of the “modernism” of the current times. I go out and talk. I like talking to people. I have lived in Minas all my life, which is a small town and more or less we all know each other. We walk under the sun and it is good for us. (...) I find it irritating that people upload stuff and the entire world comments... I don't like that. No one should care of what happens to me. I find that family gets together, and all the kids are with these things (their devices). Family conversation is lost... On my birthday I said: “I'm going to leave a bucket for you to place your cellphones” ... And mothers, if kids bother them, give them their cellphones from a very young age! I've seen little kids in the strollers and mothers giving them the cellphone... Us, we raised our children strong. They cried, yes, but now my children do that. They all come with their cellphones. They come to a family gathering and they are all with them (the cellphones) (...) The gift of the family is being lost; the family meeting is being lost. At noon they eat with the TV on, the cellphone on. It is not like when family gathered to talk about problems. The other day we were having lunch with my daughter. She was there where Nelly (a neighbor who was there during the entire interview) is sitting, and her cellphone was ‘beep-beep-beep’ all the time. And I told her: Raquel, they don't let you have lunch in peace! She told me it was because she was on groups and would miss stuff otherwise.

Resistance takes many forms and varies person by person. Some people may find some things in the technology useful while others see it as part of the encroachment of life by technology. For instance, Estela told me how she used email but fell to the pressure of her daughter who made her a Facebook account even though she did not want one. However, she negotiated with it and adopted it to her desires:

Many people received the tablet and stored it in a drawer or handed it to their grandkids, and weren't interested... I resist using it and be enslaved by it. I have

an email and friends in Spain and I communicate with them through email and I think it is fantastic. My niece came one day and set me up a Facebook account even though I told her I didn't want to, but she insisted that I must have a Facebook account. So, I learnt that I could limit the people who can see my Facebook page.... I like seeing people face to face... so my Facebook is scant, short, and with positive stuff (...) I think it is a good policy. It depends on how you use it or on how you get along with technology but giving the same chance to everyone to have the same, I think it is fantastic.

Also displaying this negotiation insisting about her active life, Gloria recognized the risk that technology entails so that she puts limits on what she does so that it does not take much time from her routine:

I get up at 7, I do some spinning, I shower, have breakfast and during breakfast sometimes I succumb to the temptation of looking at the phone to see whether I have messages. I always check my email in the morning.... But if you let yourself be trapped, it'll trap you. You could spend more time than you should.

In summary, participants in this research tended to be very much aware of how risky it is to allow too much technology into one's life. They seem to act as 'watchdogs' of technological interference into ways of doing things and established social practices. There seems to be another layer to the contradiction between their techno-optimist discourse and their actual use: a layer that criticizes the role of technology in daily life even though they perceive useful affordances for communication. This could be interpreted that these seniors' generation could be the last bulwark of lives that are lived fundamentally offline, and for whom ubiquitous access to the internet and information are not strictly necessary. They show that life goes on without heavily using digital

technology, negotiating some of its uses, and demonstrating that life can actually be fulfilling and active.

### **7.5 Conclusion: What does “Use of the tablet” mean?**

In general, seniors claimed that they used the tablet for some entertainment but primarily for communication. Within these two broad categories, there is a wide spectrum of uses that the seniors stated that they give to the tablet such as communication through Facebook or looking at pictures. But what does *use* actually mean? *Use of technology* is a complex term and is far from being a binary (Quan Haase et al., 2016; Neves and Mead, 2017; Kania-Lundholm and Torres, 2017; Wyatt, 2002). Use entails a wide spectrum, and it certainly does not automatically mean effective appropriation (Neves and Amaro, 2012; Bakardjieva, 2005; Olsson and Viscovi, 2018), where by appropriation I mean how people or groups incorporate technologies as their own, according to their own needs and interests in everyday life, producing transformations (Casmayou and Morales, 2017: 204). Some participants stated that they have particular times/places/situations of use. Others, however, were not so interested in the technology: “Perhaps I’ll be aware someday that it is useful...when I have time maybe I’ll do a sampling of what’s inside that little device” or “There some things that they taught us at UNI3<sup>35</sup> that time we went, such as the @, email, that didn’t call my attention.”

The key however, is to understand that the tablet takes different meaning according to the individual’s circumstance, as Luis, who is interested in traveling and cooking, adamantly stressed:

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<sup>35</sup> UNI3 stand for ‘University for the Third Age’. It is a national program where seniors can attend different courses.

I don't write much on it, because I write what I want and that's it. I don't read books either. *Each one uses it for what they like.* I like traveling so I look for things and I know how things are; for cooking too. Recipes are not easy to come across, but you can watch how a dish is made step by step. I don't have that thing where they send you mail. Well, I have it but I don't know how to use it. I don't pay attention to all the other silly things. I love traveling and recipes.

And Laura stated:

There are many things to learn with the tablet. There is social media, multimedia, all those things that you don't even touch. I've taken pictures, gone into Facebook, sent pictures of plants—I take pictures of plants, because I love flowers, pictures of my grandchildren, but I have to keep focused because if not, I am a disaster. You have to be very focused with the tablet (...) When I didn't have it, I was indifferent toward it. But now I have adapted to it. I love food, and before, recipes were a mystery to me. Now, you look how to prepare pickled mushrooms and there are several ways. Now I want to make a pea stew, so I look for it. Besides, the tablet does not occupy room. I travel, and I take it with me. There are also things that I don't know, such as moving the pictures from one place to another.

In general, my participants indicated that they did not use the tablet very much and that it did not have a significant impact. They usually mentioned the need for help with doing things in the tablet and other technology because they need to be up to date with current times and ways of communicating, while others do not see anything meaningful in it. If one needs a recipe or wants to communicate with a loved one, and internet is the way to do it, then he or she would access it through the tablet or any other device him or herself, or with the help of a technological mediator. If one is bored on a rainy afternoon, perhaps then scrolling through Facebook is a way to occupy their time.

These activities, of course, are only available if one has access to the internet, something that my participants complained is scarce through the program. However, they frequently said that there is not much that the tablet offers them that makes a significant change in their lives, and that, indeed, their lives would probably be the same with the tablet or not, especially in the context of lives that are indeed active enough and that involve already familiar technologies such as cellphones, TV, radio, and even smartphones. Thus, the uses and rejection of the tablet largely depend on the person's circumstance and what affordances it reveals to them accordingly. Indeed, as active decision makers, if a senior finds it gratifying to take pictures or to find recipes, he or she will use the tablet, smartphone, laptop, a recipe book or any other thing that affords them that possibility; and if the seniors do not find anything relevant in the tablet, it will remain in a drawer.

## **Chapter 8: DISCUSSION**

### **8.1 Techno-Circumstance as a framework for use and non-use**

My research seems to affirm the many opinions in the literature that discuss the necessity for moving away from grandiose affirmations and expectations of participation in the digital world and take a closer look at contexts of use in the accounts of the relationship between older people and technology, (e.g. Neves et al., 2018a; Sayago, Sloan and Blat, 2011; Sayago and Blat, 2010; Larsson; 2009; Östlund, 2004). This research contributes by capturing and providing a description of a group of senior Uruguayans' relationship with technology, especially in the framework of a country that has developed a public program for seniors' digital exclusion by delivering tablets. In general, I agree with Quan Haase et al., (2016: 701-702) when they write:

We find that agency is central to our understanding of digital seniors' use of ICTs, they critically consider various technological options, and make choices around personal preferences, convenience, and affordability. For digital seniors, ICT use is not a binary, they want to have the flexibility to choose for themselves how to engage with ICTs.

Indeed, many ethnographic studies have been developed to grasp what technological agency means for seniors and how it interacts with their previous routines and practices where non-use, or very restricted use, is often the reality (e.g. Morris, Goodman and Brading, 2007; Selwyn, 2004; Knowles and Hanson, 2018; Suopajarvi, 2015). A concrete case is illustrative, in which Hakkarainen (2012) studied rural Finnish seniors' rejection of computers and the Internet. He summarized the social representation that his research

participants had of these technology, often as a self-defense against an increasingly computerized society: “the computer and the Internet are useless and risky ‘tools and things’ that threaten one’s freedom, lifestyle, health and security as well as create differences between users and non-users” (Hakkarainen, 2012: 1212). Hakkaraiennen also remarks that the ways in which older people understand ICT relates to the individual’s history: where he or she lives, the kind of work he or she did, and so on,

Existing literature has pointed out a gap in the knowledge about the way seniors understand technology and how they make sense out of it (Richardson et al., 2011). Hagberg (2004: 162) argued that knowledge concerning seniors “needs of, readiness for, and interest in using new technology is very poor” and that social scientists have not dealt with technology’s social micro-world when individuals of flesh and blood meet new technology and incorporate it into their daily lives (2004: 165). My research adds to an increasing body of literature in addressing this lacuna by providing an analysis from a specific part of the world —Uruguay, where digital inclusion of low-income seniors is a public policy— examining the meaning of government-delivered tablets.

I suggest that even though my participants seem to be responding to a sociotechnical imaginary (Jasanoff, 2015; Jasanoff and Kim, 2009; Jasanoff et al., 2007) that frames their discourse in techno-optimist terms, they are active constructors of their technological circumstance by using and rejecting the tablet —as well as other ICT— according to how they understand their life and how they deal with their circumstances. They see value in the tablet in so far it could be a device through which they can communicate with distant loved ones, but for which however they need the help of people who they trust such as family members. In other words, to bring the affordance of

communication they perceive in the tablet into fruition, they need the help of technological mediators who are close to them. Those with whom they perceive they can communicate through the tablet also act as mediators in the sense that they are they are the ones who make the tablet and other communication technology significant in their lives as *devices-to-be-in-touch-with-loved-ones*; they make devices meaningful within their circumstance.

Given the way that my participants relate to the tablet, I propose that a person's circumstance is the fundamental value-giving realm, thus Ortega's thinking here is enlightening in so far as it conceives the agentic relation of a responsible individual within structural forces who has to make decisions about how to live within technological circumstances. For the Spanish philosopher, life is a drama, a having-to-do (*que-hacer*) in which circumstance is the other half of human-being; it is that within which we find ourselves existentially and where we find ourselves with the *task* of making our own lives. Human life is thus the *radical reality* in which all things appear, where self and things are mutually dependent and therefore co-implicated.

Followers of Ortega such as Echeverría (2000) and Mitcham (2000) described the primary role of ICT within human circumstance at the turn of the century (see also Diéguez-Lucena, 2018), which composes a radical techno-circumstance that as human beings we have to inevitably face and make our current lives with. The person has thus to negotiate with ICT the development of his or her life and what he or she wants to be. In this dealing with ICT, people can see their lives determined by technology, can reject it, or more wisely, both accept and reject technology according to his or her circumstance and what she, as a conscious decision maker, wants to be (see Peek et al., 2016).

The circumstance involves the biography of the person, and “biographical changes in the individual life course are likely to affect to what extent and for what purposes technologies are used, and whether or not digital technologies are perceived as accessible devices in everyday life” (Kuoppamäki, 2018: 64). Biography also relates to how we allow the artificial real that humans create, i.e. technology, to encroach our lives. As Ortega would put it, we have to learn what to desire and what to be as individuals (Ortega y Gasset, 2015).

Plan Ibiraptá is indeed a laudable initiative aiming to address the structural inequality of the digital divide as well as to providing skills to seniors. Taking into account that seniors have the access to the technology through the program (although there could be some problems regarding internet), I propose that the tablet means different things for my participants according to the circumstances of their lives, and thus it affords different things. Rather than suffering from exclusions, they include themselves in their own terms. Therefore, I align with recent research such as Kuoppamäki’s (2018) and suggest that older adults are selective users of digital technologies. “They want to participate in meaningful digital environments that support their personal needs, goals, desires and aspirations” (Kuoppamäki, 2018: 67). It seems that seniors are not prisoners of their circumstance, but they act upon it; they ‘save’ their circumstance. Rather than victims, my participants use the tablets and other devices, such as their cellphones, smartphones or laptops, as they see fit (for instance, I contacted most of my participants by calling them on a mobile phone rather than a landline). They must be conceived, as previous research also has shown (e.g. Joyce et al.,

2016; Peine, van Cooten and Neven, 2017), as active agents in its construction through conscious and responsible choices. Richardson et al., (2010: 713), for example write that for their participants in New Zealand,

their rejection of computing technology and how they narrated their rejection presented non-use as a position of empowerment — a self-conscious decision not to act upon social narratives that present computers and computing as adding value to how their lives can be lived — at least not at this moment in time.

For my participants, devices such as the tablet may play a positive or useful role, or not, within a person's circumstance. Besides being selective users who reveal the affordances of the tablets according to their contexts, my participants seem to live active, meaningful lives without a fundamental need for the internet. My argument in this sense is not far from Bakardijeva's, who in her study of the internet in everyday life claimed that the technology should be located "within the social-biographical situation of a user" that defines and gives meaning to situations "depending on the practical interests the subject is pursuing" (2005: 44). This fundamentally depends on the life course understood as circumstance, life projects, and thus on the meaning that things acquire as a function of the subject's relationship to his or her circumstance. Quite similarly, Quan Haase et al. (2017: 692) pointed out that adoption of technology "is an iterative process in which potential adopters constantly seek out new information about a technology, are influenced by peers and families in their attitudes, and adjust their behavior as their life circumstances change."

Furthermore, my data further showed that the binary use/non-use is inaccurate (see Quan Haase et al., 2017; Neves and Mead, 2017; Kania-Lundholm and Torres, 2017;

Wyatt et al., 2002); rather, those are the extremes of a complex spectrum that depend precisely on the individual's circumstance and the meaning of technology within it. My participants had a complex and even contradictory relationship to the tablet (see Weaver, Zorn and Richardson, 2010). They echoed a narrative that frames ICT as essential 'modern' technologies that benefit people, including older citizens, at the same time that they stated that most devices were not useful in their lives. They were aware of many of the affordances of ICT (Schreurs et al., 2017) such as those of Plan Ibirapitá's tablets, but for the most part they created a boundary with the device expressed by their structured use.

The Uruguayan seniors pointed at problems that could be conceptualized as 'weak links' of the actor-network of Plan Ibirapitá, such as issues with the training sessions and the tablet's manual, their own lack of patience *vis-à-vis* tablets that are considered slow, or the problem with tablets breaking or needing updates. They also argued that they live busy lives for which further ICT is not strictly necessary, and those that somewhat used their devices such as tablet and laptops tended to have established times of the day for using them, such as the mornings or afternoons before they went on doing their daily activities.

By exploring how my participants see technology within their lives, we also find the tension between structure and agency core to sociology, where the digital divide based on age—or more precisely, the so-called 'Grey Gap'—has been a relevant structural phenomenon to describe seniors' exclusion from the benefits of the digital world, usually portrayed as an external evil force that has to be counteracted. However, I suggest that it is more interesting to focus on how seniors relate to this structure precisely

as part of their circumstances, and how they understand this structure themselves rather than assuming it as an external, determinant factor.

In fact, Neil Selwyn (2003) has made similar arguments on this matter, by noticing that overarching definitions of people's participation in the information society are problematic, and that it is much more useful to define access to ICT from the individual's perspective. He criticized the assumptions that ICT is a desirable and beneficial activity for all individuals and that the non-use of technology is an abnormality or a sort of malaise to be cured with straightforward technical solutions (see also Neven and Peine, 2014). This assumption is paternalistic, it takes agency and free will away from people, and focuses on the needs of society rather than on the needs of persons (Neven and Peine, 2014).

That is why this research brings forward the insight that technology could be assessed according to the extent to which it enables individuals to participate in society according to *their* own needs in spite of dominating discourses (Richardson et al., 2011; 2005). In the case of my participants, for example, they responded to a socially techno-optimistic narrative that was not really reflected in their own daily practices.

By focusing on seniors as actors within their circumstances, then, we are able to see that the costs of not using the Internet and other ICT much may not be experienced as dramatic to some people as they seem to those of us for whom digital technology is an inseparable part of our lives. Newer ICT, in fact, is not a magic solution to seniors' life problems as well as it does not necessarily make lives better (Selwyn, 2006). Indeed, in many cases technology carries the risk of further complicating older people's lives making them more dependent (Aceros et al., 2015). For some people who belong to a

generation largely alien to the internet, and whose life does not require it, there may not be much of an intrinsic benefit or need for using it in old age (see Kuoppamäki, 2018). My participants, indeed, fundamentally demonstrated a constant ambivalence toward ICT in general, and toward the tablet, in particular. As Neven and Peine (2014) put it, we should not consider technology to be a morally necessary solution: it may work for some people in some circumstances, and it may not work for other people in other circumstances. In this sense, Sally Wyatt writes that: “digital exclusion does not always mean social exclusion” (Wyatt, 2014: 1). In fact, non-use of technology can also be a tactic of resistance through which people assert control over their lives, as Selwyn (2003: 112) explained,

[For] some people ‘dealing with everyday problems’ does not and will not involve personal use of ICT. There is a danger that academics, researchers and technologies operate in a wish-fulfillment ‘information society’ that does not exist beyond their reified, technology rich work and domestic environments. In other words, we need to stop seeing technology non-use as a source of marginality and exclusion from opportunities and start thinking about it as an expression of agency, choices, and decision-making (Selwyn, 2006: 289).

Indeed, Selwyn (2005: 22) and I noted something quite similar, which is the fact that ICT is not something that they feel like actively engaging with. And Selwyn —although not from an Orteguian perspective— also brings forward the idea of circumstance: “For those who use ICT, it needs to be comprehended according to the person’s circumstance because the internet seems to be incorporated as a new means through which people carry out their usual social practices and interests rather “than creating ‘new’ adult learners or amateur chefs” (Selwyn, 2005: 22). In other words, *the person’s circumstance defines*

*technology*, and rejection of using technology should also be included as a possibility for ageing actively without computers. Thus, digital inclusion policies should include non-use as a choice (Hakkarainen, 2012; Wyatt, 2014).

However, according to my findings, the line between use and rejection is blurry and must be understood according to the person's circumstance. My participants used the applications that afforded them what they needed which was basically communication with family members, primarily through the help of technological meditors. That is why I coincide with other scholars such as Baumer et al. (2015b: 53) who have noted that non-use is often not an absolute category within the binary use/non-use. In fact,

a given individual is neither a user nor a non-user, but rather constantly (re)negotiates dis/engagement with the technology.... These discussions suggest that there may be a better term than non-use that could provide a more nuanced conceptual vocabulary for grappling with these issues. Instead of clear typologies, might we develop accounts of varied technological engagement that are less categorical and more fluid in nature? Studying non-use can problematize this imperative, calling into question the fundamental premise of both the value and the unavoidability of such technologies.

Furthermore, as Sally Wyatt wrote: "Rather than seeing use and non-use as an either/or choice, users of digital technologies need to be conceptualized along a continuum with degrees and types of involvement that may change, depending on education, jobs, children and moving house" (Wyatt, 2014: 3). This dynamism of the person's circumstance based on his or her actions, is also indicated by Peek (2017: 186): "older adults' perceptions and use of technology [are] embedded in their personal, social and physical context. A contextual understanding is required to better capture reasons for use

and non-use.” Seniors, then, should be conceptualized both as part of sociotechnical networks, but also as meaningful actors within their techno-circumstance. In other words, people take the task of bringing devices forth as significant within their lives according to their projects and the person they are. My participants do not want to be colonized by technology, although they rhetorically recognize its benefits, and show an ambivalent engagement with it. They perceive it as useful for the joy of looking at pictures of loved ones or communicating with them, so they try to find a way to use digital devices to that end with the help of others.

Overall, what the existing literature converges upon is the idea that we have to move away from deterministic and paternalistic notions about the impact of technology on people’s lives (Neven and Peine, 2017) and look at the nuances and contexts; in other words, seeing *people as active builders of their techno-circumstances*. Neves and Mead (2017: 48) have written that “research still tends to conceptualize users and non-users as a binary and depict non-users as a homogeneous group” assuming that exclusion is an involuntary phenomenon. Indeed, why assume that exclusion is involuntary? This may be a way of looking at the problem from only one angle, removing agency from older people and assuming that they are determined by the structural forces of the digital divide.<sup>36</sup>

Exclusion and non-use may also be voluntary, and thus, the task of researchers is to scrutinize its meaning (Larsson, 2009; Wyatt, 2014; Richardson et al., 2011; Helsper and Reidorf, 2013; Eynon and Helsper, 2011). Neves and Mead (2017: 49), for instance, claimed that we need to inspect how users see themselves as digital agents and how non-

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<sup>36</sup> Again, I must insist that by no means I am saying that there is no digital divide, as As Wyatt puts it, “There is still a digital divide, people!” (Baumer et al., 2015b). But I believe that we have to emphasize people’s agency and challenge blindly techno-optimist discourses.

users make sense of users and usage. This way we are better positioned to understand complexity and context, allowing us “to frame meanings and actions as interconnected, and to establish a continuum between subjective understanding and social structure.” (53). Through this continuum we can see how “actors are not merely interacting with technologies in isolation; rather such interaction passes through a web of meaningful relations that transforms the technological experience into social action.” (57).

Elsewhere I have stressed that this is the key investigating circumstance for understanding the social (Castleton, 2018). Seniors’ lives are dynamic and changing. The affordances of technology appear and disappear as a function of seniors’ life as radical reality. In fact, fighting against the digital divide concept has been informed by assumptions claiming that advancing the information society is intrinsically desirable and morally good. As an outcome of this study, I am convinced that that we have to look at seniors’ co-construction or co-implication with their circumstance, allowing them to decide the role of technology on their own terms according to what is relevant for their lives and to who they want to be as persons. Previous researchers such as Helsper and Reisdorf (2013) point in this direction when they propose the need to pay attention to individual issues such as personality as reasons for digital inclusion and exclusion, besides the sociodemographic variables that are usually used to explain them.

## **8.2 Generations, the individual and techno-circumstance**

It has been argued that particular technologies are important for specific generations. Prensky (2001), for instance, described the generational difference between ‘digital natives’ and ‘digital immigrants’. However, these sort of approaches posing the difference between savvy and naïve users have been challenged, because generations

experience several technological trajectories during their life course (Kuoppamäki, 2018). As Kuoppamäki explains (2018: 12), it has generally been assumed that generational experiences are constituted on the basis of historical circumstances during young adulthood, but recently research has noted that generations experience several relationships to different technologies through their life course. As a consequence, generational identity does not refer around particular devices. She further says (2018: 13) that “The relevance of generational categories as an explanatory factor for technology usage has thus been questioned. More focus has been put on the biographical changes that offer opportunities for creation of new routines and leisure activities.”

The relationship to our techno-circumstance, then, could be argued is a combination of macro influences from the generation we are part of and of our particular biographies. On the one hand, for Ortega, generations are the ‘axis of history: “a generation is a human variety. Its members come to the world with certain common traits that grant them a common appearance, differentiating them from the previous generation” (in Chamizo-Domínguez, 2002: 135-136). And Marías (1949: 100) explains that for Ortega, as we age, we have to deal with the world differently:

Man is primordially his life—certain trajectory with a prefixed time. And age... is above all a stage in that trajectory rather than the state of his body or soul.... Aging is something that belongs to our lives rather than to our organism—they are different stages that segment our vital having-to-do (*que-hacer*).... Each age is a particular type of having-to-do (*que-hacer*).

Technological identities are established in relation to generations and “defined by members sharing the same technology-related experiences who adopt and use

technologies in question in like ways” (Taipale, 2019: 49). For instance, video games marked my generation —those of us who lived our childhood in the nineties— with a Chinese version of the Nintendo Console very popular in Latin America, known as ‘family game’. My nieces’ and nephews’ generation is marked by smart-phones, tablets, YouTube, and Instagram.<sup>37</sup> Generations live in different technological landscapes (Hagberg, 2008). For instance, snapchat is totally alien to me, a person in the beginning of his 30s in 2019, but it is a fundamental way of communicating for my teenage nephews and nieces the same way that the landline and cellphones earlier on were an essential component of my parents’ lifeworld.

On the other hand, our relationship to technology depends on our concrete, individual lives. Hagberg (2005) proposed in this sense to pay attention to people’s techno-biographies, that is, people’s attitudes toward technology during their life course, how technology is actually used, and how it acquires meaning. Similarly, Bakardjieva (2005) argued at any time of her life, a person finds herself in a social-biographical situation. Even though we are born at a particular time and live our lives in a techno-historical context, we are able to decide when some technologies are needed, and others are not (Hagberg, 2004: 176). Most importantly, “whatever form of everyday technology one allows into one’s life, has to do with who one is and who one wants to be as an individual”, as Bakardjieva put it (2005: 179).

Recognizing an individual’s agency is not saying that technologies are mere neutral tools that we use for different ends but recognizing that people have choices within their techno-circumstance. Technologies indeed co-shape our subjectivities and

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<sup>37</sup> Taipale (2019) however warns that generations label others, such as ‘Nintendo Generation’, which reflects prejudices more than the labeled generation experiences.

organize our lifeworld as “they open up the potentialities of what we might become and enable our ‘world’ through their potentialities” (Kiran, 2012: 90). But human beings as meaningful actors, can relate differently to our circumstances and deliberate about how technology unavoidably mediates our existence (Verbeek, 2005; 2011). Indeed, certain technologies are part and parcel of what Larsson-Ranada and Hagberg (2014) call older people’s ‘material room’, that is, the objects (technical, furniture, memorabilia, etc.) that they own. Some of them may find their material room expanded, for instance, by assistive technologies or different gadgets and ICTs; others can find it reorganized as some things lose value and end up stored; it can also stagnate because people decide to stop replacing artefacts because they lose interest in making decisions; the material room can be reduced because people want to make life simpler or are preparing for the end of life; and it can be reduced and transformed as people move to different settings such as smaller households or nursing homes (Larsson-Ranada and Hagberg, 2014: 111).

In the case of reduction, such alterations are outcomes of active decision-making processes about one’s daily life and thus should be comprehended as a form of agency and as a way to continue to evolve (Larsson-Ranada and Hagberg, 2014: 112). There is a sort of de-domestication process where they see some artifacts as not important anymore and define their usability in new ways. This downsizing could indeed be a strategy to keep control and independence (Larsson-Ranada and Hagberg, 2014: 117). In fact, it could be the case that some older people are fundamentally opposed to allow new artifacts and devices into their lives, and this acting on the material world could be a way of maintaining their agency (Fernández-Ardèvol, 2017; Weaver et al., 2010).

My participants tended to be critical with a technology such as the tablet, and I

think that these attitudes should not be presented as something negative or as a problem to solve. Perhaps seniors alive today may be the last generation of truly experiencing a modern-ICT disconnected life—a life that is not truly shaped and mediated by internet, computers, laptops, and smartphones (see Kania Lundholm, forthcoming)—such as mine and the generations after me. Perhaps seniors can attest to what is being lost or traded-off in a context of ubiquitous connectivity, a context in which the last thing I see before going to sleep and the first thing I look at when I open my eyes in the morning, is my smartphone.

By asking my participants about their context, I found that many of them tended to affirm that it was necessary to be up-to-date with ‘modern technology’, but when I probed, it was clear that they paid lip service to this technologically optimistic discourse while not really using the technology very much, being ambivalent to it, and indeed being critical about technological intrusion. I concur with Knowles and Hanson (2018) when they write: “Our conversations with older adults reveal that they are often unwilling to acknowledge that their lives would be enriched by digital technologies (whether or not they were made accessible).” In fact, my findings largely resonate with Knowles and Hansons’ who write:

Learning and using technology was not considered rewarding in and of itself. Many also talked about consciously avoiding “getting caught up in” digital life, viewing the abundance of applications and features as possible diversions from more rewarding activities. Social networking often fell into the time-wasting category, with many noting the insipidness of the content on Facebook; though some found it useful (and even enjoyable) for keeping in contact with family. For those in the former camp, there was a strong aversion both to the idea of one’s life being an “open book” and to being glued to one’s mobile phone—trends they

found deeply troubling to have witnessed in younger generations.

Moreover, my participants often indicated that the fact they live busy lives was a hindrance to using the tablet, because they simply did not have time. Their day was usually taken by many activities such as taking care of grandchildren, volunteerism, classes, etc. (see also Suopöjarvi, 2015). There seems to be a boundary a boundary that separated their daily routines from tablet use, which was fed by a recalcitrant critique of the role of technology in life—a role that is encroaching upon activities that they value and that for which they do not need more technology. That is why the tablet seems to occupy specific times of the day in the life of my participants who more or less use the tablet by themselves.

### **8.3 Are rejection and non-use of technology an issue?**

Seniors' rejection of technology may not be solely the product of some obscure force acting behind the scenes of social life that surreptitiously determines how they live their lives, but may indeed be part of a more conscious decision; it may be that simply they do not need digital technology as much, and their lives are not necessarily worse because of this.

Knowles and Hanson (2018) found that non-use is often times a rational choice that they found was based on three main factors: (1) older adults are uncomfortable taking responsibility for things that were traditionally done by professionals—things that increasingly are being overtaken and mediated by computers and internet, such as banking, in which there are legitimate risks involved; (2) they found that seniors are hesitant to use technology when it replaces something that they value such as the face-to-

face contacts with clerks in stores; (3) for older adults, non-use of technology is acceptable because of cultural expectations that establish older people as non-users. They write: “considering non-use from the perspective of lacking, as not doing something, obscures the fact that non-use is “active, meaningful, motivated, considered, structured, specific, nuanced, directed, and productive.” (2018: 75). At the same time: “when there’s something they want to do, nothing is going to get in the way of an older adult using technology. This means that the more appropriate questions are those that seek to understand what may be underlying older adults’ resistance to developing digital proficiency.” (76)

For instance, one of my participants, Justino, was older man in his eighties who is into music. He plays several instruments, had been a member of many bands in the past, and worked as a private DJ for parties and events. He invited me to his house to proudly show me how he had attached the tablet to his music system and used it along with an old computer to download songs and play them through his speakers. He had a little workshop where he worked part-time fixing small electronic appliances for his neighbors, so he had the necessary electronic skills and interests to fiddle with the tablet and adapt it to something that was of interest to him. Another participant in his sixties described how he took the tablet with him when he visited Spain. He marveled about how he could access information beforehand about the places he was going to visit.

These two examples show how seniors use technology selectively. Many seniors indeed bring affordances into fruition that transform them into particular ‘inhabitants of the information society’ of sorts. However, in many cases —usually without technological mediators— the tablet ends up collecting dust because there are no possible

useful interpretations that users make of the technology. Lacking affordances, it is just a material object that occupies space in a drawer or that the grandchildren may use to play.

In what follows I will bring this dissertation to an end by stressing the notion of *circumstance* and the affordances that appear as a result of it. As I pointed out earlier, context is fundamental to comprehend the relationship between seniors and technology. This is to say that seniors' circumstances and their agency within them are crucial to grasp why they use a technology such as tablets or not.

## Chapter 9: CONCLUSION

This research examined the circumstances in which using technology becomes relevant for older people by looking at the relationships that a group of seniors in Uruguay establish with the tablets provided to them through an innovative and well-intentioned public program called Plan Ibirapitá. This study is important because it aims at exploring and disclosing how seniors relate to technology when technology is given to them, which could be useful for deliberation in the design and development of a public policy such as this one. It starts from the presupposition that seniors are not inept or intrinsic rejecters of technology, but actors who decide what devices to incorporate and how, according to their lives' circumstances. This is to say that seniors and technology are co-constituted, co-constituted or co-implicated; in other words, technologies such as tablets are not simply adopted, but are rather introduced into a sociotechnical network in which they have to negotiate with seniors' practices, and actually could fail to be adopted at all.

One main contribution from from this thesis is to problematize seniors agency *vis-à-vis* technology, for which I built upon existing literature which urges researchers to start paying attention to contextually nuanced uses of technology where there is, “a need to investigate multiple possible ways in which older people, in a range of *different circumstances* [my emphasis] and settings, make sense of new technologies and choose, or not, to incorporate them into their everyday lives” (Richardson et al., 2011: 146). The key term I emphasized in the above quote is *different circumstances*. In fact, the literature repeatedly indicates the heterogeneity of older people and the dynamic characteristics of their lives (see, for example, Ratzenböck, 2017, 2016; Peek, 2017; van Deursen and

Helsper, 2015). That is why I propose Ortega's philosophy of human life and technology as an interesting approach to consider, given its focus on life as *radical reality*, that is, *that within which everything appears*. Such an approach provides a framework for examining what things mean within human life, and thus things shine forth within seniors' circumstance according to their projects, needs, and goals. Rather than being mere casualties of technological exclusion and determined by the digital divide as a sort of external force, this dissertation shows that older people are nuanced users and non-users of technology (see Schreurs et al., 2017; Quan-Haase et al., 2018). They perceive what it affords them or not and act consequently, for instance, finding a technological mediator to help them when a device such as the tablet is valuable for them, or plainly not using it without any dramatic consequences in their lives.

Methodologically, I followed a phronetic approach aimed more at describing than at explaining, looking to generate dialogue rather than to 'discovering truth' of any kind. My objective was to theorize about the meaning of tablets and digital technology in the life of seniors.

As such, I have to insist that this dissertation is by no means an evaluation of the Uruguayan policy because it is limited in two ways. First, I do not aim at generalizing to the entire population, which may be obvious given this research's qualitative nature. Second, this research was cross-sectional and thus it does not contemplate changes over time. Meaning, beliefs, attitudes, and life are not fixed, so things can change according to a person's life (Peek et al., 2017). At this time, I hope that my approach and analysis can be food for thought for the development of techno-policies, and such qualitative approaches are something that previous research constantly point out as needed (e.g.

Larsson, 2009; Hagberg, 2012; van Deursen and Helsper, 2015), especially since quantitative analysis have been criticized because they do not provide deep insight into how people live their daily lives and curtail the opportunity of asking older people their own reflections about growing older in a digitalizing society (Olsson, et al., 2019: 69).

That is why in a context where Plan Ibirapitá's Third-Use Survey (2017) indicates that over half of seniors who received the tablet do not use it, it is insightful to develop qualitative approximations such as this one to shed some light on the meaning of technology in seniors' lives. Obviously, my qualitative sample of seniors from two specific towns in Uruguay prevents any general extrapolation, but it brings some indications of the meaning of the tablet and of some of the problems in establishing the network of the senior-user.<sup>38</sup>

Furthermore, in a more general way, the fundamental goal I set to accomplish with this dissertation is to contribute to the knowledge about the relationship between humans and technology, and in that way to examine the inextricable technological component of the human condition. Looking at older people in this sense is interesting, because as Östlund (2004: 59) pointed out:

With one foot planted in theoretical sources and the other in the results obtained from empirical research into the practice of technology and the elderly, the area of technology and the elderly could in all likelihood contribute important and groundbreaking knowledge. This area could also contribute to improving and advancing communication between philosophy and technology.

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<sup>38</sup> A note of caution is necessary here: longitudinal research would be needed to see whether my participants' interactions with the tablet changes.

The main question I posed for this research was: *what is the meaning of the Plan Ibirapitá delivered tablets in seniors' lives?* I also formulated three more specific exploratory questions: (1) What is the role of the tablet in seniors' lives? (2) How do seniors change their social practices with the digital medium? (3) How do the tablets of Plan Ibirapitá mediate and shape seniors' reality and their identities?

To start answering that main question, we could say that older persons today actually live in a different world in comparison to younger generations; their *technological circumstance* is different and this may affect their decisions to use or not use certain digital technologies. In other words, the existential horizon (Kiran, 2012) of many of my participants is composed of a technological landscape that includes the technologies of their generation (Hagberg, 2008). The technologies that they commonly used through their life course, and that were part and parcel of their circumstances, co-construct who they are and the projects they are developing throughout their lives. But at the same time, there are currently new information and communication technologies that are being introduced into this technological landscape.

That is why it is important to comprehend how seniors themselves understand being participants, or not, of the information society (Selwyn 2006; Richardson et al., 2011; Weaver et al., 2010), as well as to comprehend how technology becomes meaningful within their lives. For answering questions (1) and (2) about the role of the tablet in seniors' lives and their change in social practices, we could start by saying that *things* are interpretations that we make of reality (Peterson, 2013). For some of my participants, for instance, the tablet meant primarily a way of communicating with distant others. It was the main *affordance* they perceived. Furthermore, for others, for example,

the tablet was not relevant for their lives; it did not grant them any affordance because their life projects did not involve the use of such technology; it afforded them nothing. In fact, pretty much all of them found their lives quite enjoyable and active as they were not using the tablet much, so they saw the intromission of a new technical artifact as a burden, not useful, and as something that they did not have time to use.

In terms of mediation —question (3)— my research noted that for others, however, the tablet was understood as a means of being able to communicate with distant loved ones, so that the tablet was a portal toward closeness (which they counted on with the help of technological mediators). For these participants, the tablet revealed itself as useful within the person's life, it afforded them a degree of social connection, for instance. Usually with the help of technological mediators, it afforded them specific things, principally the possibility of being in touch with others, but also that of taking pictures, of finding some information they want, etc. Thus, the tablet was used more for specific 'projects' within purposive events, as also noted by recent previous research such as Kuoppämäki's (2018), Quan Haase et al.'s (2016), or more than a decade ago by Selwyn's (2003).

When discussing the meaning of a technology, my research reveals some ways in which it sometimes become relevant for seniors' lives, and it points out that the concepts of *affordances* and *co-construction* are revealing in so far as that they provide some directions on how to think about including seniors digitally. For seniors who already have some contact with technology such as smart phones, for instance, instead of developing training based on general topics such as 'Facebook', 'Email', 'Camera', 'Google browsing' etc. in the local Centro MECs, perhaps it would be useful to change focus and

approach training from an ‘affordance’ perspective, so to speak, such as ‘Using Technology for Communication’, and then more personally working with seniors according to the knowledge that they already have and building on the technologies many of them already use for communicating such as WhatsApp.

Many of the participants who indeed were interested in the tablet, mentioned the fact that they ran out of Internet bandwidth rather quickly, and perhaps this more focused use according to affordances could help them optimize the time for what they want to use digital devices. Previous research such as Eynon and Helsper’s (2011: 547) points in this direction when they suggest “that much of adult learning using ICTs tends to informal more than formal and that policies designed to support people’s interests as opposed to trying to make people undertake more formal kinds of learning would be more effective.”

Perhaps being more sensitive to the life of individuals, in Ortega’s terms—that is, life as radical reality, the fundamental realm where everything appears—, paying attention to how seniors live their lives, what they currently do, what things they currently use to do their tasks, could be the starting point for thinking about seniors relationship to technology.

Regarding the development of skills, it would obviously be a very expensive and unpractical policy matching a trainer to an individual, but at the same time top-down approaches perhaps are not the most accurate (Peine and Neven, 2018; Givskov and Deuze, 2018). Although, I repeat, I am not in a position of evaluating the policy given the nature of my research, it would perhaps be a good idea to stimulate the bottom-up organization of seniors. Previous research has indeed indicated the need to provide specifically designed need-based training and support for seniors (Rasi and Kilpeläinen,

2016; González, Fanjul & Cabezuelo, 2015). For instance, groups of people who know each other within the neighborhoods or group of friends could request assistance in one of their houses and have a volunteer go to their house and attend the particular needs of individuals within a small group of seniors more personally. As a matter of fact, the Uruguayan Ministry of Social Development is fostering volunteerism in society, so an initiative such as this one could be thought of.<sup>39</sup> In addition, it would also be an opportunity for seniors to socialize among themselves and with young trainers.<sup>40</sup>

Moreover, one important reason for not using or seldom using the tablet was that many of my participant saw their lives as already active, so that new technology is unnecessary. Revealing tablet-affordances for the activities that they already develop could perhaps be an interesting approach, not only focusing on tablets which sometimes could be cumbersome to carry around, but on the smartphones that many seniors already have.<sup>41</sup> The already existing techno-optimistic discourse that my participants demonstrated provides a fertile ground, at least ideologically, to develop the benefits of online activities.

At the same time, non-users and rejecters are important. As many critics have argued, the problem with increasing technology is that it yields diminishing returns and possibly disengages from meaningful practices as well as it threatens skills (e.g. Borgmann, 1984; Dreyfus, 2003). Ortega describes that increasing technology brings a *crisis of desiring*, which has been a historical process characterized by a slow but steady

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<sup>39</sup> See <http://www.mides.gub.uy/109074/voluntariado-2019>

<sup>40</sup> In fact, I noticed that the training sessions offered at Centro MEC played a socialization role among the seniors who attended. In a few opportunities, a couple of them did not even take their tablets. The socializing aspect is also very important and something to stress.

<sup>41</sup> This was the case of my participants. Plan Ibirapitá's Third Use-Survey (Plan Ibirapitá, 2017), however, indicated that for many receivers of the tablet this was their first contact with digital technology.

disengagement from craftsmanship to the current abstract, black-boxed, technique of information technology (Mitcham, 2000; Echeverría, 2000). The solution to this—which Ortega proposed approximately 70 years ago—is being critical of our ‘devotion’ to technology so that we can determine by ourselves what we want to be.

In fact, that sort of critical attitude was shown by my participants but in an ambivalent way. On the one hand, they expressed criticisms toward such a technological policy and many of them did not see the tablet as very meaningful for their lives. On the other hand, they echoed a techno-optimist discourse through which they praised technology and stressed the need of being connected in modern life. I suggested that this is the product of a sociotechnical imaginary (Jasanoff, 2015; Jasanoff and Kim, 2009) dominant in Uruguay with its position as a small but connected country. Thus, their techno-optimist discourse could be interpreted as many of my participants echoing a politically-correct discourse, but at the same time being critical agents at the level of practice, as frequently they leave the device aside and barely use it. Seniors seem to be rejecting digital devices such as the tablet because in many cases it is useless for their vital project and *que-hacer*, as Echeverría (2000: 29) wrote:

In so far as we accept that new ICT create a new surrounding for humans, that new social space (information society) produces a new circumstance and, hence, technical actions are possible. The recursivity of technical actions implies the possibility of reacting against the new technical medium rather than be resigned to accept it.

Indeed, seniors are people who can make the conscious decision of not using a technology because it does not afford them anything in the context of their lives.

Rejection of technology is obviously a complex phenomenon affected by many elements that forms a person's circumstance. But circumstance is only one half of a person; they can reflect upon their lives and make decisions. That is why I propose that technology adoption, non-use, and rejection need to be looked in the context of *life*, that is, of the complex imbrication of self and things. My participants also tended to show us a way of thinking that is very important for the modern condition: how one can have a critical attitude toward technology, not using many devices, and live active, busy lives nonetheless. At a practical level, new communication technology is not strictly necessary.

I would like to bring this dissertation to a close with a final remark. Plan Ibirapitá is a very interesting project that has the noble and arguably necessary goal of including people in the information society. To some extent, accessing the internet is mandatory for actually being a citizen in today's world, given that information and services are migrating digitally to the web and communication is increasingly mediated by digital devices. Indeed, having government services online benefits many people, and applications such as WhatsApp helps family communication (Ivan and Fernández-Ardèvol, 2017; Taipale, 2019). However, if we judge by the great deal of non-use of the tablet (Plan Ibirapitá, 2017), the problem seems to be with top-down approaches, something that many researchers that I referenced throughout this dissertation have argued. Just to bring a recent example, Peek et al. (2017, in Peek, 2017: 154) suggest that older adults' technology acquirements "are unsuccessful when they are 'externally driven' or 'purely desire-driven'" and that "when technologies that are acquired in ways that are not congruent with seniors' personal needs and circumstances, they run a higher risk of proving to be ineffective or inappropriate" (Peek, 2017: 124). That is why

interventions through techno-policies as Plan Ibirapitá, although unarguably benefitting many people (see Hughes, Pereiro y Pérez, 2017), perhaps are not the most efficient. Qualitative research about seniors' needs and pre-existing use of technology is needed (Peine and Neven, 2018), and conceptualizing technology within the radical reality of older people's lives provides with a new focus that allows analyzing the selective, meaningful use or non-use of devices that are increasingly being pushed into their—and everybody's— lives.

### **9.1 Further research**

This research provides a snapshot of how a group of seniors in two towns in Uruguay received Plan Ibirapitá's tablet into their lives. It looked to explore a top-down techno-policy such as that of Plan Ibirapitá in the life of a group of seniors. As such, it leaves the door open for further research, but there is also a next step that this research would need to take. It would be relevant to examine how the role of the tablet in my participants' lives changes through time. For example, Peek and colleagues (in Peek, 2017) proposed a model called “Dynamics in Technology Use by Seniors (DITUS)” to study what causes stability and changes in the use of technologies by seniors. Through this model, they reach a conclusion that is not particularly revealing in my estimation. They state that DITUS

...provides a new perspective: both negative and positive aspects of technology are dependent on the older adults' personal, social and technological context, and this context is subject to change. In other words, to fully understand independent-living older adults' technology acceptance, it is necessary to be sensitive to issues of context and timing. (Peek, 2017: 193)

This conclusion is rather evident, I believe, as peoples' lives are intrinsically dynamic within their circumstances. People's personal, social and technological contexts *do* change. Therefore, it would be interesting to examine under what circumstances or events the tablets change meaning for my participants, if they do at all, and how it co-constructs their lives. Do seniors start using the tablet more? Do they stop using it? Did they find new applications? Do they take on other devices? What sort of new agency do they have? That is why doing a second round of interviews with my participants would be the next step for this research in order to contemplate the changing nature of human life and its relationship to the tablet.

I also think that finding objective ways of measuring usage would be necessary in order to measure the impact of the policy. Unarguably, it is a good thing granting seniors the opportunity of using a tablet, and well-being is indeed subjective. However, the cost-benefit of such a program should be quantified to indicate its effectiveness.

Furthermore, it would also be relevant to examine the ideologies of being a 'low-income retired senior excluded from the digital world' that policymakers and designers have. I pointed at a socio-technical imaginary that seems to prevail, but further empirical research could delve into this matter. This knowledge would be fundamental for understanding how being a senior is socially constructed, and how it affects the planning and development of a techno-policy such as Plan Ibirapitá.

As I described above, Researchers such as Neven and Peine (2017) and Neven (2015) have noted that technoscientific solutions have been described as a "triple win" in so far as they alleviate the social consequences of aging, they give older people a better life, and they foster economic growth. Seen this way, it appears that science and

technology are separate from the experiences of aging. This position projects what Peine, Rollwagen and Neven (2014) have described as an ‘implicit paternalistic stance’ that has dominated technology designed for older people.

This paternalistic stance means that the senior who uses technology is conceived as a preexistent, separate entity whose “needs can be mapped and understood rather than as agents who learn about and develop new needs” (Peine et al., 2014: 927). In other words, this way of thinking of technology as an external factor that comes to ‘solve’ the problem of aging, is a perspective that ignores how later life is ‘sociomaterially constituted’, that is, how aging and technology have always been inextricably related (Peine et al., 2015). Such a project would be relevant for two reasons. On the one hand, it would respond to the urgent need of examining how the design of technology and policy-making could involve surreptitious ageist imaginations that are then materialized in devices and programs for older people (see Oudshoorn et al., 2016; Joyce et al., 2015; Neven, 2011). On the other hand, it would be relevant because it focuses on the design of information and communication technology and how it impacts the identity of seniors as technology users or, frequently, as technology rejecters (Joyce et al., 2016; Suopajarvi, 2015).

## **Appendices**

### ***Appendix A Script for semi-structured interviews with receivers of the tablet (English version)***

#### **Background question:**

What was your occupation before retirement?

#### **Use of the tablet and management:**

What do you use the tablet for?

How long did it take you to become comfortable with the tablet?

What new things does it help you accomplish?

How much time do you spend with the tablet on a typical day?

Do you encounter any problems when using it?

Do you use it for any other purpose besides what it is intended for?

What features of the tablet do you like?

What features of the tablet do you dislike?

#### **Changes brought by the tablet:**

What does it allow you to do that you weren't able to do in the past?

Has the tablet changed your routine? If so, what is your routine with the tablet? If not, why not?

What did you use to do in the time that you now spend on the tablet?

How has the tablet changed your life in general?

What other technologies would you like to use? Why? (Why not?)

#### **Satisfaction with the tablet:**

Has the tablet fulfilled your expectations? In what ways? (Why not? In what ways?)

What other things would you like to use it for?

Does using the tablet make you happy? Why? (Why not?)

Do you think your life is better with this technology?

Do you think that your life is different since you received the tablet? If so, why?

All in all, do you like the tablet?

***Appendix B Script for semi-structured interview with trainers (English version)***  
(Interviews developed by undergraduate students from Universidad de Montevideo)

How do you see older adults relate to the tablet?

What are the functions of the tablet in which older adults show interest?

What kind of problems do older adults have with the handling of the tablet?

Have you noticed progress in the use of the tablet by older adults that you train?

Do you think that the tablet has a significant impact on the lives of older adults? Why?

How do you see that the tablet changes the routine of seniors?

More precisely, in what ways do you think the tablet has impacted on the lives of older adults?

Why do you think older adults go to training?

*Appendix C Participants*

Name (psedonyms)	Some characteristics of the participant
Violeta	97 years old. <sup>42</sup> No previous digital technology. She worked as a tailor. She has used Facebook, newspapers, camera. Her daughter, who lives with her, helps her.
Lucia	80 years old. Lives alone. She worked as a cook. She had a cellphone and now a smartphone. She has used the camera, newspapers, Facebook. She has spoken with friends in Argentina through the app that ‘has the picture of a little telephone.’ She asks her grandchildren and went to the ‘Plan Ibirapitá’s people’ to have it fixed.
Jorge	Worked as a construction painter. He lives with his wife and his granddaughter often stays with them. He has a cellphone and does not use the tablet. His wife uses a smartphone and is more of an avid user than him. He asks his wife or granddaughter for help if he needs anything that involves ICT.
Rodolfo	His last job before retiring was for a beverages-distribution company. His wife and him had a laptop before the tablet but they do not use it either (his wife did not receive the tablet). He is discouraged because he cannot do things with the tablet. He would need constant personal assistance to use it.
Selva	Retired school-teacher. Lives by herself. She used cellphone and laptop before receiving the tablet. She uses the tablet principally for taking pictures. Her grandchildren help her.
Silvia	Retired school-teacher. She has a laptop, but she does not use it. She lives by herself. She dislikes technology. She uses her smartphone more. Her grandchildren help her. She went to pick up the tablet just because. uses WhatsApp. With the tablet she takes pictures and plays solitaire, although she said she does not use it very much. Her grandchildren help her.
Teresa	85 years old. Retired hair dresser. She has a cellphone. She barely uses the tablet and when she does, it is with her daughters.
Sara	She managed a coffee-shop. Lives with her husband. She has a smartphone which she mainly uses it to communicate with her children abroad. She has taken pictures with the tablet and read the newspapers. She has also looked for information such as dates.
Lorena	She is hair-dresser (retired but still works for her previous regular customers). She has a cellphone. She does not have anyone to help her - she asked me for help with Facebook and to find a recipe on internet).
Mercedes	She is a private tutor (still works under the table). 79 years old. She has a smartphone. Asks her granddaughter and high-school students she teaches for help. Her tablet broke down, sent it for repairs, and has not

<sup>42</sup> The age was recorded when it was participants themselves that mentioned it. I did not specifically ask for age.

	been able to use it since. She has used the tablet for communication with family through Facebook.
Raúl	He has been a farm worker and still works on his own piece of land. He does not use it very much because he does not have time. He has a smartphone. He gets help from his nephew and sometimes from his wife.
Gloria	She was a municipal worker and used a computer. She lives by herself and has a smartphone where she does most of the things she needs. When she used the tablet, it was for reading and as a distraction.
Inés	She and her husband have cellphones. She worked as a retail employee. She does not use it every day, and for an hour at the most. She likes Facebook and YouTube. The husband uses it for 20 minutes for looking at the newspapers. They say they do not have much time to use it. She asks question at Centro MEC and to heir nephews and nieces. Then she answers her husband's questions.
Raquel	Retired schoolteacher. She has a cellphone. She uses the tablet no more than half an hour a day, when she uses it, for email and has used YouTube.
Julia	She barely uses it. She has a smartphone and a laptop. She has looked at pictures on Facebook. She has also a Skype account set for her by her son. She asked me to help her log into it. She asks her grandchildren if she needs help.
Irene	80 years old. She uses the tablet approximately one hour per day. She also has a computer. She reads newspapers and has used Facebook and YouTube. She asks question to her granddaughter, great granddaughter, and her neighbour.
Verdún	She still works as a care-giver. She has to ask her grandson for help, or her neighbour's daughter. She has a smartphone. She has been in touch with classmates through Facebook and has used the camera.
Washington	He was a government employee. He uses his computer instead of the tablet. He sometimes looks for information, looks at the newspapers and Facebook. He sometimes takes the tablet to his son's house when he has to look after his grandson.
Mirta	She was a school teacher. She uses it to go to Facebook and find things she is interested in. When she uses it, is approximately for an hour, although she goes days in a row without using it. She has a computer.
Alvaro	He was a farm worker. He has a cellphone. He has gone into YouTube, has an email account and takes pictures. He put unlimited internet in his home.
Beatriz	67 years old. She does not use it much. She goes into internet, into Facebook and reads newspapers. She has a cellphone. She sometimes asks questions to his son.
Justino	He was a DJ and played in rock bands when he was young. He repairs small appliances for his neighbours. He attached the tablet to his computer and uses it for playing music with his speakers.

Alejandro	He runs a tire-repair shop. He has a smartphone and uses the tablet for looking for information he wants. He put unlimited internet in his home. He uses it half an hour a day.
Humberto	He is 73 years old. He was a municipal worker. He uses the tablet when he wants to find out about something. His son helps him.
Clara	She used to work at the hospital. She does not use it.
Johanna	She is 68 years old and was a municipal worker. He used the tablet for listening to the radio. It is now broken and does not use it anymore.
Gladys	She is 62 years old and was a domestic worker. She used to look for information in the tablet but now it is broken.
Pablo	He is 87 years old. He worked in farms and as a public employee. He has never used the tablet. His grandchildren use it.
Guillermo and Sabrina	He is 58 years old and she is 57. He worked in many things until he was retired forcefully because of a health issue. She has vision problems. They use it for looking for information with the help of their daughter. They use it for a little while per week.
Alfredo	He never used the tablet. He went to pick it up just because. He does not use cellphone.
Santiago	He is 68 years old and used to be a farm worker. He used it for listening to the radio.
Carmen	She is 80 years old. She worked in retail and in a mine. Her tablet is broken. When she used it, she listened to music and went into YouTube. Her son helped her with the tablet.
Martina	She is 74 years old and worked as a hair-dresser. She has used the tablet for looking for information. She barely uses it.
Daniel	He is 68 years old and was a farm worker. He uses his cellphone but never used the tablet.
Juan Antonio	He is a retired farmworker who never used the tablet.
Fernanda	She is 70 years old and worked as a domestic worker. She has a cellphone where she plays solitaire, takes and looks at pictures. She does not use the tablet.

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