

TECHNOLOGY, CARE AND A SENSE
OF HOME: UNDERSTANDING OLDER
PEOPLE'S DOMESTICATION OF
TELECARE

GIGLIOLA BRINTAZZOLI

A thesis submitted in partial fulfilment of the requirements of the
University of Brighton for the degree of Doctor of Philosophy

June 2018

Abstract

Ageing in Place and Telecare solutions are being proposed by policymakers as solutions to the ageing population and the increased demands for care as people live longer, often with chronic health conditions. Research and policy tend to draw attention to the economic benefits of Telecare for older people and society in general, with a much smaller, but significant, body of qualitative research now addressing the more experiential aspects of Telecare. This quasi-ethnographic study involved undertaking semi-structured interviews, opportunistic conversations and observations of sixteen older Telecare users over a period of six months and has sought to understand the process by which older people came to acquire and use Telecare and how their experiences of using Telecare has changed the experience of, and meanings associated with, 'home' and 'care', in particular. The study is situated at the intersection of studies of care (particularly relational approaches) and studies of the relationship between technology and users, specifically, domestication theory. My research questions were: 1) How do older people come to adopt Telecare in their homes? 2) How does Telecare change the meanings and experiences of home for older people? and 3) How does Telecare change the meanings and experiences of care for older people? Drawing on domestication theory, I analysed how Telecare was *appropriated*, *objectified*, *incorporated* and *converted* by older people in their own homes. My findings suggested an incomplete 'domestication' of Telecare, linked both to feelings of ambivalence towards this form of care which, despite its stated purpose as a tool to support independence, can still come to be associated with frailty and vulnerability amongst older people and the quest for independence embedded in Telecare. The research shows that older people's homes were modified, although not significantly disrupted, by the introduction of Telecare. This is because their homes were already a site of care, populated by formal and informal carers and by a plethora of assistive devices. Telecare seemed to coexist, without particular tension, with previous forms of care. The study showed that the extent to which, and the ways in which, the dichotomization between care 'in person' and care 'at a distance' fails to capture older people's experiences of Telecare, the latter of which was experienced as part of a wider care network of established and new formal and informal carers and technological devices. When it

worked well, despite some ambivalence that seems to reflect concerns about growing frailty and dependence, Telecare gave older people a sense of security and safety at home, as well as new opportunities for face-to-face care with Telecare workers.

Contents

Abstract	3
List of tables	13
Acknowledgements	15
Author’s declaration	17

Chapter One

Introduction

1.1 Introduction.....	19
1.2. Outline of the thesis	26

Chapter Two

Ageing, Technology and Care: Towards an Understanding of Telecare system

2.1 Introduction	29
2.2 The ageing population.....	29
2.3 Disentangling Ageing in Place.....	31
2.4 Telecare as part of Ageing in Place: how Telecare fits in the UK political agenda	36
2.5 Telecare as part of Ageing in Place: critical studies	38
2.6 Discourses of ‘care’: from an ethic of care to relationalities and networks of care	44
2.7 Discourses of ‘care’: relationalities and gerontology.....	47
2.8 Discourses of ‘care’: how ‘care’, ‘home’ and Telecare intertwine	48
2.9 Discourses of ‘care’: how ‘care’, ‘home’ and Telecare are interlinked with gendered practices.....	54
2.10 Conclusion.....	56

Chapter Three

The domestication of technology theory and critical debates

3.1	Introduction	59
3.2	The domestication of technology theory and its approach in media studies	59
3.3	The domestication theory as informed by Science and Technology Studies (STS)	74
3.4	Conclusion.....	81

Chapter Four

Methodology

4.1	Introduction	83
4.2	Research questions	83
4.3	Constructivism and symbolic interactionism: how these theoretical perspectives informed my research	84
4.4	Quasi-ethnography	86
4.5	Participant observation and interviews	89
4.6	Reflexivity	94
4.7	The sample	96
	4.7.1 Access to the social setting and recruitment	96
	4.7.2 The research participants	98
4.8	Data Analysis	101
	4.8.1 Thematic Analysis.....	102
	4.8.2 Managing data: description, analysis and interpretation.....	104
	4.8.3 Reliability, generalisability and validity in qualitative research..	106
	4.8.4 Ethical issues.....	112
	4.8.5 Payment to participants.....	112
	4.8.6 Feedback to participants and final considerations	113
	4.8.7 Feedback to CareLink Plus	113
4.9	Research participants: brief description and living situation	114
4.10	Conclusion.....	114

Chapter Five

The domestication of Telecare

5.1	Introduction	115
5.2	The <i>appropriation</i> of Telecare	116
5.2.1	Triggering events or processes.....	118
5.2.2	The role of neighbours, friends, family and more formal (care) networks	120
5.2.3	The significance of specific Telecare devices (choice of)	122
5.3	The <i>objectification</i> of Telecare	126
5.3.1	Location of Telecare devices (both fixed and portable)	127
5.4	The <i>incorporation</i> of Telecare	130
5.4.1	Relations between Telecare and (older) user	130
5.4.2	Telecare technical issues	139
5.5	The <i>conversion</i> of Telecare	142
5.5.1	Discussing Telecare with the wider outside world: interactions between Telecare users and the world beyond the home.....	144
5.6	Conclusion.....	147

Chapter Six

Meanings and experiences of ‘home’ for older people

6.1	Introduction	151
6.2	Meanings and experiences of ‘home’ for older people.....	152
6.3	‘Home’ as a place of attachment to the environment in which it is located	152
6.4	‘Home’ as a place of emotional attachment.....	154
6.5	‘Home’ as a place of attachment to (significant) objects: the role of objects in maintaining a sense of self	158
6.6	‘Home’ as a place in which different forms of care are experienced.....	168
6.7	‘Home’ and (risk of) social isolation	173
6.8	Conclusion.....	175

Chapter Seven

Meanings and experiences of ‘care’ for older people

7.1	Introduction	177
-----	--------------------	-----

7.2	The provision of care	178
7.2.1	Formal care	182
7.2.2	Informal care	183
7.2.3	Occasional help and care.....	188
7.2.4	Care ‘in person’ and care ‘at a distance’: blurring boundaries? ..	189
7.2.5	Meanings and experiences of ‘care’	190
7.3	Conclusion	198

Chapter Eight

Discussion

8.1	Introduction	199
8.2	How do older people come to adopt Telecare in their homes?	199
8.2.1	<i>Appropriation</i>	201
8.2.2	<i>Objectification</i>	203
8.2.3	<i>Incorporation</i>	204
8.2.4	<i>Conversion</i>	205
8.3	The (incomplete) domestication of Telecare: why is that?	207
8.3.1	Feelings of ambivalence.....	209
8.3.2	The quest for independence	210
8.4	How does Telecare change the meanings and experiences of ‘home’ for older people?	213
8.5	How does Telecare change the meanings and experiences of ‘care’ for older people?.....	217
8.6	Conclusion.....	220

Chapter Nine

Conclusion

9.1	Summary of findings and final arguments	225
9.2	Limitations of the study.....	228
9.3	Strengths and contributions of the study	228
9.4	Recommendations for future research.....	230
9.5	Recommendations for practitioners and policymakers	231
9.6	Final reflections.....	232

Bibliography233-253

Appendices Tables

Table A: Real observation	255
Table B: Research participants' demographics and home visits arrangements	256-26
Table C: Assistive devices	261-263

Appendices Figures

Figure A: In-depth semi-structured interviews. Sample questions.....	265
Figure B: In-depth semi-structured interviews. Adaptation of sample questions	266-267
Figure C: The ageing population in the UK.....	268
Figure D: Fieldnotes: Karen, 3 rd September 2015	269-271
Figure E: Reflexive notes: Hannah, 19 th June 2015	272-275
Figure F: Invitation letter	277
Figure G: Reflexive notes: At Home, 26 th August 2015	278
Figure H-1: NVivo analysis: Codebook.....	279-281
Figure H-2: NVivo analysis: Coding by Node (percentage coverage)	282
Figure H-3: NVivo analysis: Coding by Node (percentage coverage in detail)	283

Appendices:

Appendix A: Demo House, Brighton	285-286
Appendix B: A day with a CareLink Plus team officer.....	287-288
Appendix C: A few hours at the CareLink Plus monitoring center	289-290
Appendix D: Before fieldwork: two memos	291
Appendix E: Electronic analytic notes	293-296
Appendix F: Informed Consent Form	297
Appendix G: Participant Information Sheet.....	299-300
Appendix H: Participant Information Sheet: personalized reminder	301-302
Appendix I: Participant information sheet: personalized confirmation	304-305
Appendix J: Thank-you letter	306
Appendix K: Debriefing and Summary of the main findings	308-310
Appendix L: Older People's Experience of Telecare.....	312-329
Appendix M: Research participants: brief description and living situation	331-346
Appendix N: NVivo analysis: transcript of the 1 st interview with Carl	347-365

List of tables

Table 1: Research participants: demographics, living arrangements, dwelling information and ownership status..... 100-101

Table 2: The Telecare package: the basic devices..... 125

Table 3: Research participants and their diverse care arrangements..... 179-181

Acknowledgements

Thanks to my supervisors Professor Flis Henwood and Dr David Harley for their guidance throughout my time as a PhD student. Thanks to Beth Hewett, the Falmer Library Information Adviser, for her advice on referencing. Thanks to CareLink Plus Telecare Project Manager and his staff for their precious collaboration. Thanks to the older people who participated in this study for their time and most of all, for their kindness and meaningful interaction with me. A special thank you goes to both my longtime and new friends Patrizia, Marinella, Natascia, Mark, Karen, Helen, Barbara and Siân. Without their ongoing support through my research project, I would not have achieved this task.

Declaration

I declare that the research contained in this thesis, unless otherwise formally indicated within the text, is the original work of the author. The thesis has not been previously submitted to this or any other university for a degree and does not incorporate any material already submitted for a degree.

Signed _____

Dated _____

Chapter One

Introduction

1.1 Introduction

‘The world population continues to grow older rapidly as fertility rates have fallen to very low levels in most world regions and people tend to live longer. When the global population reached 7 billion in 2012, 562 million (or 8.0 percent) were aged 65 and over. In 2015, 3 years later, the older population¹ rose by 55 million and the proportion of the older population reached 8.5 per cent of the total population’ (Wan, Goodkind, and Kowal, 2016, p.1). The European population’s age structure is older than that of any other world region and is set to age further during the next few decades. By 2020, close to one-quarter of the population in several European countries will be aged 65 or over. (United Nations Organization 2002, as cited in Grundy, 2006, p. 105). With respect to the UK, ‘over 70% of UK population growth between 2014 and 2039 will be in the over 60 age group, an increase from 14.9 to 21.9 million people’ (Government Office for Science, 2016, p. 18 (see Appendix Figure C²). This ageing population projection has led to the demographic issue becoming a major policy priority in the US, UK and other Western industrialised countries. As a possible important part of the solution to the problem of increasing costs of caring for an ageing population, Ageing in Place, a means by which older people can maintain a sense of independence by staying in their own homes as long as possible, has been heavily encouraged by policymakers. Ageing in Place not only reduces the need of institutional care but ‘reflects the preferences of most older people, who generally wish to “stay put” in their own homes’ (Wiles, 2005, cited in Sixsmith *et al.*, 2014, p. 2). For Milligan, ageing in place means that the vast majority of older people requiring care and support now remain within existing family relationships and settings’ (Milligan, 2009, p. 14). In this context, ‘informal carers are required to accomplish the delivery of that care within a restricted

¹ For the purpose of this report, “older population” refers to those aged 65 and over.

² Appendix Figure C was originally named Figure 1.1: Population estimates and projections, based on ONS principal population projections, 2014 (for more information, see: Government Office for Science, 2016, in the Bibliography section).

space (the home and immediate surrounds)' (*ibid.*). According to Carole Thomas, 'the inter-personal relationship between the carer and the care recipient might be defined in terms of family ties, friendship or "neighbours", or contingent caring relationships, the latter meaning a relationship between strangers who were brought together under the form of statutory or voluntary services in view to fulfil an acknowledged need' (Thomas, 1993, p. 652).

Before the discussion on Ageing in Place and care of older adults, it is important to define and distinguish what I mean by 'care', 'support' and 'assistance'. My understanding of these three concepts was influenced by different scholars, one of them being Barnes, who defines care in three distinct, although related, ways. In the first aspect, care is understood 'as a way of conceptualizing personal and social relations. Such relationships certainly include the intense, intimate and personal relationships associated with giving care to those who are old, young, ill or disabled, as well as those that result from interactions in the context of "care work"' (Barnes, 2012, pp. 4-5). I discuss this 'relational' approach to care more fully in Chapter Two, section 8. In the second aspect, 'care comprises a set of values, or "moral principles" as Tronto elaborates, that offers a way of thinking about what is necessary for human well-being flourishing and indeed survival' (Barnes, 2012, p. 5). This definition highlights '...whether personal relationships, work relationships, friendships, processes of political decision making etc. are capable of enabling the conditions in which we can live well (or as well as possible) both individually and together' (*ibid.*). I will return to care as a moral practice and link it to the discussion of Silverstone, Hirsch and Morley (1992) 'moral economy' in Chapter Three. The third aspect of care, argues Barnes, is 'to think about it as a practice' (Barnes, 2012, p. 6) and this 'reflects the significance of a focus on the work and activities of care giving that have been emphasized both by feminist researchers seeking to make visible the unpaid work done by many women and by carers themselves through their campaign and organisations' (*ibid.*).

Milligan and Wiles (2010) have also sought to define care, which they understand as 'the provision of practical or emotional support' (Milligan and Wiles, 2010, p. 737), thus using 'care' and 'support' interchangeably. With respect to Telecare in particular Milligan, Roberts and Mort (2011) argue: 'It is little wonder, then, that the emergence of Telecare, designed to address and support the care needs (or perceived needs) of frail

older people living at home through remote monitoring, has attracted considerable interest' (Milligan *et al.*, 2011, p. 737). In their understanding, 'support' to vulnerable and frail adults is provided in this context by a form of care 'at a distance' (Telecare). Using a geographical lens, Milligan *et al.* 'acknowledg[e] that a wide spectrum of care technologies exists including assistive devices such as hoist, canes and rails' (Milligan *et al.*, 2011, p.349). Similarly, I appreciated that devices such as mobility aids (wheelchairs, rollators, and the like), bath aids (toilet seats, bathroom grab rails, shower seats and stools, and anti-slip mats) and household aids (grab rails, for example) are 'assistive' and can provide 'support'. Crucially, 'assistance' and 'support' might overlap, thus reinforcing my claim that 'care' is a complex issue.

In England's system of care and support for frail older people, 'ageing in place' is a well-established policy goal (Yeandle *et al.*, 2012). Before the Care Act 2014, this shared policy goal existed within a system of social care support which was complex, geographically variable and under frequent review (Commission on Funding of Care and Support, 2011; Law Commission, 2011). 'Older people and their relatives often find local social care arrangements hard to understand and to negotiate, especially compared with their access to NHS healthcare, which is free and accessed through their GP' (Yeandle *et al.*, 2014, p. 4). The Care Act describes how the Act and supporting regulations and guidance set out the process of assessing an adult's needs for care and support and deciding whether a person is eligible for publicly funded care and support. As well as helping councils make decisions, the assessment allows people to express their own wishes and preferences. The Act sets out when the local authority has a responsibility to meet someone's care and support needs. It also sets out how it can do so even if it does not have to. Social care arrangements in England are the responsibility of councils with social services responsibilities (CSSRs). However, '[...] even when an assessment says that someone does not have needs that the local authority should meet, the local authority must advise people about what needs they do have, and how to meet them or prevent further needs from developing' (Department of Health, 2016). As previously explained, local councils, in order to provide care and support to older people, will proceed to an assessment. The local authority may view Telecare, a form of technology that 'can monitor for falls, movements, eating pattern, irregular heart activity etc. providing support that can help to ensure that lone dwellers or older households in which both partners experience frailty maintain as healthy a lifestyle as

possible, enhancing their ability to remain in their own homes' (Milligan *et al.*, 2011, p. 349) as necessary to meet older individuals assessed care. In my study, Brighton & Hove City Council carried out an assessment of older people's needs, a possible outcome of which was them having the Telecare equipment installed, and in particular the type of equipment that would best suit them. Telecare needs two keyholders i.e. people who are able to attend the site when an alarm has activated. As keyholders can be either formal or informal carers, Telecare, often thought of as a form of care 'at a distance', could be understood both as formal and informal care. Telecare has been seen as the key to enabling older and frail people to live in their own homes and thus reduce health costs. In order to reduce areas of risk for older people living alone, the installation of a lifeline unit (the base unit), that can be used to raise an alarm call from anywhere in the home by simply pressing a radio trigger, the large illuminated red button on the unit or automatically via the range of Telecare sensors, such as fall detectors, bed sensors, smoke alarms, wirelessly linked to the home (Welbeing, Wealden and Eastbourne Lifeline Ltd., n.d.) or the use of products such as the personal trigger, or 'pendant', usually worn around the neck, and devices such as fall detectors, bed sensors, and smoke alarms, can actually modify the perception of home. This kind of equipment often alters the home spaces in an attempt to improve the user's wellbeing.

As explained above, a Telecare system is usually made up of a network of sensors fitted around the older person's home. These sensors can then be linked through a telephone line to a call centre. Telecare does not involve active health monitoring or treatment, thus distinguishing itself from telehealth systems, which are used to remotely monitor health signs such as blood pressure (NHS Choices, n.d.b). Telehealth has been defined as equipment used 'in the management of long-term conditions in the community to proactively monitor patients and respond promptly to indicators of acute exacerbations. "Vital sign" monitoring is believed to reduce hospital admissions and uses equipment in patients' homes to identify trends and alert when pre-set parameters are breached' (Department of Health, cited in Stowe and Harding, 2005, p. 195) According to Stowe and Harding, 'users are trained to operate a machine which measures physiological indices such as blood pressure, oxygen saturations, pulse, spirometry, temperature, ECG and blood glucose readings each day in their home. In addition, users can enter subjective information into a touch screen, such as their responses to relevant symptom

questionnaires and their latest weight. Data collected from a telehealth machine are sent via a telephone line to an Internet portal which can be accessed by health care professionals (such as community matrons, GPs and hospital consultants)' (Stowe and Harding, 2005, pp. 195-196). Telecare can also be distinguished from Telemedicine (which is sometimes conflated with Telehealth). In fact, Telemedicine refers to medical interventions performed at a distance. It falls under the broader term of eHealth and involves the delivery of medical care where distance is a critical factor. The telemedicine approach uses information and communication technologies for the exchange of information for diagnosis, treatment and prevention of diseases and injuries, research and evaluation, and for the continuing education of healthcare providers (WHO, n.d.).

Acknowledging the presence of different systems and forms of care, in this thesis I will focus on Telecare, which has been seen as the key to enabling older and frail people to live in their own homes and thus reduce health cost. In order to suggest the adoption of Telecare, in 2006 the UK Department of Health commissioned the largest randomized control trial of telehealth and Telecare in the world (Department of Health, 2011), the so-called 'Whole System Demonstrator' (WSD). The WSD 'involved 6191 patients, 238 practices across three sites, Newham, Kent and Cornwall and looked at cost effectiveness, clinical effectiveness, organisational issues, the effect on carers and workforce issues. It focused on three conditions: diabetes, COPD and coronary heart disease. The programme would provide a clear evidence base to support important investment decisions and show how technology supports people to live independently, take control and be responsible for their own health and care' (Department of Health, 2011). In other words, this quantitative trial sought to highlight the expected benefits of Telecare for older people and society in general. Studies such as Steventon *et al.* (2013), which analysed a cluster randomized trial comparing Telecare with usual care, general practice being the unit of randomisation, in which 2600 participants with social care needs were followed up for 12 months, focused on the benefits of the use of Telecare (decrease in hospital admissions, replacing face-to-face contact in domiciliary care and facilitation of faster discharge from hospital), were characterised by a quantitative approach. Thus, they would not focus on Telecare users' needs, and ultimately on older Telecare users' experience. Furthermore, the WSD's studies considered neither the

interactions between Telecare and home nor between Telecare and more traditional forms of care thus neglecting to consider how Telecare home and care are intertwined.

A body of critical studies has argued that the benefits of using Telecare, such as the reduced use of hospitals and care homes, as suggested by the WSD, were not so clear-cut. Hamblin, Yeandle and Fry confirm that ‘the dominant methodological debate in this field [Telecare research] has been inclined towards RCCTs as the “gold standard” for robust evidence. Telecare is a complex social intervention, however, affected by a myriad of confounding variables which may influence outcomes and compromise measurements of effects’ (Hamblin, Yeandle and Fry, 2017, p. 9). Critical studies of Telecare focused on different aspects of Telecare. While Milligan (2009) discusses how Telecare changes how its users experience the home and which forms of technology are accepted by older people and possible drawbacks, such as the potential decrease in social contact following the adoption of new forms of care, other studies (such as Percival & Hanson, 2006) are concerned with the potential decrease of individual choice and independence. In this respect, a complex and meaningful concept such as ‘independence’ has been oversimplified by policymakers and, at a lower level, by Telecare providers, who have attributed an intrinsic value and yet vague meaning to this term. I will come back to ‘independence’ and how I understand it in Chapter Two, section 8.

Human geographers’ critical studies about Telecare, ‘care’ and ‘home’, which have been introduced above (see Milligan, 2009), highlighted the complexity of the introduction of remote care in older people’s homes. Science and Technology Studies (STS) scholars, such as Oudshoorn (2011), understood ‘home’ as a space of care, which is inhabited by an increasing number of technical devices. Another significant group of scholars (Lawton, 1985; Oswald, 1996; Rubinstein & Parmelee, 1992) identified – inside older peoples’ homes – the favourite places, which had become ‘living centers’ within the home. More recently, Barnes (2012) suggested that ‘home’ is significant because of older people’s memories and because of the space which was shared and continues to be shared with significant others (see also Chapter Two, section 3). However, home can also mean loneliness and social isolation (Milligan, 2015), although it might be possible to counteract social isolation and address the emotional needs of older people, as suggested by Barrett *et al.* (2012), and Rabeem (2013) (cited in

Milligan (2015)). Older people's homes are also embroiled in practices of care, both face-to-face and at a distance (Milligan, Roberts and Mort, 2011; Milligan, 2015). Even though the delivery of these practices might reinforce the link between ageing and the development of dependency, I argue that Telecare, which is part of a complex care network in which more traditional forms of proximal and non-proximal face-to-face care coexist with less proximal forms of care, can help independent living. In my understanding, the concept of independence has been oversimplified. Firstly, I suggest that human beings are never (completely) independent, but that they 'inter-depend' on other people, such as formal and informal carers. Secondly, I propose that the use of Telecare might limit older people's agency. In this respect, the ambivalence in the use of Telecare in case of emergency was interpreted as a quest for independence, reinforcing my claim that Telecare could paradoxically be perceived by older users as a potentially disempowering care technology. Although critical studies of Telecare focused on the interrelation between Telecare, 'care' and 'home', it was felt that the process of adoption of Telecare in older people's home had not been sufficiently investigated from the older people's perspective. Hence, I identified the need to explore the interconnections between Telecare, 'care' and 'home' and designed my research by choosing a qualitative approach, which would address the following research questions: 1) how do older people come to adopt Telecare in their homes? 2) how does Telecare change the meanings and experiences of 'home' for older people? 3) how does Telecare change the meanings and experiences of 'care' for older people?

The first research question was answered by means of the domestication of technology theory, a conceptual framework developed from the Social Shaping of Technology theoretical approach and Media Studies, which is useful for understanding technology use within everyday contexts, and as such, was considered particularly suitable to investigate a small group of older people living in their own homes and using Telecare. In particular, domestication focused on how older users 'domesticate' a particular kind of technology during a process characterised by four non-discrete phases: 1) *appropriation*, 2) *objectification*, 3) *incorporation*, and 4) *conversion*. While Silverstone, Hirsch and Morley (1992) used 'domestication' to understand the adoption of new media technologies such as the television or CD player, other scholars have chosen this theory to investigate the appropriation of ICTs in the urban Chinese household (Lim, 2006), the 'domestication' of personal laptops by students of the

University of Lapland (Vuojärvi, Isomäki and Hynes, 2010), and to investigate older adults' experiences with mobile phones (Lee, Smith-Jackson and Kwon, 2009). In contrast, I drew on the domestication theory to study the adoption of Telecare in a small group of older people. To my knowledge, no other studies have used 'domestication' to investigate Telecare. The second research question investigated how Telecare changes the meanings and experience of 'home' for older people. Drawing from the literature review, my study confirmed that 'home' is charged with a number of different meanings. 'Home' was understood as a place of attachment to the environment, intended as the home's location. 'Home' was also understood by older people as a place of emotional attachment, in which they could feel safe and could remain independent for as long as possible. Furthermore, 'home' was a place of attachment to (significant) objects, such as photographs and mementos, which in turn provided older people with a sense of continuity in life. Finally, 'home' was a place of care, and was populated and modified by assistive devices. The third research question aimed at understanding how Telecare changes the meanings and experiences of 'care' for older people. I found that 'home' was a complex space, rich in diverse and relevant meanings, the 'theatre' in which the delivery of care occurred. 'Care' was understood as a complicated and complex network, in which multiple forms of care, from the more traditional proximal and non-proximal care 'in person', to new care technologies such as Telecare, also defined as care 'at a distance', can coexist without significant tension. I argue that care 'in person' is not necessarily 'good' care, and therefore care 'in person' might not be the 'best possible' kind of care. Or, more accurately, that there is no such thing as 'the best' form of care. Importantly, Telecare changes the nature of care interactions, for example by providing peace of mind not only to older people but also to both formal and informal carers.

1.2 Outline of the thesis

This thesis is divided into nine chapters. The current chapter introduces the setting, the research background, the research gap, the purpose of the study and the outline. Chapter Two and Chapter Three are the literature review chapters. I decided to write two distinct review chapters in order to focus first on the ageing population issue and to disentangle the concept of Ageing in Place before of introducing Telecare as part of Ageing in Place

and how it fits into the UK political agenda. Then I explored a body of research which is engaging more critically with Telecare. After that, I turned to discourses of ‘care’ and discussed the literature on relationality, networks of care, care ethics, relationality and gerontology. I also discussed how ‘care’, ‘home’ and Telecare intertwine and how these discourses are interlinked with gendered practice.

Chapter Three reviews the domestication of technology theory, which is the theoretical framework I chose to conduct my study. ‘Domestication’ of technology is explored in two different sections: the first, which focuses on media studies, will present a discussion on the cultural studies of media use and of information and communication technologies, while the second section will examine the domestication theory as informed by Science and Technology Studies (STS). The chapter ends with an examination of sociological and technological studies literature, which engages critically with notions of ‘care’ and ‘home’. Chapter Four describes my methodological approach and in particular *why* I designed my study using a quasi-ethnographic approach, *how* I recruited the research participants, *when* and *how* I visited older people in their own homes and *the rationale* behind the decision of meeting participants (most of them) three times over approximately a 6-month period of time. Then the chapter turns to the qualitative analysis method adopted, explaining why I chose Thematic Analysis (TA). The chapter then outlines concepts of reliability, generalisability and validity as applicable to qualitative research. Ethical issues and the feedback that I provided to participants and to the Telecare provider will also be explored.

Chapter Five, Six and Seven are the analysis chapters. Chapter Five, in which I analyse the domestication of Telecare by using the four phases of the domestication process, as described by Silverstone *et al.* (1992): *appropriation*, *objectification*, *incorporation*, and *conversion*, allowed me to answer the first research question: ‘How do older people come to adopt Telecare in their homes?’.

Chapter Six analyses the meanings and experiences of ‘home’ for older people. The chapter, which explores meanings of ‘home’ for older people, and how ‘home’ is modified by the introduction of Telecare, provided an answer to the second research question: ‘How does Telecare change the meanings and experiences of ‘home’ for older people?’ Chapter Seven analyses the meaning and experiences of ‘care’ for older people. This chapter explores the complexity of participants’ care network and discusses

how different forms of care could coexist in different homes. This chapter allowed me to answer the third research question: 'How does Telecare change the meanings and experiences of 'care' for older people?' Chapter Eight, the discussion chapter, brings together all analysis chapters and provides interpretation of findings in light of existing debates. Chapter Nine is the concluding chapter. It summarises findings, implications, limitations and strengths of the study and recommendations for both practitioners and policymakers.

Chapter Two

Ageing, Technology and Care: Towards an Understanding of the Telecare system

2.1 Introduction

This research considered how Telecare is experienced by older people living in their own home and how it changes meanings and experiences of ‘home’ and ‘care’. In exploring these issues, I began by investigating the ageing population issue and disentangling it from Ageing in Place. Then, I discussed Telecare as part of Ageing in Place and how it fits the UK political agenda. I continued by developing a critique of Telecare as a solution for the increasing level of dependency amongst the older population within ageing societies. I then acknowledged that thinking about Telecare cannot disregard an ethic of care, relationalities and networks of care, or relationalities and gerontology. I also considered how Telecare intertwines with ‘care’ and ‘home’ and how the three are linked with gendered practices.

2.2 The ageing population

Wan *et al.* observe that ‘the world population continues to grow older rapidly as fertility rates have fallen to very low levels in most world regions and people tend to live longer’ (Wan *et al.*, 2016, p. 1). Indeed, ‘the European population’s age structure is older than that of any other world region and is set to age further during the next few decades. By 2020, close to one-quarter of the population in several European countries will be aged 65 or more years’ (United Nations Organisation 2002, as cited in Grundy, 2006, p. 105). In the UK, the Government Office for Science has argued that ‘in mid-2014, the average age exceeded 40 for the first time. By 2040, nearly one in seven people is projected to be aged over 75’ (Government Office for Science, n.d., p. 6). This trend has significant consequences. The Government Office for Science (*ibid.*) claim that ‘without significant improvements in health, UK population ageing will increase

the amount of ill-health and disability. Chronic conditions, multi-morbidities, and cognitive impairments will become more common. At the same time, families will face increasing pressure to balance care with other responsibilities, particularly work’.

Similarly, Hamblin, Darowski and McShane (2013) suggest that ‘at the same time, the number of people who might act as potential caregivers, such as family members, is reducing, due to significant demographic changes, in particular, the decline of fertility, the patterns of marriage and parenting, the greater geographical dispersal and women’s increased participation in paid employment. All of these factors have implications for care provision within the family, and it is within this context that Ageing in Place and Telecare solutions are being proposed’ (Hamblin et al., 2013, p. 3). These ageing population projections suggest that the demographic issue has become a major policy priority in the US, UK and other Western industrialised countries. Cawston et al., (researchers at Reform, an English independent non-party thinktank), have claimed that: ‘Population ageing will continue so that by 2021 for every person over 65 there will be 3.2 workers to support them (down from 3.9 in 2011). By 2041 there will be 2.5 workers for every person over 65’ (Cawston et al., 2011, p. 5). From a social policy perspective, Walker (2012) argues that the British welfare state, which is built on a pay-as-you-go (PAYG) social contract between those inside the labour market and those outside it, is at risk. As future generations will have to face the costs of ageing, social policies should be introduced to improve their prospects by investing more in education and training, in extending working lives and investing in public health measures to prevent the increasing costs of ageing. Walker (2012) has argued that the (then) coalition government’s neoliberal agenda did not have the right policies in place to deal with this because they need consistent public investments.

2.3 Disentangling Ageing in Place

Clearly, the demographic issue and the consequent exponential increase of the older population has become a major policy priority in U.S., U.K. and other Western industrialised countries. As a possible important part of the solution to the problem of increasing costs of caring for an ageing population, Ageing in Place, ‘a popular term in current aging policy, defined as “remaining living in the community, with some level of independence, rather than in residential care”.’ (Davey, Nana, de Joux, & Arcus, 2004, p. 133, cited in Wiles *et al.*, 2011, p. 357), has been heavily encouraged by policymakers. ‘Ageing in Place’ has been a major thrust of UK policy on older people and housing. The underlying assumption is that enabling people to ‘age in place’ at home will not only benefit the older person in terms of their quality of life but will also be a cost-effective solution to the problems of an expanding population of very old people (Tinker *et al.*, 1999, cited in Sixsmith & Sixsmith, 2008, p. 220). This solution becomes evident when we consider that in the UK there is also great interest in addressing the issue of the independence in older age, which is seen as the key to lowering the expense of elderly care within the NHS. However, the term Ageing in Place is a broad concept which has been problematised by a significant body of scholars. On the one hand, Ageing in Place has been ascribed positive meanings, but on the other, it has been seen as a potential source of tension, as I will illustrate shortly. Scholars such as Wiles *et al.* claim that ‘Aging in Place is linked to sense of attachment and social connection, such as the “warmth” of the communities and the sense of social connection and interaction among locals but is also linked to sense of security and familiarity and home was seen as a refuge, community as a resource’ (Wiles *et al.*, 2011, pp. 360-361). According to Wiles and fellow researchers, ‘aging in place was tied to sense of identity, linked to independence and autonomy’ (Wiles *et al.*, 2011, p. 363). In particular, ‘independence might be referring to independence “from” family in terms of help with personal care, or independence “through” family who provide personal care and transport. Independence was also seen as something that could be enhanced by one’s surroundings and local resources (*ibid.*).

Ageing in Place can be a complex matter. In this respect, Lowenstein suggests that the home can be a source of tension when the requirements of the older person conflict with family members or other people involved in the decision-making processes related to

care provision (Lowenstein, 2009). Moreover, 'the home may also have negative connotations, including poor housing conditions, insecure tenancies and inappropriate design' (Heywood, Oldman, & Means, 2002, cited in Sixsmith *et al.*, 2014, p. 2). With the intent of further understanding what lies beneath the term Ageing in Place, I disentangled the meanings of 'home' from a lifespan perspective. This well-known approach fits into the developmental theory life cycle stages developed by Erikson (1997). According to him, development is a process from birth to death and is closely related to the socio-physical context in every life phase. From birth onwards, persons interact with their social and physical environment, leading to a meaningful representation of the self within the environment (Oswald & Wahl, 2005). Although environmental psychology does not usually address ageing issues, it nevertheless provides important insights that are relevant for a diversity of age groups. According to Markus (1995), home has three main functions: 1) gaining cognitive and behavioural control over space; 2) manipulating, moulding, or decorating space in order to create a setting of physical comfort and well-being; and 3) perceiving continuity with significant places and people of the past.

Different theorists, working from the same general person-environment transaction view of human development, have emphasised different aspects of the meaning of home throughout life. Among them are the exploratory behaviours inherent in childhood play (Muchow & Muchow, 1935, cited in Oswald & Wahl, 2005, p. 4), that 'enable the individual to interact with the environment, acquire information and build up knowledge systems' (Keller, 1998, p. 455), so that she can acquire competence in the physical surroundings. Later on, in adulthood, meanings of home are represented by territoriality, such as occupation, or security of tenure, and ownership, which is a symbol of security and status (Altman, 1975; Fox, 2007). In later life, the significance of home is represented by age-related types of bonding, such as autobiographical insideness, which is the sense of belonging and having one's life expressed within a place that can derive from lifelong residence (Rowles, 1983). Interestingly, though, the meaning of home is associated with ambiguous feelings throughout life. A child's home environment can be secure, supportive, and self-affirming, yet at the same time disruptive, frustrating or frightening. This is especially true in later life: an elder's home might be a comforting, familiar place despite the fact that it has become burdensome to maintain and unsafe (and therefore a source of anxiety). Home can also be a place of

abuse and not only a place where the older person feels safe and secure. An American team of physician-researchers (Taylor *et al.*, 2006) claim that approximately 4-10% of people aged 65 or more and living in the US are currently victims of violent episodes perpetrated by relatives, caretakers or strangers. In contrast with environmental gerontology and human geography studies, both of which bring attention to the positive aspects of ageing at home, this American study emphasizes strong negative connotations of home for older people. Hence, the need consider carefully to which extent meanings of home for older people might differ, according to their subjective experiences.

Ageing coincides with a reduction in action range, especially during very old age (Oswald & Wahl, 2005, p. 6). Older people spend more time at home than younger people do. Recent data suggest that older people (65 years and over) spend 80% of their daytime at home on average (M. Baltes *et al.*, 1999; Küster, 1998, cited in Oswald & Wahl, 2005, p. 6). Observational data have also shown an age-related tendency for environmental centralization even inside the house, especially around the most favoured places at home. These places, which can be found among both healthy and impaired elders, are typically organised to be comfortable and close to many necessary and preferred items used in daily life. In this way, such places become something akin to 'control centers' or 'living centers' within the home (Lawton, 1985; Oswald, 1996; Rubinstein & Parmelee, 1992). The home acquires new meaning in old age, with the scope of compensating for the diminished functional capacity of the ageing person, especially in very old age. In order to maintain autonomy and to avoid institutionalisation, either environmental changes or behavioural adaptations must generally take place (Oswald & Wahl, 2005). Research based on the 'environmental docility' hypothesis (Lawton & Simon, 1968; Lawton & Nahemow, 1973; Lawton, 1987, cited in Oswald & Wahl, 2005, p. 7) has shown a significant correlation between reduced environmental competence, such as vision or mobility impairment, and objective living arrangements (Wahl, Oswald & Zimprich, 1999; Wahl, Schilling, Oswald & Heyl, 1999, cited in Oswald & Wahl, 2005, p. 7). The relationship between loss of competence and the meaning of home in a broader sense, however, has received little attention (Oswald & Wahl, 2005).

Peace, Holland and Kellaheer (2006) claim that Ageing in Place is a subjective

experience and highlight emotional attachment to place, focusing on the work of anthropologist Rubinstein (1989), who studied how older people build meaning into the home environment and develop attachment to a place. More recently, Barnes claimed that 'home has both a functional and symbolic significance' (Barnes, 2012, p. 129). Similarly, Rowles (1993) affirmed that older people develop a sense of 'being in place' in their home that corresponds to an entire life of experiences. Furthermore, home is experienced differently across the lifespan. In this regard, the 'young old' (individuals aged under 75) present less attachment to familiar places due to a greater level of activity and mobility (Rowles, 1983). Home is significant because it contains reminders of what the aged person is and was, and also because of the space that was shared and continues to be shared with significant others (Barnes, 2012). One of the assumptions of the psychosocial approach of environmental gerontologists such as Rubinstein (1989) is that older people, thanks to the person-centred process, might attribute to the environment aspects of greater endurance than their own bodies. Rubinstein describes two processes: entexturing, in which the regulation of the environment may induce a sensory state of comfort; and environmental centralization, where the environment is manipulated in order to manage the increasing limitations of the body. Environmental psychology and gerontology have not produced major differences in defining the meaning of home. Both fields suggest that the meaning of home among older adults is related to aspects of physical, social and personal bonding, on behavioural, cognitive and emotional levels. Older adults have often lived a long period of time within the same residence, therefore cognitive and emotional aspects of the meaning of home are often strongly related to biography. Such links may be manifest through processes of reflecting on a past symbolically represented in certain places and meaningful objects within the home. The same can be said for behavioural aspects of meaning, where familiarity and routines have been developed over time (Oswald & Wahl, 2005).

Human geographers, such as Milligan (2009), equally insist on the importance of home. Milligan claims that home is the 'elected' place to provide care and at the same time to allow older people to remain as independent as possible for as long as possible. The home provides a sense of attachment, and there are three main aspects to it. The first is defined as 'Home as haven', which means that home is a 'protected place', in which the oldest can feel secure. The second is the home

intended as a ‘preconscious sense of setting’ (Rowles, 1993, p. 66), meaning that during time we develop not only a physical attachment to the home but also to the routines we perform within it. The final aspect is the home as ‘a site of embodiment and identity’. In other words, home is located not only in a certain geographical space but also contains memories contributing to a sense of identity (Milligan, 2009). However, Hillcoat-Nallétamby and fellow researchers contend that ‘home as a context for care has become over-romanticised as an ideal living environment for supporting and maintaining independence’ (Hillcoat-Nallétamby *et al.*, 2014, as cited in Milligan, 2015, pp. 1568-1569). In fact, they argue that ‘where health and functional abilities decrease, where the costs of running or maintaining the home become prohibitive, or where family composition changes, ageing in place may not be the best option for enhancing the wellbeing of older people’ (*ibid.*, p. 1569). This theoretical contribution seems to challenge the assumption that Ageing in Place is the most desirable form of ageing because of the meanings embodied by one’s home for older people. Important for this thesis, home can be transformed by new care technologies such as Telecare (discussed below in Section 2.4). Milligan (2009) has argued that ‘the reordering of the home into a space of care’ involves a continuous renegotiation of the meaning of home as a site of care and a place of social relations and personal life (Milligan, 2009, p. 71). Health scientists such as Angus *et al.* (2005) claim that ‘the aesthetics of healthcare spaces typically differ from those of the home’ (Angus *et al.*, 2005, p. 171). In fact, healthcare’s objects are designed to be durable, easy to clean and maintain, and not decorative.

‘Home’ has been understood in different ways from a range of diverse fields and disciplines. A reasonable approach to tackle the issue of Ageing in Place could be to consider the relevance of home both as ‘physical space’ and ‘memory space’, the latter being important in maintaining a sense of identity. Milligan’s (2009) attempt to understand the meanings of home might, therefore, help in investigating the complexity of ageing and the most feasible solutions to this issue. However, the term Ageing in Place might be ‘ambiguous’, as suggested by Wiles *et al.* (2011, p.358), and cannot be understood in a simplistic way, for example not (only) as a way of reducing the cost of care for an exponentially older population. More clearly, ‘home’ cannot always be the ‘elected’ place in which care can be provided. Neither can it always be a safe place to live, on account of the poor quality of housing or the potential

dangers due to inappropriate design. Nor can it be ‘secure’ when older people have to face the risk of short tenancies. Finally, ‘home’ cannot be a safe and secure place when it becomes a place of abuse. ‘Home’ can also be the theatre of intergenerational contrasts, with respect to the provision of care from family carers, who in turn may (or may not) allow older people to take decisions related to their care provision. This last consideration leads to the discourse of independence. Older adults living on their own might need a formal or informal caregiver, and this could create a form of dependence on their carers. However, as I will discuss, neither independence nor dependence are straightforward concepts; they are best understood in terms of a dependence-independence continuum.

The section that follows will shed light on how UK government policies have attempted to deal efficiently with a huge set of issues created by the exponential increase of population in retirement age, while at the same time acknowledging the relevance of Ageing in Place. In particular interest is how UK policymakers focused on the development of remote care technologies, and in Telecare in particular, to encourage the oldest to stay at home, thus keeping both costs of hospitalisation and of retirement homes under control.

2.4 Telecare as part of Ageing in Place: how Telecare fits in the UK political agenda

Hamblin (2013) highlights that Telecare solutions are often seen as cost-saving, arguing that ‘with an average Telecare system costing £450, equivalent to just a week in residential care, Telecare with support becomes a desirable solution for older people, their families and social care system alike’. However, she goes on to acknowledge that ‘it is difficult to prove the cost savings associated with Telecare as it is impossible to estimate what might have happened if someone had not had the system’ (Hamblin, 2013, p. 29). In 2006, the UK Department of Health announced the establishment of three pilot studies, known as the ‘Whole System Demonstrator’ (WSD), with the explicit purpose of demonstrating the benefits of integrated health and social care (reduced use of hospitals and care homes) when supported by assistive technologies like Telecare and Telehealth. Steventon and Beardsley (2012) explain that the pilots were

evaluated using a variety of methods including a randomised controlled trial (RCT), in which groups of patients either received the telehealth intervention or acted as controls by receiving their usual care. 3,000 patients participated in the trial, making the evaluation the largest and most complex trial of telehealth in the world. While Steventon and Beardsley claimed that ‘over the 12 months that they spent in the trial, patients allocated to receive the telehealth intervention had fewer emergency hospital admissions than those in the control group and that these differences in emergency admissions and mortality were statistically significant’ (Steventon and Beardsley, 2012, p. 3). Another pilot study, conducted by Steventon *et al.* (2013) on the effect of Telecare on use of health and social care services, found that Telecare, as implemented in the Whole Systems Demonstrator trial, did not lead to significant reductions in service use, at least in terms of results assessed during 12 months and over. These quantitative studies, which sought to measure any reductions in health care costs that come with the introduction of Telecare, were not conclusive. Steventon and Beardsley suggested that there were reasons for cautions, such as finding, which ‘relate[d] to particular deployments of telehealth in three sites in England’ (Steventon and Beardsley, 2012, p. 3) and that ‘the impact of telehealth depends on the type of technology and how it is used, as well as the nature of care that is subsequently provided’ (*ibid.*).

In contrast to these randomised controlled studies – which sought to measure any reductions in health care costs that come with the introduction of Telecare – a qualitative study was also conducted alongside the Whole System Demonstrator trial. This investigated the potential barriers to participation and adoption of Telehealth and Telecare (Sanders *et al.*, 2012). Respondents were interviewed on topics such as their social care problems, care arrangements, perceptions of the equipment, expectations of the intervention and the potential impact on the management of health and care needs. Interviewees showed concern about the threat to identity, existing routines and habits of life by the introduction of new technologies. Sanders *et al.* (2012) concluded that further study was needed into who benefits from specific Telecare and telehealth interventions and in what circumstances. A study by Hendy *et al.* explored whether the use of remote technologies such as Telecare and telehealth could be considered as a feasible solution by the UK government. In their comparative and longitudinal analysis of the implementation of the above remote care technologies Hendy *et al.* (2012) expressed concern with regard to the practicability of assistive technologies in solving the so-

called ‘demographic time bomb’ issue (cf. Hendy *et al.*, 2012, p. 8) and argued that more in-depth investigation was currently needed. Beyond rational discourses of economic benefits from the use of Telecare in older people’s homes, and as suggested by Hendy and research fellows, it was felt that the quantitative studies previously examined presented a gap in terms of the experience of using Telecare at home. The purpose of the following section is to review more critical studies that have begun to examine such issues.

2.5 Telecare as part of Ageing in Place: critical studies

There is now a body of research that is engaging more critically with Telecare and its role in supporting older people and enabling them to live at home longer. Many research studies are qualitative and focus on how Telecare changes how its users experience the home. Milligan (2009) is one such study. Milligan argues that the impact of Telecare on the home can be twofold: on one hand, Telecare can result in an increasing sense of safety and security for the oldest living on their own; on the other hand, it can lead to a new and different form of dependence, because of the constant checking and monitoring of people’s lives involved in the use of these new technologies. Milligan (2009) also reflects on another relevant issue: which forms of care technology are accepted by older people. According to this scholar, we might identify two groups of technologies: those designed to ameliorate, to increase older persons’ ability to manage their own life (facilitative new care technologies) and those designed to check health and activity (surveilling new care technologies). Milligan also claims that older persons who need care and support can often feel a lack of control over their lives and that technologies intended as surveillance objects can increase this feeling, thus negating the positive effects of monitoring their everyday life. Some elderly people actually refuse to use technology, and this resistance can be understood as them trying to regain some control in their lives.

Percival and Hanson (2006) also provide a critical analysis of remote care technologies. In their study, which included focus groups of professional and lay members, Percival and Hanson found that concerns about Telecare services were expressed by both groups. As a result of their research, they argue that remote care technologies potentially

enfeeble individual choice and independence, either by ‘inadvertently producing dependent, learned behaviour or by restricting opportunities for risk-taking’ (Percival and Hanson, 2006, p. 895). Telecare, they claim, could actually become like ‘big brother’, when people were in some way pressured to accept it. In this respect, participants signalled that Telecare should not be oversold and should not automatically be targeted at all elderly people, many of whom are able and active. Another significant issue raised during focus groups was the importance of maintaining face contact, and not replacing it with Telecare. As observed by the participants, technology should not have reduced the person’s connection with a social world (Percival and Hanson, 2006) therefore leading to possible isolation. Milligan (2009) also points to the potential decrease in social contact following the adoption of new forms of care. In contrast with informal and formal carers, who would still be required to aid personal care such as dressing, bathing and the like, new care technologies allowing remote diagnosis and remote monitoring might reduce the need for face-to-face care by health professionals. Thus, although new Telecare technologies might increase the ability of older adults to live independently in their own home, they may at the same time lead to exclusion and isolation. More recently, Bentley *et al.*, in their study about the barriers and facilitators of the use of Telecare, observe that the ‘particular interest [of] the often simultaneous and contradictory view of Telecare as a symbol of reduced independence, yet also being described as a way to maintain independence, a perception which may be linked to stigma around Telecare and is being viewed as the next step in a downhill ageing process’ (Bentley *et al.*, 2016, p. 10).

Finally, Hamblin *et al.* (2017) suggest that, though accepting Telecare was a sign of vulnerability, it also reduced risk and therefore the likelihood of having to move home. This is also linked with issues related to Telecare as signifying a loss of independence. Although many research participants felt that Telecare was unsightly and therefore potentially stigmatising, if it could help them achieve their ultimate goal of remaining independent, active and easing their caring networks’ concerns, they were able to overlook its appearance. In another study about Telecare technologies, Milligan affirms that realising that Telecare should be considered as an *aid* and not a solution (to growing demands for care) becomes increasingly important when we also think about the additional and maybe less overtly recognised role that paid and unpaid carers play in the home (Milligan *et al.*, 2011, p. 350). This points to the importance of ‘physical’

caregivers inside older people's homes. In spite of empowering old and frail people, it appears that without a provision of 'traditional' face-to-face care, Telecare would not be sufficient to support independent living. Thus, the importance of caregivers must not be underestimated or overlooked.

Mort, Roberts and Callén (2013) in their report on research undertaken within the EU FP7 Science in Society project, Ethical Frameworks for Telecare Technologies for older people at home, examined, together with partners in Spain, The Netherlands and Norway, examples of remote care using different kind of approaches, observed Telecare practices and convened a series of older citizens' panels to discuss their aspirations for care and different Telecare. In their report, Mort *et al.* (2013) mention examples of 'misuse' of Telecare, such as in the case of a woman who: 'seems only to know anything about the pendant alarm and pull cords – the falls monitor is sitting next to her on the shelf, next to the china dogs, pills, little tin pillbox and books' (Mort *et al.*, 2013, p. 806), which was less acceptable (compared to unqualified social workers) to Telecare providers and service managers. In both the Spanish and English research studies concerns arose when older people used Telecare for purposes other than those for which it was designed. One such purpose was social needs: some clients 'misused' the service so they could have social contact with monitoring centre operators. Interestingly, Mort and fellow researchers found that the Telecare steering group and commissioning managers suggested misusers should have the Telecare system removed. This study sheds light on a number of ethical issues. First of all, it explains that Telecare might be 'misused', thus suggesting that there might be a 'right way' as well as a 'wrong way' of using remote care devices. Secondly, it suggests that Telecare devices might be used to accomplish social needs (chatting with the teleoperators) in contrast with health needs (pressing the alarm button in case of fall, for example). This point is even more subtle, in which might insinuate that older people, who are the remote care devices' end users and thus those most interested in the use of devices, have apparently a limited freedom of expression, or, better, of choice. Another important finding of Mort and colleagues' study lies in the fact that Telecare systems are seen as potentially coercive, in which they create an obligation to live in a 'telehome' (Mort *et al.*, 2013, p. 803). Moreover, Telecare users were 'punished' with the removal of the Telecare system in case of misuse (Mort *et al.*, 2013, p. 811). They suggest a need for 'an inclusive, flexible design' (*ibid.*).

López and Domènech (2009), in their study about a 12-month ethnographic research study in a Catalan Telecare Service, aimed to discuss how autonomy is embodied through the use of a Telecare device. Their findings showed that autonomy appears as the result of a group of connected interdependencies that enable/disable certain possibilities for action. In this context, Telecare appears as a service that encourages autonomy because it preserves the configuration of interdependencies that make a person feel at home. In other words, when a user contacts the Telecare service, the technicians enter all useful information into the database (e.g. the medicines being taken, the available technical aids, the neighbours and relatives, and the like). However, even though it might seem that the autonomy of the Telecare users only depends on the capacity of the service to manage at a distance the users' care environment (relatives, neighbours, general practitioner, and so on), López and Domènech (2009) showed that the service transforms the user into an active agent, who must make certain decisions and develop certain actions according to the logic of the service. An example of this is wearing a pendant with a red button and pressing it in case of need. Interestingly, López and Domènech highlight that 'as opposed to what usually happens in a hospital or certain enclosed or assisted living settings, the Telecare service requires that users do something apparently simple for themselves: that they put on the pendant and press the red button if they need help. But this simple gesture turns out to be extremely complicated, since the action of putting on the pendant and pressing the button is not a logical consequence of need on the part of the user' (López and Domènech, 2009, p. 185). Users may resist wearing the pendant because of the way in which the pendant embodies autonomy. In this case, what the users are doing by refusing to wear the pendant is resisting a particular way of understanding how care has been transformed from what was previously the responsibility of family members into a consumer product that can be bought and sold depending on certain individual necessities. The denial of wearing the pendant was also interpreted as a failure of the incorporation process of the technology in the daily life of the person. The terminology used (incorporation process) is quite interesting. In fact, although drawing from phenomenology and Actor-Network Theory (ANT), López and Domènech (2009) used a terminology similar to the one employed by the domestication of technology theory. In this respect, later in their paper, these research fellows suggest, as one of the possible explanations for not wearing the

pendant, the term ‘disruption in a process’³ (see López and Domènech, 2009, p. 188). But why is the user not willing to wear the alarm pendant? Maybe because the device is not well designed and the person lacks the minimum abilities in order to use it (for example, forgetting that they have it), or because the care network does not reinforce the importance of using it to the users (López and Domènech, 2009, p. 188). The second conclusion of López and Domènech (2009) regards the feeling of being safe, which is deeply linked with autonomy. According to these scholars, the promotion of autonomy is not underpinned by a negative notion of security, such as the absence of danger, but by a positive one. Being safe not only involves being completely free from daily dangers and being protected from them, but also knowing how to deal with them if they should present themselves. López and Domènech’s study provided an interesting contribution in different areas of research: the user’s autonomy provided (or not) by the Telecare system, the processes of incorporation and/or resistance to technology, as exemplified by the use/misuse/non-use of the alarm pendant, and the notion (positive or negative) of security. With regard to possible lack of research in this domain, Percival, Hanson and Osipovič (2009) claim that there is a gap related to the views or experiences of Telecare users or potential users. Furthermore, there is not much empirical evidence on the ways in which older people use assistive technology. Also, there is an insufficient number of studies about Telecare and the older population who live in ordinary houses and not sheltered housing. This gap needs, therefore, further investigation, as the experience of ageing adults appears to be crucial in understanding the potential outcomes as well as pitfalls of ageing at home with the support of new care technologies.

Pols (2012, p. 12) remarks that in the Netherlands the Dutch government has structured national health care as a (regulated) market. The Dutch government encourages care organisations, professionals, patient organisations and insurance companies to develop Telecare projects together. Although to date the Dutch national patient organisation is ‘pro’, the people who actually have to live with the devices have no voice (or choice) in this issue until their care providers offer them a particular Telecare device. Since the implementation of Telecare is often done through pilot projects, such offers come and go. One possible implication of this is that Telecare end users are deprived of agency

³ The other explanation offered by López and Domènech for a user’s unwillingness to wear the pendant is ‘resistance to social change’ (López and Domènech, 2009, p. 188).

when it comes to adopting or not remote care technologies. Oudshoorn (2011), one of the most influential Science and Technology Studies (STS) scholars, adopts a focus on the importance of place in shaping user-technology relations. Places matter because they may shape how technological devices are used. Places can also contribute to redefine the meaning and practices of the spaces in which they are used and introduce new spaces in which people and objects interact. (Oudshoorn, 2011, p. 23). As Telecare technologies involve relocating healthcare⁴ from the hospital and general practitioner's rooms to the home, boundaries need to be considered. Moreover, remote care technologies redefine the home. Oudshoorn argues that 'homes are not constituted only by people' (Oudshoorn, 2012, p. 127). Homes are increasingly populated by technical devices, and we may wonder how these devices will affect the home. Drawing from scholars such as Angus *et al.* (2005), Willems (2008) and Lehoux *et al.* (2004), cited in her book about Telecare Technologies, Oudshoorn (2011, p. 24) points out that receiving long-term healthcare at home changes 'the meanings and the experience of being "at home" and "in place".' In this respect, Oudshoorn claims that 'Telecare technologies drastically extend this 'medicalization of the home', because they introduce medical devices for monitoring and diagnosing chronic diseases that occur frequently in western industrialised countries, including diabetes, respiratory insufficiency and heart failure' (Oudshoorn, 2011, p. 24). Thus, any contribution about the adoption and use of Telecare cannot ignore the relevance of home, not to mention the relevance of care, intended as face-to-face care. The issues raised by this more critical literature on Telecare – the new dependencies that may be created; the potential for increased isolation and the possible resistance by older people to the perceived controlling aspects of technologies; the relations between care and technology, new organization and models of care delivery (in this case to frail older people) – all point to the need to examine Telecare *in use* and lead us to the question of how Telecare and care might be theorized. Acknowledging that thinking about Telecare involves first thinking about care and what it involves, I will begin by providing an understanding of ethics of care, relationalities and networks of care.

⁴ In my study, Telecare is part of a broader package of social care support.

2.6 Discourses of ‘care’: from an ethic of care to relationalities and networks of care

The theoretical discussion of the ethics of care has been informed in general by Gilligan’s work (1982, 1993, cited in Weicht, 2015) on the ‘different voice’ in which she identifies two different (gendered) ways of speaking about moral problems, which include two different ways of describing the relationship between other and self (Weicht, 2015). According to Gilligan, girls develop through an attachment to their mother and boys through a separation from her (1982, cited in Weicht, 2015). Thus, boys show a more empathic individuation than girls and, in general, differences to other people. As separated gendered identities arise and intimacy and relationships are more related to the female than the masculine identity, girls and women judge themselves in terms of their ability to care and tend to listen to and try to understand voices others than their own. There have been variations of an ethics of care, such as Tronto’s model for an ethic of care. Tronto’s (1993) work *Moral Boundaries* sees as central to the development built around the significance of care in our lives the understanding that humans are relational beings (see also Barnes *et al.*, 2015, p. 3). Tronto (1993) understands care as a process with four ‘phases’: attentiveness (caring about), responsibility (taking care of), competence (care giving), and responsiveness (care receiving). In order to have an ethics of care, all the phases have to be reached, not necessarily in a linear order. Her approach to care has informed scholars such as Barnes (2012) who defines care in three distinct, although related, ways.

In the first aspect, care is understood ‘as a way of conceptualizing personal and social relations’. In the second aspect, ‘care comprises a set of values, or “moral principles”’ (Tronto, 2010). This definition highlights ‘...whether personal relationships, work relationships, friendships, processes of political decision making etc. are capable of enabling the conditions in which we can live well (or as well as possible) both individually and together’ (Barnes, 2012, p. 5). Therefore, the relational approach to care is a central notion of care ethics. Barnes (2012), Doyal and Gough (1991) and Kittay (1999) argue that human interactions occur between people who are unequal however interdependent. In particular, Barnes observes that ‘human babies, more than the young of any species, depend on intensive care over an extended period of time to ensure their basic survival need for food, warmth and shelter are met’ (Barnes, 2012, p. 13). Similarly, ‘care is necessary to all human individuals, and thus we cannot and

should not confine the need for care to a group of people who are defined and distinguished specifically by their need of care' (*ibid.*). 'While our interdependencies are most evident when we are very young, ill, disabled or have become frail in old age, we are relational beings throughout our lives: "the quality of people's lives depends hugely on the quality of the social relations in which they live, and on how people treat one another"' (Sayer, 2011, p. 7, cited in Barnes, 2012, p, 15). Informed by Barnes (2012), I argue that 'dependence' and 'independence' should be understood as opposite ends of a continuum. Beginning with a condition of 'dependence' at birth, human beings then become more 'independent'. During their lifetime human beings then become 'interdependent' on each other. In light of this, I argue that individuals cannot become completely 'independent' and also that the notion of 'independence' might in fact be overrated. Individuals who are considered 'independent' in a broad sense might nonetheless be unable to resolve apparently trivial issues such as repairing a leaking kitchen sink and therefore become 'dependent' on the plumber who accomplishes this task for them. The plumber might in turn become 'dependent' on another individual under different circumstances. These forms of relationalities are continuously displayed and I agree with Sayer (2011, cited in Barnes, see above) when he focuses on the quality of the social relations. Thus, concepts such as 'dependence' and 'independence' cannot be defined using a 'biological' vision of the life cycle, which starts from infancy and ends with death. Instead, human beings are interdependent on each other throughout their lives. The third aspect of care, argues Barnes, is 'to think about it as a practice' (Barnes, 2012, p. 6) and this 'reflects the significance of a focus on the work and activities of care giving that have been emphasized both by feminist researchers seeking to make visible the unpaid work done by many women and by carers themselves through their campaigns and organisations' (*ibid.*). I acknowledge the relevance of this last aspect, and I will draw on it when looking at the work of Telecare workers in Chapter Five.

Informed by Milligan *et al.* (2011), I contend that Telecare systems can offer disabled or frail⁵ people a level of empowerment in their lives that they may not previously have experienced. The standpoint from which the relationship between the experience of being cared for in old age considers care 'as an integral part of human existence'

⁵ Frailty is theoretically defined as a clinically recognizable state of increased vulnerability resulting from aging-associated decline in reserve and function across multiple physiological systems such that the ability to cope with every day or acute stressors is compromised. (Qian-Li, X., 2011, p. 1)

(Sevenhuijsen, 1998). In fact, ‘over a life cycle, people will variously both receive and provide care’ (Shakespeare, 2000b, p. 62), which is more likely to be provided in older age, as older people experience limitations arising from their own body frailty. This ‘increased vulnerability’ which might lead to an increased care provision need not necessarily be understood as a dependency.

In my study I aim to unravel how older people are cared for by formal and informal carers and in general the nature of older people’s care networks. Ward, Barnes and Gahagan (2012) claim that ‘care can encompass a range of activities and relationships, from having someone watching out for you, help with household tasks, to nursing and personal care’ (Ward *et al.*, 2012, p. 6). In my understanding, these scholars highlight how caregivers can provide help with every day activities related to housework, or to personal care such as washing, dressing and bathing. Caregivers may be physically present in a broad sense, which also includes occasional forms of care, such as those provided by caretakers or neighbours, and how they interact with Telecare, a form of care at a distance which is part of a complex (and complicated) care network. Chapters five and seven will explore the role played by care networks in older people’s provision of different forms of care. In my thesis, I also suggest that the focus on ‘dependency’ is not only unjust but is also inadequate. In fact, the ‘dependent’ label does not consider how older people care for other (older) people, such as their spouses or adult children who, in turn, care for them. In this respect, caregiving, such as assisting those in need with basic daily self-care activities (getting out of bed, bathing and the like) and/or instrumental daily care activities (cleaning the house, managing finances, taking medications, and so on) might be juxtaposed to care receiving. Despite being cared for, older people can also care for others (spouses, other family members, friends). The relationality of ‘care’ has been understood differently by disability scholars, who have refrained from using the term ‘care’ when referring to frail, old, and mentally and physically disabled people. This is because it would have reinforced notions of dependency, further disadvantaging particular groups of people in our society (Milligan, 2009, p.18).

In contrast, Thomas (2007) problematises ‘care’ and notions of dependency, by reflecting on how older people and disabled people may have a greater need of assistance in daily life, in the way a busy and ‘successful’ non-disabled executive needs

assistance in their organisation of meetings, travels and the like. However, the executive is seen as ‘successful’ and ‘independent’ while the older and frailer person is seen as ‘dependent’. Drawing on Thomas (2007), I will consider the notions of dependence and independence critically and will regard them as part of a dependence-independence continuum. I argue that notions of dependence should not be associated (only) with those (older) people affected by particular dependency needs through sickness, disability and frailty. These conditions, which are sometimes used to define older age, might be stigmatising, in their attempt to simplify different health conditions (in their broader meaning). Thus, dependence on carers, either formal or informal, will not recurrently connote negative values. In contrast, it will be considered that, as people grow older, they are likely to need an increasing provision of care and might be therefore ‘moving’ along the dependence-independence continuum towards the ‘dependence’ side. However, using the lens of ‘interdependence’, I will show in Chapter Seven how older people can act as both care receivers and caregivers, and in particular how spouses can reciprocate the provision of care. In the next section, I will focus on how relationalities and gerontology can be understood.

2.7 Discourses of ‘care’: relationalities and gerontology

Relationalities and gerontology as part of the care discourse can be understood using different approaches. In particular, I will consider how environmental gerontology and social gerontology, respectively, understand relationalities. I will begin with environmental gerontology, on which I already touched on previously in the discussion regarding Ageing in Place. Scholars such as Wiles *et al.* (2011) acknowledge that ‘beyond the home, neighbourhoods and communities are crucial factors in people’s ability to stay put’ (Wiles *et al.*, 2011, p. 358). These scholars highlight how ‘consideration needs to be given not only to housing options but also to transportation, recreational opportunities, and amenities that facilitate physical activity, social interaction, cultural engagement, and ongoing education’ (Wahl & Weisman, 2003, cited in Wiles *et al.*, 2011, p. 358). I have decided to draw on environmental gerontology as this scholarship emphasises how aspects of Ageing in Place are permeated by the development of relationships between older people, neighbourhoods

and communities. This approach is also useful to further understand how factors such as transportation, recreational opportunities and amenities can promote social interaction.

Social gerontologists such as Lloyd (2012), draw attention to the ethics of care and in particular on one of its core principles: the interdependence of human beings and how this insight opens up a different way of understanding health and well-being as the outcome of social relationships. Using a life course approach, Lloyd contends that ‘the determinants of health must also include care, since it is only through being cared for in infancy that an individual survives to reach old age’ (Lloyd, 2012, p. 27). Confirming another body of literature (Barnes, 2012; Doyal and Gough, 1991; Kittay, 1999), Lloyd here recognises the importance of interdependence. Further on, Lloyd adds that ‘the giving and receiving of care necessarily entails a consideration of ethics, since the need for care places people in a position of relative powerlessness, and without an ethical framework being “cared for” would exacerbate and individual’s vulnerability rather than ease it’ (*ibid.*). The emphasis here is again on the relational nature of care.

I will conclude this section by saying a few words about the social construction of care. In this respect, Weicht claims that ‘older people are constructed in such a way that they should be cared for and that it is the task of others to arrange and design particular support and treatment. This is again based on the creation of a clear separation of the time when someone is healthy and independent from the time when someone needs care’ (Weicht, 2015, p. 145). Here, Weicht emphasizes how the social construction of care seems to be embodied with ageistic prejudices and how this approach is antithetic both to a life-course approach and to feminist ethics of care approaches.

2.8 Discourses of ‘care’: how ‘care’, ‘home’ and Telecare intertwine

Milligan *et al.* (2011) and Milligan (2015) clearly highlight how ageing people’s homes are enmeshed with practices of care, both face-to-face and at a distance. Importantly, and in contrast with Phillipson *et al.* (1986, cited in Shakespeare, 2000a, p. 11), who problematize the experience of old age ‘as if older people were invariably incapable and physically dependent’, my study will challenge the understanding of ageing as an inevitable step towards dependency. On one hand, the home can potentially become a

site of loneliness and social isolation, alienation and disempowerment (Barrett *et al.*, 2012; Rabieem, 2013, cited in Milligan, 2015), particularly where the home becomes a site of medical and service intervention. Milligan suggests possible ways to counteract social isolation, through the development of ‘robotic pets⁶ designed to address social isolation and to address some of the emotional needs of older people’ (Milligan, 2009, p. 78). According to Milligan, ‘the globalization of care, migration and shifting family and work patterns, combined with the rise of new communication and travel technologies, are shifting both the ways and places in which people engage in care. Thus, families can engage in both the affective (caring *about*) and physical (caring *for*) performance of care’ (Milligan, 2009, p. 10).

Caring for is thus seen to encompass the performance of care-giving, including the activities undertaken by formal paid workers or informal, unpaid workers such as family, friends and volunteers [...]. At its most fundamental, caring for is about the personal, the performance of proximate and personal care tasks, but it can also include other everyday tasks such as childminding, pet care or household tasks. At a distance it can involve arranging and monitoring paid and professional care. (Milligan and Wiles, 2010, p. 741)

Importantly, carers can provide care through ‘physically proximate care’, by monitoring care through modern communication and care technologies, or by engaging in regular travel to deliver care. It is important to note that an informal carer might be geographically proximate and emotionally distant (Milligan, 2009, p. 10). For example, an adult child could have elected to live geographically closer to his or her aged and frail mother without being psychologically closer to her.

Caring about, on the other hand, refers to the emotional aspects of care; this might also include the generalized relational and affective elements of being caring. (Milligan and Wiles, 2010, p. 741)

The place in which care is delivered *is* relevant. Milligan *et al.* (2011) point out how Telecare and telemedicine in general need a geographical perspective, as they change

⁶ Robotic pets, or domestic robots are artificially intelligent machines for now. According to Chapman, there are two distinctly separate genres of robots, i.e. assistants and companions. While robot assistants generally feature anthropomorphic forms, companion robots tend to be more abstract and look more ‘cute’ and ‘cuddly’ (see Chapman, 2005, p. 122).

the place of care-work. Remote care affects the nature of care interactions within the home as ‘there is little doubt that, at their best, Telecare technologies can offer disabled or frail older people a level of empowerment in their lives that they may not previously have enjoyed’ (Milligan *et al.*, 2011, p. 349). Telecare technologies can move and redefine the boundaries between spaces formerly considered public or private, and between institutional and non-institutional spaces. Telecare can also change the way home is experienced and reorder the place of care-work and responsibilities to care as new actors become part of the care network and existing care-givers assume different roles and responsibilities. Recognising this, Milligan *et al.* (2011) investigate how these new care technologies are experienced by older people and how they could reshape both the nature of care and the places within which that care is performed. This study suggests that whilst it may be possible to render some care technologies relatively invisible, the installation of technologies designed for surveillance and monitoring can modify elderly people’s sense and experience of home. It is suggested that New Care Technologies have the potential to reshape not just the relationships between people and things inside the physical structure of the home, but also the feeling and sense of ‘being at home’. Thus, any effort to understand the effects of new care technologies needs to focus on the complexity of home as both a site of social interaction and personal meaning and as a site of care. The interactions between home, care and Telecare become even more complex if we consider Milligan’s recent review of state of the art in geographical gerontology. In fact, while ‘recognising that while much of [care technologies] physical manifestation is, indeed, within the home, they also bring into play new sites of care that can be remote from both the home and the institution. Call centres, teliagnosis and monitoring stations, for example, all involve sites of care that are linked to, but remote from, the home’ (Milligan, 2015, p. 1574).

Roberts, Mort and Milligan, in their European Commission-funded ethnographic study of two English Telecare monitoring centres, claim that ‘Telecare is not “disembodied” work, but a form of care performed through the use of voice, knowledge sharing and emotional labour or self-management’ (Roberts, Mort and Milligan, 2012, p. 490). Care at a distance is sometimes perceived as a ‘dehumanisation’ of care. However, these scholars ‘refused to assume that care technologies fall somehow outside humanity (and are cold, hard, unfeeling)’ (Roberts *et al.*, 2012, p. 493). An example of how Telecare can be human is provided by the relationships that teleoperators attempt to build

through the Telecare system and when they make weekly test calls to make sure the equipment is working, thus potentially leading to the formation of emotional attachments (see Roberts *et al.*, 2012, p. 498). According to Roberts *et al.* (2012), successful Telecare relies on the existence of social networks and the availability of caregivers. While the care package most often also involves physical care, such as washing, dressing, help with meals and the like, Telecare can be an additional form of care. Telecare cannot replace care in person but neither is it the opposite. Both forms of care are strictly intertwined. The issue here is ‘in which ways Telecare [can] be constructed as care’ (Roberts *et al.*, 2012, p. 493).

In this regard, a significant body of literature (Pols and Moser, 2009; Mol, Moser and Pols, 2010) sees technology as an element of care. Again, technology is not being considered as cold or as something that is opposed to a warm care but as an element of care itself. Technologies are seen as an instrument needed to achieve a specific effect. In order to reach this goal, ‘good’ care, technologies have to be continuously adjusted. Pols and Moser (2009) claim that it is too simplistic to make a distinction between ‘cold care’ (technology-mediated) and ‘warm care’ (human-mediated). For example, the Health Buddy (Pols and Moser, 2009, p. 7), a device that was introduced and is currently used in pilot projects with particular groups of patients with chronic disease in the Netherlands, asks the patient a series of questions at periodic intervals, to which he or she has to answer using the four buttons on the device. Data are then sent to a computer located in the appropriate hospital where potentially worrying or perturbing answers are visualised by a code and a nurse can read the answers the patient gives. Patients have to use the Health Buddy every day answering questions about their health, allowing the device to observe their conditions daily, while teaching them about their illness and giving them instructions on how to behave. As the device, the ‘little white box’, is a direct line to the nurse who makes judgements about the patients’ conditions, the technology is seen in a positive way. In fact, patients feel they are cared for by the nurse more than if they had to go to a three-month consultation; patients feel safe. Pols (2012) claims that good care needs ‘warmth’ and ‘coldness’. It also needs knowledge and empathy and carers have to combine these to adapt to the situation of individual patients. In the study conducted by Pols (2012), Telecare technology such as ‘the white box’ represents a care network. The ‘white box’ provides a form of remote care to the patients, who have to answer health questions asked by the ‘box’ on a daily basis.

Patients' care can be delivered in many diverse and not always obvious ways. In the following extract, care is provided by approaching the patients by using the everyday tools of the domestic life, such as serving a hot drink:

Serving coffee may function as a tool that nurses use to care for their patients. It is a non-verbal form of taking care, making a nice beverage a form of support. The nurse domesticates, or rather, appropriates the coffee by turning it into a tool of care. (Pols, 2012, p. 7)

Care is a very complex matter and it certainly cannot be easily expressed. Moreover, the place in which care is delivered is also relevant.

The place where one sits influences care, but so is moving around. (van Hout, Pols and Willems, 2015, p. 1213)

So, is there a possible way to unravel the multiple meanings of care? Is it possible to understand them, or at least make an attempt to understand them? Pols observes that: *'[...] routine practices may (have) become invisible to participants, but may be visible to an involved observer. Devices obviously do not speak, and their doings can only be observed and spoken about. Detailed insight into what happens in care practices is thus important for learning what care actually means in a particular situation. This explains my partiality to ethnographic methods; they allow you to see people and devices 'in action', in the reciprocal taming and unleashing processes in the struggle for fit, even if the participants are unaware of what exactly changes along the way' (Pols, 2012, p. 20).*

These examples stimulate different reflections about care. How is Telecare changing/reshaping the meaning and experience of care? Significantly, we are not anymore dealing only with care in person or face-to-face care, or care provided solely by a formal or informal caregiver. On the contrary, we are confronted with different kinds of care that combine technology-mediated forms of care with face-to-face care. From the research on Telecare to date, it is clear that these new, more technological, forms of care have an impact on how patients or service users experience care. They may feel the need to be collaborative towards nurses, and eventually towards

technology. Technology may develop an affective meaning, as it is linked to humans, to those people who stay behind the ‘little white box’⁷ (Pols and Moser, 2009, EFORTT Deliverable F7 Final Research Report, 2011), or towards the pendant (Roberts and Mort, 2009, for a description of the pendant). There is also another issue: patients sometimes ‘misuse’ technology, either intentionally or accidentally. As previously mentioned, some patients played with their devices while others refused to use them (by hiding the pendant, for example).

In her study about Telecare technologies and the transformation of care in the Netherlands, Oudshoorn (2011) explains how new technologies ‘redefine not only the order of who cares but also where care takes place and what care will be provided’ (Oudshoorn, 2011, p. 64), creating new ‘geographies of care’. Oudshoorn (2012) highlights ‘how spaces still matter’, despite the move from physical to virtual encounters between healthcare professionals and patients. Following Oudshoorn, I argue that science and technology studies (STS) research on Telecare has been enriched by including a focus on the place to understand the dynamic interactions between people and things. Adopting insights of human geographers (Milligan, 2009; Milligan *et al.*, 2011; Roberts *et al.*, 2012; Oudshoorn, 2011; Oudshoorn, 2012), I show how places in which technologies are used affect how technologies enable or constrain human actions and identities. Whereas some spaces may facilitate the incorporation of technologies, others may contribute to resistance of technologies. Telecare has been presented as part of the Ageing in Place’s solution, and here I consider some of the studies that have evaluated the benefits of Telecare adoption. These studies highlight the financial benefits for healthcare providers but also show a necessary and more critical perspective from users of Telecare who experience the technology as inadequate in various ways. These inadequacies are explored by considering how it is that Telecare embodies notions of ‘care’ and ‘home’.

⁷ The ‘little box’ is a user-friendly name that stands for the Healthy Buddy Appliance, also called ‘Healthy Buddy’.

2.9 Discourses of ‘care’: how ‘care’, ‘home’ and ‘Telecare’ as interlinked with gendered practices

While acknowledging the gendered nature of ‘care’, I would like to introduce this section by explaining that my thesis did not aim at discussing gendered aspects of care in any depth. This decision was based on a choice: I decided to focus on a small population of older people and how notions of ‘care’ enmesh with ‘home’ and Telecare. However, it is important to recognise that one of the key aspects of ‘care’ is its relationship with gender. In this regard, Carole Thomas suggests that the majority of carers are women and that ‘carers may be defined in terms of familial roles, such as “wives”, “mothers”, “daughters” or in relation to occupation, professional or sectoral roles: “home helps”, “nurses”, “voluntary workers” and so on’ (Thomas, 1993, p. 651). Much more recently, scholars such as Fine and Glendinning (2005) have challenged discourses of ‘care’ and dependency, such as the demographic characteristics of the caregivers who, according to the feminist literature, are in the majority women and have to carry the unequal burdens in relation to the care of older or disabled people or other kin. Fine and Glendinning observe that ‘older people (particularly older men) as carers suggests that, in shaping patterns of care-giving, in this age group at least, gender is no longer the most influential factor’ (Fine and Glendinning, 2005, p. 609). This finding has obvious limitations, as it refers to a particular age group (older people). However, Fine and Glendinning’s finding calls attention to the need of not assuming gender bias for granted in relation to older people’s care. In this respect, Milligan (2009) suggests that ‘though women are still more likely to be carers than men – with 56 percent of all carers in Britain being female compared to 44 per cent males – the extent of male caregiving is surprisingly high’ (Carmichael and Charles, 2003; Dahlberg et al., 2007, cited in Milligan, 2009, p. 33).

As mentioned in section 2.6, the EFORTT project highlighted how home care is mostly undertaken by women, and in this context the introduction of Telecare might have consequences for gendered distributions of work. In fact, ‘genderisation of care is grounded in the notion of care as something connected to home, family and idea of care as a feminine capacity’ (Anderson, 2016). Geographers such as Wiles (2003a; 2003b, cited in Milligan and Wiles, 2010, p. 4) observe that ‘how the home as a context for care shapes both the care itself (for example, the availability of formal support to family

caregivers) and has a huge impact on how people perceive and experience their home. The latter cannot be understood without taking into account that space is gendered'. In this respect, Johnson has observed that 'women and men inhabit different spaces, and that women are oppressed by existing special and social relations and knowledge of these spaces' (Johnson, 1990, p. 20). With a more in-depth focus on the difference in the use of space, Townsend explains that 'women, once in the home of another family, are more likely to have access to more (or all) parts of the home than men (Townsend, n.d., p. 42). Access to bedrooms, kitchens and bathrooms is often more free for women than men (Gullestad, 1993, as cited in Townsend, n.d., p. 42) and this would appear to be a cross-cultural occurrence. Townsend (n.d.) further suggests that male partners of women frequently have space that can be considered as their own personal territory in the form of the garden, a garage, den, or study; a space where they have the freedom to do as they choose. Women, as housewives, rarely have defined personal space, such as personal space in their part of the bedroom. The kitchen may be defined as a 'woman's place' because of its ties with domesticity, although in many homes it is also a 'family space' and a workplace. And because 'home' is characterised by space gendering, the introduction of technologies, and in particular of Telecare, seems to be gendered, too. There is a vast body of literature which has investigated the relationship between technology and gender. It is important to state that I am not aiming at presenting a complete overview of the different bodies of research with a gendered technology focus, as this would go beyond the scope of my research. Nevertheless, Livingstone's (1992, p. 117) 'gendered talk about technologies' needs to be acknowledged. Although Livingstone's (1992) claim about domestic technologies which might have been used differently by husband and wife and hence would often be understood differently, appears to be quite outdated, it cannot be denied that gendering is a feature of technology. Lie's discourses of 'gender symbols which might indicate a dichotomous categorisation of male and female' (Lie, 1996, p. 204) have been employed to highlight how technology embodies a number of different meanings that may incorporate different attributes to the users, such as the attribute of force when holding a weapon. More recently, there has been a shift in the conceptualisation of women's relation to technology. Oudshoorn and Pinch (2003) suggest that while in the early feminist literature, women's relation to technology had been conceptualized predominantly in terms of victims of technology, in the last two decades (now three - editor's note) this

body of research has underscored women's active role in the appropriation of technology.

Drawing from STS scholars, I agree with feminist scholars who identify healthcare as a sector characterized by gendered practices. In this regard, Oudshoorn (2011) claims that the healthcare sector shows a gendered segregation of labour in which men still dominate the higher management positions. By virtue of this situation, Oudshoorn (*ibid.*) wonders 'whether and how the new category of Telecare workers challenges or reinforces this gendered hierarchy in healthcare' and how the displacement of healthcare from the clinic to the home shapes gender divisions of care work in households'. These reflections shed light on the complexity of the significance of place in which 'care' is delivered but also on notions of power relationships in 'home', 'care' and technology.

2.10 Conclusion

This chapter provided a critical understanding of the ageing population and of 'Ageing in Place', that is growing older in one's home in spite of being frail and vulnerable. Meanings of 'home' were unravelled using a lifespan perspective, which highlighted how the meanings of 'home' evolve in older age. The literature review showed how 'home' may also have negative connotations. For example, remaining at home can develop tensions between older people and their family carers, or can be burdensome or unsafe. 'Home' can also be a place of abuse for older people. Then, Telecare as part of Ageing in Place solution as suggested by policymakers, who understood the adoption of Telecare as cost-saving solution to face the increasing costs of an exponentially older population, has been discussed. On one hand, quantitative studies, such as the Whole System Demonstrators, which aimed at demonstrating the cost-effectiveness of Telecare, were not conclusive. On the other hand, a body of critical studies explored issues related to the use of Telecare, such as the potential decrease in social contact, the risk of being continuously monitored and possible ethical implications, the decrease of independence and individual choice, and issues of stigma triggered by the use of Telecare. These studies allowed me to raise the question of whether the adoption of Telecare was the best solution for the challenging issues of an ageing population.

After having acknowledged that thinking about Telecare involves in the first place thinking about care and how it is understood, I developed a number of sections in which I discussed ethics of care, relationalities and networks of care and how relationalities relate to gerontology. I also discussed how ‘care’, ‘home’ and Telecare intertwine and how these three are linked with gendered practices. The next chapter will discuss technology and social context, with particular attention to the Social Shaping of Technology (SST) theory from which the domestication framework, the theoretical approach employed in this study, was developed.

Chapter Three

The domestication of technology theory and critical debates

By domestication I mean something quite akin to the domestication of the wild animal: that is a process by which such an animal is accustomed to 'to live under the care and near the habitations of a man', a process of taming or bringing under control, a process of making or settling as a 'member of the household'; to cause to be at home; to naturalise. (Silverstone, 1994, p. 83)

3.1 Introduction

This chapter will provide an in-depth analysis of the theoretical framework I have used in my study: the domestication of technology theory. Domestication theory sits at the intersection of media studies and the branch of science and technology studies (STS) known as the Social Shaping of Technology (SST). It was developed by Silverstone to investigate how new media technologies are appropriated and used by households (Silverstone *et al.*, 1992) but has since been used to explore this 'domestication' process for a range of other technologies (Haddon, 2011). By using the domestication theory, I am aiming to bring a deeper understanding of technology issues to social gerontologists and trying to get them to think more critically about technology. In fact, I identified a gap in the understanding of the relation between older users and technology, particularly Telecare. 'Domestication' will allow me to explore in an everyday context (older peoples' homes) the factors which shape the 'domestication' of Telecare. In the next section I will discuss the origins and uses of domestication theory and show how and why it was selected as an appropriate framework within which to explore older people's adoption and use of Telecare.

3.2 The domestication of technology theory and its approach in media studies

The domestication of technology theory (combining science and technology studies and

media studies) describes the processes by which a new technology is ‘tamed’ or appropriated by its users and was initially developed to help understand the adoption of new media technologies into the home (Silverstone *et al.*, 1992). In order to understand the adoption of new media technologies, Silverstone *et al.* conceptualised ICTs such as television, telephones, videos and computers as ‘objects’ using the domestication theory. Silverstone was a leading cultural studies scholar fascinated by technology, McLuhan, and medium theory. He was also influenced by de Certeau (1988) and his book *The Practices of Everyday Life*. Silverstone believed that de Certeau’s reflections on the practices of everyday life provided an interesting and important starting point for the analysis of the dynamics of television in contemporary society (Silverstone, 1989, p. 92). Silverstone’s interest in television, and in particular for television as a domestic medium, was revisited a few years later in *Television and everyday life* (1994). In this book, meaningful concepts such as households, homes and families, and their cultural and historical difference (Silverstone, 1994, p. 43), were discussed. Before going any further, I would like to explain that the reason that led me to consider the intellectual and research-oriented path undertaken by Silverstone following his analysis of the domestication theory is substantial. In this respect, the knowledge of his above-mentioned work on television, technology and daily life adds significant insight into understanding how the domestication of technology might be applied in the context of Telecare.

As Berker, Hartmann, Punie and Ward (2006) observe, domestication literally refers to the taming of a wild animal. At a metaphorical level, a domestication process can be observed when users, in a variety of environments, are confronted with new technologies. Thus, in the same way that we house-train a pet in order to integrate it into the family, ‘technologies have to be integrated into the structures, daily routines and values of users and their environments’ (Berker *et al.*, 2006, p. 2). Clearly, these technologies are not only objects: they are media and have an impact on a household. They also provide, both actively and passively, links between households and members of households, leaving the world beyond their front door (or not). In fact, they are ‘doubly articulated’⁸ into public and private cultures as they are located in the domestic

⁸ Double articulation ‘refers to the ways in which information and communication technologies, uniquely, are the means (the media) whereby public and private meanings are mutually negotiated; as well as being the products themselves, through consumption, of such negotiations of meanings’ (Silverstone *et al.*, 1992, p. 28).

sphere while at the same time being part of a wider environment of work and leisure. Silverstone *et al.* (1992) consider households as part of a transactional system of economic and social relations within the more objective economy and society of the public sphere. Within the household, commodities such as ICTs are appropriated into the domestic culture, and through that appropriation are incorporated and re-described in different terms, according to the household's own values and interests. The household is understood in this theory as a 'moral economy', a concept developed by historian E.P. Thompson (1971). The concept derives from Thompsons' treatment of bread riots in eighteenth-century Britain. Fundamentally, English peasants' riots were generally peaceable acts that had the purpose to 'set the price' of essential goods in the market. According to Silverstone *et al.*, 'the household is a *moral economy* because the economic activities of its members within the household and in the wider world of work, leisure and shopping are defined and informed by a set of cognitions, evaluations and aesthetics, which are themselves defined and informed by the histories, biographies and politics of the household and its members' (Silverstone *et al.*, 1992, p.18). The household is a system which is dynamically involved in the public world of production and exchange of commodities⁹ and meanings. Ward defines commodities as 'being given meaning according to the values of the home', which are 'redefined, shaped and ascribed a function to adhere to the home's established routines, patterns and social hierarchy of gendered and aged roles' (Ward, 2006, p. 148). Once they are introduced into the household, commodities are shaped according to the appearance and constitution of the home to create a 'meaningful economy', which is an expression of the values of the home (Ward, 2006). The moral economy¹⁰ of the household is therefore grounded in the creation of the home, which may or may not be a family home but which will certainly be gendered, and which itself is multiply structured, both spatially and temporally' (Giddens, 1984, p. 119, cited in Silverstone *et al.*, 1992, p.19).

In Chapter Two, I discussed the literature on care ethics. It seems therefore appropriate to link Silverstone's moral economy to care as a 'moral practice'. Scholars such as

⁹ Traditionally, commodities were considered to be the raw materials (energy, metals, and agricultural products) used by human beings to create a livable world. More recently, the definition has expanded to include new types of commodities, such as mobile phone minutes and Internet bandwidth. With regard to this study, 'commodity' has been employed to define Information and Communication Technologies (ICTs).

¹⁰ 'The moral economy refers to the capacity of households actively to engage with the products and meanings of the public, formal, commodity- and individual-based economy and to produce something of their own as a result of that engagement' (Silverstone, 1994, pp. 45-46).

Barnes (2012) suggest that ‘an ethic of care argues that we need to focus on the particularities of day to day interactions and understand the need for care to be given and received in particular circumstances in order to enable human flourishing’ (Barnes, 2012, p. 17) adding that ‘in order to understand care we must look at the practices of care or the activities that comprise care in concrete situations, not just the principles that should guide these’ (*ibid.*). My understanding of these claims is that ‘care’ needs require practical applications into day to day interactions. Thus, just as the household, whose ‘moral economy’ is embodied in the everyday life’s activities of the household members, the ‘moral economy’ of care, with its ‘work of making moral judgments about the best thing to do in often difficult circumstances’ (Ward and Gahagan, 2010, cited in Barnes, 2012, p. 18) seems to be embodied in older people’s domesticities. After all, the *appropriation* of Telecare involves deciding what is best for older individuals who need to be cared for in their particular circumstances. As already mentioned, households are conceived as part of a transactional system of economic and social relations within the economy and society of the public sphere. One aspect that differentiates this study from others which used the domestication of technology theoretical framework is the suggestion that even the Telecare provider might be considered as having its own ‘moral economy’. This ‘moral economy’ can be translated into the house. The provider, in fact, has its own routines and values. It has a hierarchy and has routines such as the monitoring centre procedures. It also has its values, among which include the respect of anonymity and confidentiality of its customers’ data, and that of providing customers continuous support at a distance, both physically and psychologically.

According to Silverstone *et al.* (1992), the dynamics of the household’s moral economy, considered in the transaction systems of commodity and media relationships, is characterised by four non-discrete phases, which are: *appropriation*, *objectification*, *incorporation* and *conversion*. Borrowing the metaphor of the domestication of a pet again to explain how technologies are integrated into a household, the introduction of technologies such as televisions and personal computers needs to cross different stages before becoming part of the household and successfully integrated. However, just as the domestication of a pet may not be complete and the pet can still be disobedient, technologies can be incompletely domesticated, or completely integrated into the household. Moreover, members of a household may not feel at ease with the

introduction, for example, of a new personal computer, and in this case, the domestication has not been fully achieved. In this regard, my study, which aims at examining the ‘domestication’ of Telecare, might suggest a difference in the way of ‘introducing’, and consequently ‘appropriating’, technology in the household. And whereas a new PC or new TV equipment enters the household on a voluntary basis, meaning that the household (at least one member of the household, if more than one) aims at owning that particular device, Telecare technology makes its appearance mostly on the basis of a ‘health-related need’. The introduction of Telecare is triggered by events such as a serious fall or processes, such as a gradual deterioration of health. The initial phase in which technology makes its way to the household has or might have an impact on the first stage of the domestication process - *appropriation*.

An object – a technology, a message – is appropriated at the point at which it is sold, at the point at which it leaves the world of the commodity and the generalised system of equivalence and exchange, and is taken possession of by an individual or household and owned. It is through their appropriation that artefacts become authentic (commodities become objects) and achieve significance. (Silverstone et al., 1992, p. 21)

In his study on the domestication of ICT’s, Haddon (2011) sees *appropriation* as the acquisition of those negotiations and considerations that led to the introduction of technologies. In this regard, ICTs make possible ways of working that are profoundly different from those that dominated mid-twentieth century workplaces. For example, the idea that some spaces and times are used for work and other for non-work is already being swept away (Felstead, Walters and Jewson, 2005, p. 5). Ward (2006), in her research on running businesses from home, defines *appropriation* as the phase in which ‘the good is purchased’ (Ward, 2006, p. 151). These definitions show how the different stages of ‘domestication’ are not so clear-cut. On the contrary, they might be ambiguous.

In the second phase, *objectification*, the artefact is physically arranged and displayed, and the values, the aesthetic and the cognitive universe of the object are also objectified. Drawing from Csikszentmihalyi and Rochberg-Halton (1981), Silverstone and colleagues have written:

If appropriation reveals itself in possession and ownership, objectification reveals itself in display and in turn reveals the classificatory principles that inform a household's sense of its self and its place in the world. (Silverstone et al., 1992, p. 22)

Haddon (2011) provides an in-depth description of *objectification*, claiming that this second stage is attentive to how the technologies are scheduled in people's habits and therefore time structures. Ward (2006) sees the process of *objectification* as the active shaping of the object (technologies) to mingle with the physicality of the household. In her study of organization of work and leisure of a group of home-workers, having analysed the priority of those working at home and discovered that it was the negotiation of physical spaces, she remarked that the boundary between *objectification* and *incorporation* was ambiguous, meaning that domestication is not a straightforward process, but often a conflictual and dynamic one (see Ward, 2006, pp. 155-156). The domestic organisation of work and leisure was decided by Siobhan, who divided the house into 'work' and 'leisure' zones and designed a strategy relating to the financial organisation and telephone bill payment. She accepted that work email frequently infiltrated the domestic arena, but in order to maintain certain parts of the house as symbols of 'home' she installed two phone lines, where the upstairs line in the study room was used for work, while the downstairs connection in the living room was dedicated to leisure and entertainment. In this way, Siobhan could monitor the payment situation (see Ward, 2006, p. 157). Ward claims that the stages of domestication are not necessarily discrete or linear (Ward, 2006). On the contrary, participants confused or rendered vague the stages of *incorporation* and *objectification*, thus indicating that the process of domestication is not smooth and precise. After being objectified, the artefact is incorporated, or used.

Whereas a concern with objectification principally identifies the spatial aspects of the moral economy, incorporation focuses on the temporalities. (Silverstone et al., 1992, p. 24)

The above definition makes clear that *incorporation* is 'bounded in time'. Drawing from research on television (Chaney, 1986; Scannell, 1988; Paterson, 1980; Modleski, 1984, as cited in Silverstone et al., 1992, *ibid.*), Silverstone and fellow researchers show that television broadcasts provide a framework both for the household's investment in the

sequencing of public time and for the sustaining of domestic routines through the broadcast schedules. Furthermore, *incorporation* involves the moral economy of the household. For example, teenagers will keep their stereos in their bedrooms and create ‘a wall of sound’ (Silverstone *et al.*, 1992, p. 25). In Haddon’s (2011) words, *incorporation* refers to how the object (ICTs, in this case) were spatially located in the home, while Ward (2006) sees *incorporation* as ‘the process of ascribing meaning within household rituals and rules’ (Ward, 2006, p. 151). The fourth and final phase is *conversion*, which describes the relationship between the household and the world beyond it. To better explain this concept, television gives rise to much of the gossip of everyday life. The content of television programmes or the morality of characters characterises many everyday talks. Thus, information and communication technologies are ‘doubly articulated’ (Silverstone *et al.*, 1992), in that they facilitate *conversion* (and conversation) and at the same time being the objects of *conversion* (and conversation). As Silverstone and colleagues have written:

Whereas objectification and incorporation are, principally, aspects of the internal structure of the household, conversion, like appropriation, defines the relationship between the household and the outside world – the boundary across which artefacts and meanings, texts and technologies, pass as the household defines and claims for itself and its members a status in neighborhood, work and peer groups in the ‘wider society’. (Silverstone *et al.*, 1992, p. 25)

The *conversion* process deals with the considerations of these technologies as part of our own identities and how we present ourselves to other, for example, in how we talk about and display these technologies (Haddon, 2013). Haddon (2011) considers the process of *conversion* on how objects (ICTs) are mobilised as part of our identities and how we talk about and display these technologies. For Ward (2006), *conversion* is the process in which technology is given meaning not only within the boundaries of the household but also in relation to the outside world. In this last phase, the object carries symbolic values about the home beyond the boundaries of the household. The gradual domestication of a range of media has a long history and nowadays many of the media studied by Silverstone *et al.* (1992) have undergone substantial modifications. For example, fixed telephones have to a large extent been replaced by mobile telephones and then smartphones, which are constantly connected with the outside world. The

media, from being ‘domestic’, have escaped their traditional location in the home, to move into the world beyond the boundaries of the households. The same phenomenon can be observed for the TV. Morley (2006) observes that ‘TV began as a public medium, watched collectively in public places, and only gradually moved into the home, and then into its further interstices’ (Morley, 2006, p. 33). As a consequence of this development, the relationships between public and private spaces are changing. Mattelart (1995) claims that public space has changed due to the increasing presence of advertising. In the worlds of Morley (2006), technologies such as TVs have now escaped from the household, to ‘re-colonize’ the public sphere. Thus, while the home has become quite ‘domesticated’, the process of domestication in itself is now on the verge of being dislocated from the private sphere of the home to the outside world.

In his study of ICTs in the urban Chinese household, Lim (2006) conducted in-depth interviews with twenty nuclear families in Beijing and Shanghai, two economically developed Chinese cities. This qualitative study was based on the four non-discrete phases – *appropriation*, *objectification*, *incorporation* and *conversion* – developed by Silverstone and Hirsch (1992) and the four key constructs – *necessity*, *control*, *functionality* and *sociality* – used by Livingstone (1992), who applied the personal construct theory, a theory of personality and cognition developed by the American psychologist George Kelly in the ‘50s which focused on the ways in which people actively construct their phenomenological world. All the families interviewed by Lim (2006) owned televisions, mobile telephones, hi-fi stereos and VCD/DVD players. Most of them also owned PCs, digital cameras and portable music devices and ICT use had been incorporated into their everyday life. Most of the technological devices, except mobile phones or portable music devices, were located in communal areas of the house such as living rooms and studies or in the parents’ bedrooms. Media were mainly used for recreational purposes, but mobile telephones were employed for both work related and social communication. Interestingly, all the interviewees showed a huge need for ICTs – not only the television but the PC, digital camera, and *fuduji* (a machine which enables users to pronounce English words in a perfect way) were all considered indispensable (Lim, 2006, p.192). Hence the ICTs had been deeply ‘domesticated’. With regard to the localisation of the ICTs, it was noted that Chinese apartments are very small. As a consequence of this, Lim’s subjects who were parents gave priority to their child’s educational needs. The child, who was the only child of the families

interviewed, needed a quiet space in order to study and relax, therefore the television was located in the living room. However, sometimes media were placed as to reconfigure the apartment into 'personal spheres', which set them apart from the rest of the family (Lim, 2006, p. 193). Significantly, ICTs acted as intermediaries, improving communication within the family of three people, the consequence of China's one-child policy. This policy gave rise to the importance of ICTs as meaningful tools for the children's social advancement (Lim, 2006, p. 196). ICTs were used to communicate with the outside world, building and maintaining an important network of contacts. Indeed, ICTs clearly showed a strong symbolic value, as they facilitated social advancement.

Another example of a study conducted using the domestication framework is the qualitative study from Vuojärvi, Isomäki and Hynes (2010), who, using the grounded theory, interviewed twenty students of the University of Lapland, Finland, identified and selected through a quantitative survey. Students were interviewed about the 'domestication' of their personal laptops at the beginning of studies on a wireless campus. According to Vuojärvi *et al.* (2010), successful domestication, considered as the comfort of use and IT capability – in other words the ability to use the laptop effectively and appropriately to communicate, solve problems and work at the university and outside – allowed the artefact to become more than just a tool for learning. In fact, the laptop also becomes an integral part of an individual's existing media environment. This article is very relevant as it clearly explains why a common 'one size fits all' approach to student engagement in ICT provision should be rejected. On the contrary, students are required to be familiar and confident with their tools, and in order to facilitate this, training should be organised by the university. One interesting claim of Vuojärvi *et al.* (2010) is that novice ICT students – especially women, regardless of their level of ICT skills – tend to rely on social support when they need hands-on assistance with their laptops. Their conclusion is that a help desk system or forms of tutoring might be arranged.

A different interpretation of the notion of domestication, or of the concept of 'domestic', can be found in Habib and Cornford (2002) who, in their ethnographic study, extensively interviewed seven families in order to explore family life with computers. These scholars remarked that, in spite of how 'domestic' might prompt

‘feminine notions of loyalty and attachment as well as docility and gentleness’ (Habib and Cornford, 2002, p. 160), they did not find any significant gender differences regarding the ‘domestic’. According to their study, the domestic is ‘a privileged physical and symbolic space of intimacy between people, where expressions of ideas, beliefs, prejudices and emotion are (relatively) unconstrained’ (Habib and Cornford, *ibid.*, p. 171). Habib and Cornford (2002) instead identify different ways of domesticating the computer such as previous formative experiences with computers inside and outside the home; and beliefs regarding the qualities and potential of the computer as domestic, undomestic or a domesticable resource. Furthermore, both these experiences and beliefs might be gendered. More specifically, in their study, the individual who uses the computer the most is the one who purchased the computer from a previous workplace. Or, to give another example, the one who believes that the computer is meant to be used by children as an educational tool or as a professional tool (see Habib and Cornford, 2002 p. 165).

Lehtonen (2003) has another view of the concept of domestication: for him, domestication is a useful tool for describing practices in which people create ‘technoscapes’, a term adopted by the Indian anthropologist, Appadurai (1996), in order to describe the movement of technologies across previously relatively closed borders. In his study about the domestication of technologies as a set of ‘trials’, Lehtonen (2003) analyses the domestication of technologies by following different phases of adoption, which are considered as a set of trials in which the capabilities of humans and non-humans are tested in many ways. These phases of adoption were discussed during five interviews centred on digital technologies conducted with fourteen people in Finland between 2000 and 2003. Participants (aged 30-60), were interviewed about their use of digital and other technologies, the aim of which was to understand the way digital technologies had been adopted in everyday life. What is relevant in this study is the analysis of the different phases of adoption of technological devices (digital television, wireless application protocol mobile phone, mobile telephones, PC and so on). According to Lehtonen (2003), before of the actual acquisition of a technological device, there is a period in which interest in the object arouses, which involves the collective assessment of the ‘need’ for an object. This is followed by consultations with friends or ‘warm experts’ – people who possess a certain level of informal expertise and therefore can provide advice on the technological device ‘needed’ by the potential user.

Then, when the objects have been bought, the piece of technology starts its life with pre-existing technological and human relationships and eventually becomes part of everyday life. Ultimately, the device may become out-of-date and be replaced by a newer version. In fact, people have become more and more accustomed to the fact that such devices will become obsolete due to changes in technology. For example, at the time in which Lehtonen's study was written, a mobile telephone's average lifespan was approximately two and a half years. Lehtonen and Silverstone both show how technological artefacts follow a process of adoption and integration in households. The language of 'trials', used by Lehtonen, derives from Bruno Latour's studies on science and technology. According to Latour, trials are 'experiments of various sorts in which new performances are elicited' (Latour, 1999, p. 311, cited in Lehtonen, 2003). Latour, one of the principal exponents of the Actor-Network Theory (ANT), believes that an actor (human or non-human) is defined by what it does. Actors show what they do in trials, where human beings and technologies influence each other, therefore acquiring new competences and qualities (Lehtonen, 2003, see pp. 364-365). Lehtonen uses domestication theory in a very different way from Silverstone *et al.* (1992). As previously mentioned, Lehtonen (2003) defines the concept of 'domestication' as a tool for describing practices in which people create technoscapes, by adopting new technologies. On this view, domestication is a process of learning; in this process, there is a reciprocal influence between things and people. Another theme of domestication according to Lehtonen (2003) is the fact that, in spite of the advancing of domestic technology, technology cannot become a success – or be perceived as a 'need' – unless it passes all the tests and trials that potential users put it through. The higher the number of attachments (the interest for an artefact triggered by encountering marketing and newspapers articles that deal with the artefact, and practices that are potentially connected with a technology and the better it fulfils the promise associated with it), the more likely a technology will be seen as something necessary. Thus, the technology comes into use when it becomes of interest when it is 'necessary'. The process of domestication is seen more like a learning process, and the four phases of domestication (*appropriation, objectification, incorporation and conversion*) are replaced by a different terminology: the development of a 'need' and the virtue of waiting; the mobilization of friends as 'warm experts'; the adjustment of technologies, homes, and practices; the continued education, in the sense of understanding of a product; and the potential use, storage and disposal. The adoption phase, according to Lehtonen (2003),

is a 'blackbox'. The previous phases or 'trials' lead to the adoption, but the adoption itself remains a mystery. Seemingly, Lethonen's approach to the domestication of technology, by using different terminology (to Silverstone), eventually leads to a different understanding of domestication and might not be useful to the extent of my research. However, the avenue followed by Lethonen presents interesting aspects. In particular, he argues that once adopted, technological artefacts, such as mobile telephones, become part of everyday life. This feature is similar to Silverstone's process of *incorporation*. However, and this point diversifies Lehtonen's approach, in order for a technological object to be 'bought' and eventually 'domesticated', the role of friends, acting as 'warm experts', is needed. This point is particularly interesting and helpful in understanding the domestication of Telecare. Although the domestication theory does not take into consideration the role of informal 'technology' experts, I found that this understanding might be applied in an everyday life context, where those people who are willing to buy a technological device but might be uncertain with respect to which particular item to buy, previously discuss the different options available with more 'expert' friends.

In *Domestication of Technology Theory: Conceptual Framework of User Experience*, Lee *et al.* (2009) investigate older adults' experiences with mobile phones using existential phenomenology-based interviews drawing on the domestication of technology theory. Different issues were investigated: the experience when buying a phone, the experience in learning how to use a phone, the experience with the current mobile phone, the role that this object plays in everyday life and the desires for future mobile phones. Results showed that the domestication of technology theory could be used as a framework for describing and understanding user experience. In their case-study about the domestication of mobile telephones. Lee *et al.* (2009) describe and analyse the user experience (UX) through the domestication of technology theory. In particular, the four phases of the domestication theory are used to explain the acquisition and user experience of mobile telephones. In their study, the *appropriation* phase includes the reasons for acquiring the telephone but also the lack of information during acquisition, while the *objectification* phase is characterised by the gender difference in user behaviours. In the *incorporation* phase, the design errors related to sensory-cognitive ageing and the limitation of instructions are considered. The last phase, *conversion*, is characterised by the personalised adoption of the mobile

telephone. In their study's conclusion, Lee *et al.* (2009) argue that the domestication framework proves very useful to explain the user experience.

Domestication theory has also examined issues of non-adoption of technology. Different studies have explored the different reasons behind the decision not to adopt, such as the past generational experiences of people who constituted the young elderly in 1990s Britain. These experiences helped to shape views of many of this generation that some technologies were not for them (Haddon and Silverstone, 1996). Other reasons for non-adoption were financial constraints and other pressures experienced by poor single parents, such that some ICTs such as personal computers could not even be considered (Haddon and Silverstone, 1996, cited in Haddon, 2007). Even those actually interested in ICTs such as the Internet have nevertheless failed to adopt because they did not have the support of appropriate social networks. Another example of the use of domestication theory to understand the non-adoption of technology is found in Hynes and Rommes' (2006) two case studies about the experiences of participants on introductory computer and internet courses in the Netherlands and Ireland. The courses were designed in order to reach disadvantaged users such as older people, those from ethnic minorities, the unemployed and single parents. The authors claim that domestication can be 'problematic, reversed, stopped altogether, or influenced by factors such as the availability of resources or the presence of a course' (Hynes and Rommes, 2006, p. 126). Of interest is the adoption of the four different phases of domestication: *appropriation*, *objectification*, *incorporation* and *conversion*. The first phase (*appropriation*) is associated with attending the course and getting to know the computers, while the second and third phases (*objectification* and *incorporation*) are linked with giving the computer a physical location and a timetable to use (Hynes and Rommes, 2006, pp. 132-139). However, not all participants incorporated the use of computers, in spite of having internet access at home. Examples are Esther and Ine, two women in their '60s from Amsterdam, who had each bought a computer with their partners. Esther ended up in leaving the computer in her partner's house, as she never used it. A year after the course, Ine did not use the computer but watched her husband using it (Hynes and Rommes, 2006, pp. 138-139). What can be inferred from the analysis of these case studies is that the process of domestication does not always 'conclude' meaning that not all the domestication phases are achieved. One of the reasons for this might be the loss of interest in the technology. However, Hynes and

Rommes (2006) consider the use of the domestication framework as a suitable tool to achieve insights for course developers, in the sense of how to support disadvantaged users in their technology domestication process.

Issues of non-adoption or resistance to adoption of technology are very relevant for the present study. The process of domestication does not always run smoothly, and it will be important to investigate the full range of user experiences with Telecare and how they adopt and integrate Telecare into their homes in different ways and to varying degrees. As previously mentioned, in many domestication studies the household is the unit of analysis. In that case, to understand both adoption and use, negotiation and interaction between household members and the politics of the home beyond conflicts and tensions on the one hand and the formation of areas of common consent on the other, have to be considered. Any understandings about the use of ICTs that emerge from this process usually have some involvement with what people do with the technologies and services. In other words, individuals do act, but not only within the constraints of domestic but also within the constraints of social contexts. In this respect, Ward (2006) observes how working at home can disrupt the balance of household routine and value system. Once the computer has been used for working from home, the boundaries between work and home become very difficult to distinguish. Technology enters the private space and disrupts it. In the words of Michael, a participant of Ward's study, *'work and home overlap. I might be sitting up at my desk upstairs – I might be dealing with domestic matters, but people do that at work.'* (Ward, 2006, p. 154) there is a close relationship between work and home. More specifically, there are time constraints, such as people's longer term social commitments, which limit not just the amount of 'free' time available, but also how that 'free' time is organised. For example, the fragmentation of that 'free' time might influence what can be accomplished. Also, it has to be considered how people experience time constraints and the 'quality' of their time (Haddon, 2004, cited in Haddon, 2007). Other limitations to the adoption of ICTs might be related to available space. In fact, ICTs can be located in some places instead of others for aesthetic reasons. Furthermore, the choice may relate to the household members' relations. More concretely, telephone, TVs, or PCs are placed in 'public' place in the home, where parents can look over their children's usage (Haddon, 2007).

In summary, the domestication approach offers a framework which has been practically applied to researching how different social groups integrate and use different technologies within the context of the home. Some studies used this approach to explore ICT use among older people. Haddon and Silverstone (1996) conducted a research project about 20 young elderly households equipped with television, radio and a telephone. The age range varied between 58 and 75 and the majority were aged between 65 and 73. In the results, the scholars underline the necessity of considering the peculiarity of economic, political and social experience in order to understand the unique character of the experience of media and information technology. Remarkably, in spite of having been written almost twenty years ago, the different technology-related issues discussed are still present today. For example, the importance of ‘early memories’. According to Haddon and Silverstone (1996, p. 49), ‘most of [their] participants did not have a phone at home when they were younger’. This passage is so important in how it pinpoints the relationship between having had the opportunity to appropriate a particular kind of technology in the early ages of your own life and the use of this technology in later years. There is a significant link between belonging to a certain age cohort and using the telephone, television, or home computer. The telephone, for example, was acquired for professional reasons by a family in 1950 so as to be able to reach and be reached by the enterprise in which a household member was a partner (Haddon and Silverstone, 1996). Another interesting annotation of this research relates to the experience of computers at work. As the young elderly did not belong to the computer generation, as office automation came into their job too late or not at all, the use of computers could be resisted by those who were close to retirement when the computer encroached on their job. Consequently, those who had not had any contact with computers at work or had tried to avoid them showed the least interest in acquiring a home computer. Haddon and Silverstone (1996) claim that ‘the innovation process – always social and always dependent on the capacity of end users to define their own relationship to a new technology – is a familiar one’ (Haddon and Silverstone, 1996, p. 92). Turning to the home computer, ‘older women are doubly excluded from computer technologies, which have been coded as the domain of both males and young people, and are less likely to have used computers in the workplace than either older men or younger women’ (Richardson *et al.*, 2005, cited in Buse, 2009, p. 1147).

Furthermore, 'older age groups are less likely to access the internet or computer in different locations, or to multi-task computing with other activities' (Buse, 2009, p. 1159). More recently, Buse claimed that 'the instrumental, functional approach of older people who used the internet as a 'tool' was also differentiated from that of younger people who used it more flexibly' (Buse, 2010, p. 999). Importantly, Buse suggests that 'technologies experienced early in the life course were more easily adopted and used 'naturally', whereas those that were entirely new were a struggle to learn and use. The participants described young people's ability to use computer technologies 'automatically' as acquired through early exposure, which supports the assertion that the 'generation gap' between 'young' and 'old' reflects different formative experiences more than differential capacities' (Buse, 2010, p. 1006). The previous 'diversion' to generational differences in the approach to technologies, including a small hint to possible gender issues in the 'appropriation' of technology, aimed at better understanding of the technology use in later life.

This section aimed to discuss a certain number of different examples of domestication studies, which applied Silverstone's theoretical approach to technology to ICTs, Telecare technologies and assistive devices. The literature review presented, which does not pretend to be exhaustive, suggested that 'domestication' could be applied in contexts which differ very much from each other. Also, 'domestication' as developed by Silverstone *et al.* (1992) can be challenged by suggesting a user-based model which makes sense of users' experiences (Hynes, 2007). In the next section how the domestication theory emerged from the Science and Technology Studies (STS) will be discussed.

3.3 The domestication theory as informed by Science and Technology Studies (STS)

The previous section focused on how 'domestication' could act as a framework to help understand the adoption of new media technologies. In the section that follows it will be argued that 'domestication' is also a conceptual framework of user experience, developed from the Social Shaping of Technology (SST) theoretical approach, in which the user has an active role in defining the nature, scope and functions of technology.

The domestication of technology theory is also a conceptual framework of the nature, scope and functions of technology user experiences, developed from the Social Shaping of Technology (SST) approach, in which the user has an active role in defining nature, scope and functions of the technology. In this respect, Mackay and Gillespie recognize the active role of the user of a given technology. The subjective, social appropriation of a technology is thus one key element of a technology – not just how it is used, but the meaning that use has for the user: a technology is not merely a physical object, it carries meaning’ (Mackay and Gillespie, 1992, p. 702). Furthermore, ‘domestication’ provides a potentially important theoretical framework for understanding technology use within everyday contexts, such as the home, which is what I am interested in studying. Before introducing the relevance of ‘domestication’ with regard to the user experience, which is one of the reasons that led me to choose this theoretical framework in my study, it is necessary to begin by defining what the SST theoretical approach is, where it comes from, and how some aspects of it became built into domestication theory.

First of all, the Social Shaping of Technology approach developed as a reaction to technological determinism (TD). The latter is a theory of society which considers technology as a separate sphere, developing itself independently of society, following its own autonomous logic, and then having ‘effects’ on society (MacKenzie and Wajcman, 1999). TD is seen as autonomous with respect to society; it shapes society, but it exists outside society, while at the same time influencing social change. In certain varieties of technological determinism, the technology is seen as the most significant determinant of the nature of a society (Mackay and Gillespie, 1992). Technology is indeed an indispensable aspect of the human condition (MacKenzie and Wajcman, 1999). However, technological determinism is unsatisfactory because technologies do not, in practice, follow some prearranged course of development. For example, research and development decisions are relevant with respect to the sorts of technologies which are developed. Tackling the unresolved issues created by Technological Determinism, Mackay and Gillespie (1992) claim that the Social Shaping of Technology approach highlights the social forces that create particular technologies. In fact, sociologists of technology consider not only the effects of technologies, but also those created by ‘processes of choice and negotiation between ‘relevant social groups’ (Mackay and Gillespie, 1992, p. 686). Likewise, in contrast with technological determinism, ‘The Social Shaping of Technology’ approach (MacKenzie and Wajcman, 1999) focuses

attention on the social context of technological development, implementation and use. Society and technology are closely linked each to each other and because of this, technology cannot be intended as an autonomous sphere. Sharing the same view, Williams and Edge (1996) argue that a variety of scholars find a meeting point in the SST project, united by an insistence that the 'black-box' of technology must be opened to allow the socio-economic patterns embedded in both the *content of technologies* and the *processes of innovation* to be exposed and analysed (MacKenzie and Wajcman, 1985; Bijker and Law, 1992). The Social Shaping of Technology studies show that technology does not develop according to an inner technical logic but is instead a social product, shaped by the conditions of its creation and use. Every stage in the generation and implementation of new technologies involves a set of choices between different technical options. The content of technology is affected not only by technical considerations but also by social factors. Williams and Edge (1996) emphasise that 'choices' (though not necessarily conscious choices) are fundamental in both the design of individual artefacts and systems, and in the *trajectory* of innovation programmes. This is a central concept. If technology does not emerge from the development of a predetermined logic or a single determinant, different routes are available, and might lead to different technological outcomes. Crucially, these decisions could have diverse implications for society and for particular social groups. In this way, social shaping theorists see the relationship between technology and society as one of 'mutual shaping'.

Alongside SST, the Social Construction of Technology framework (SCOT) and Actor-Network Theory (ANT), also criticise Technological Determinism as well as the linear model of innovation, an early model of innovation that suggests technical change happens linearly from Invention to Innovation to Diffusion (Rogers, 1983). The Social Construction of Technology theory emphasises the social character of technologies and, in particular, their 'interpretative flexibility'¹¹, drawing attention to how technologies are shaped in use. Kline and Pinch (1996) claim that "interpretative flexibility" distinguishes SCOT from other social constructivist approaches in the history of technology. In fact, SCOT emphasises artefacts and their working particularly as subject to radically different interpretations that are compatible with social groups. SCOT

¹¹ 'Interpretative flexibility' means that each technological object has different meanings and interpretations for each of various groups.

focuses attention upon what counts as a practicable working artefact, and notably in what counts as a satisfactory test of that artefact. Different case studies have shown how social groups have tested feasibility and test results together. Such studies highlight the dangers of taking for granted that a technical domain might predetermine similar meanings of an artefact for all space, times and communities. According to Wajcman (2000), when exploring the gendered relations of technology, 'the concept of the "interpretative flexibility" of technology is widely seen as SCOT's most useful addition to feminist debates' (Wajcman, 2000, p. 450). More clearly, feminist scholars argue that women's absence from spheres of influence, such as science or engineering for example, is a relevant feature of gender power relations. Wajcman (2000) explains that interpretative flexibility refers to the way in which different groups of people involved with a technology can have very different understandings of its technical characteristics, thus users can radically alter the meanings and the use of technologies in an effective way. However, the problem with 'a primary focus on "relevant social groups"' in the process of technological development is how to take account of those actors who are routinely marginalised or excluded from a network' (Harding, S., 1991 and Star, 1991, cited in Wajcman, 2000). Thus, as women are usually absent from the 'relevant social groups' (Mackay and Gillespie, 1992, p. 686), there was a tendency to ignore the need for a gender analysis of the technology (Wajcman, 2000).

Kline and Pinch (1996) claim that the 'relevant social groups' play a role in the development of a technological artefact and share a meaning of the artefact. This meaning can then be used to explain particular developmental paths. Typical groups might include engineers, advertisers, consumers, and so on. Such groups are not static; newly emergent groups can also be identified. Although relevant social groups share a meaning of the artefact, they may of course share other properties of family resemblance, which also give them their group characteristic. The same artefact can mean different things to users from different social groups. For example, in the study of the development of the bicycle, for young men riding the bicycle for sporting uses the high-wheeler meant the "macho machine", as opposed to the meaning given to it by women and elderly men who wanted to use the bike for transport. For this latter group, as already mentioned, the high-wheeler was the "unsafe machine" (because of its habit of throwing people over the handle bars-known as "doing a header"). Such meanings can get embedded in new artefacts, and developmental paths can be traced which

reinforce this meaning (e.g., placing even larger wheels on bicycles to enable them to go even faster). ‘Interpretative flexibility’, however, does not continue forever. “Closure” and stabilisation occur, such that some artefacts appear to have fewer problems and increasingly become the dominant form of the technology. This, it should be noted, may not result in all rivals vanishing, and often two very different technologies can exist side by side (for example, jet planes and propeller planes). Also, this process of closure and stabilisation need not be final. New problems can emerge and interpretative flexibility may reappear. Interpretative flexibility distinguishes SCOT from other social constructivist approaches in the history of technology. SCOT draws attention to artefacts and their working particularly as subject to radically different interpretations that are compatible with social groups. This goes beyond saying that technology is merely embedded in human affairs.

Mackay and Gillespie (1992) affirm that within the sociology of technology there are two broad approaches to the social shaping of technology. The first of these focuses on the ‘micro’ and can be seen in terms of three schools: the ‘social constructivist’, the ‘systems’, and the ‘actor-network’ approaches. The social constructivist approach draws on the sociology of scientific knowledge. Here, scientific facts are seen as social phenomena; to social constructivists, technological artefacts are socially constructed. The systems approach stresses the importance of ‘seamless webs’ or synthesis, such as great technology systems, or utility networks. According to Hughes, (1986), ‘heterogeneous professionals, such as engineers, scientists and managers, and heterogeneous organisations – such as manufacturing firms, utilities and banks – become interacting entities in systems, or networks’ (Hughes, 1986, p. 282). An example of this is electric light and power systems, which have a central control and seamlessly interconnect different components such as physical artefacts, manufacturing firms, academic research, and investment banks, in order to contribute to a system output. The actor-network approach, which treats objects as part of social networks, does not agree with the categorisation of elements in a system or network. Callon, one of the most important ANT scholars, argues that these elements are permanently interacting, being associated and tested by the actors who innovate, thus there is no need to categorise or compartmentalise them (Callon, 1980, cited in Hughes, 1986). According to ANT, humans and non-humans (inanimate things and forces) are both actors who participate in systems or networks.

Technological systems are considered built by the ‘enrolment’ of both physical (human) and social (nonhuman) into networks, drawing heterogeneous components together (Hughes, 1986). Importantly, Latour (1992) asserts that networks between human and non-humans (artefacts) can exist only when the actors behave in a certain way, such as to remain connected. Thus, each actor performs certain tasks itself, and delegates other tasks to other actors. This network-dependent behaviour is called a script or a scenario. The script is partially determined by the delegations which an actor accepts and makes. Successful delegations delegate those tasks which are difficult and slow for certain actors to other actors for whom these tasks are quicker and easier. In this way scripts help translate programs of action of involved actors. Because of their scripts, artefacts invite certain actions (making them faster and easier) and discourage others. According to Akrich (1992), designers put initial scripts in the devices based on their ideas of who the ‘projected users’ or ‘virtual users’ will be. When users invent new practices and applications of new devices, they become in a way also designers, because they discover new ways to use the device. This way they help themselves to achieve their goals or program of actions. Furthermore, this is one way in which users influence the design process and can actually change the intended script of the device – so the real script of an artefact is not always that intended by designers. Thus, uncovering the actual script of an artefact is central in ANT.

Woolgar (1991) introduces the notion of the ‘user as reader to emphasise the interpretive flexibility of technological objects and the processes that delimit this flexibility’ (Oudshoorn and Pinch, 2003, p. 8). The phase in which technology is being tested is seen as a location in which to study the co-construction of technologies and users. Users are seen as represented by designers. This approach has been criticised by other scholars. For example, Mackay *et al.* (2000) suggest that ‘designers configure users, but designers in turn, are configured by both users and their own organisations’. More empirically, Mort *et al.* (2013) claim, in their study about home Telecare systems, that sometimes the user, in this case the older person, does not use the installed Telecare system in the prescribed way. For example, older people do not wear their pendant alarms, or use them only sometimes, or do not understand how Telecare devices function. One respondent, an older person who had had a serious fall, wore her pendant alarm but did not seem to understand how the falls monitor works, as it was ‘sitting next to her on the shelf, next to the china dogs, pills, little tin pillbox and books’ (Mort *et al.*,

2013, p. 806). With regard to the user, a few additional thoughts arise here. First of all, the user can assume either a passive role or an active or both. In fact, he/she is both passive when he/she undergoes technology and active when he/she makes comments and suggestions about the design and the function of the artefact. The user is also active when he/she eventually domesticates the technological device. Pols affirms that ‘domestication theory granted humans more agency: animals, plants and technologies do not determine our lives but come to live with us, in our homes, and on our terms. This approach informed the study of creative use practices where users put technologies to different uses than their designers intended’ (Pols, 2012, p. 18). However, new technologies such as Telecare are still far from domesticated. First, when new technology is ‘let out of its box’, individual devices are unleashed into the daily life practices to which they come to belong. This means that their actual effect and working are unpredictable. They can do all kinds of unexpected things. For instance, people domesticated the telephone quickly (see Pols, 2012, p. 18) because it supported a wide-ranging network of social relations and played a crucial role in community life, especially for women – from organising children’s relationships and church activities to alleviating the loneliness and boredom of rural life. Interestingly, its designers had actually conceived and intended the telephone to transmit the business conversations of American men¹². People domesticated the telephone, but differently than expected. Secondly, there is a process of mutual adaptation involving taming the devices, in the sense that users try to make them fit in with how they want to use them in practice. For example, few people use all the functions their personal computers provide; they just use the ones they need and know about. Thirdly, devices unleash the creativity of their users who quickly invent new applications. This happens, for instance, when physicists or chemists discover that drugs can be used for different purposes than those currently established (Pols, 2012, pp. 18-19). Pols (2012) also pointed out that technologies can be used for different scopes than those intended by their designers (see domestication of the telephone) and that users can ‘unleash their creativity’ with technologies. In this respect, technologies such as Telecare may allow end users to identify new functions, as the script of Telecare is fixed only at first. Users can accomplish different tasks than those originally expected, mostly aiming at maintaining peace of mind, safety and independence.

¹² For a detailed analysis of the domestication of the telephone, see Fischer, C. S., 1992. *America Calling: a Social History of the Telephone to 1940*. Berkeley: University of California Press.

In her book about Telecare technologies and the transformation of healthcare, Oudshoorn (2011) claims that, during the last twenty years, social studies of user-technology relationships have described how users have actually modified technical devices to suit their own goals. As a consequence, technologies' initial purposes have been changed by the users, who are therefore seen as active actors, and not as passive ones. However, she claims that patients are 'largely absent from the dominant discourses on Telecare technologies' (Oudshoorn, 2011, p. 145). Patients are seen as 'passive receivers', while healthcare professionals are seen as 'active senders'. Nurses, doctors, and professional carers 'do healthcare work' (Oudshoorn, 2011, p. 145), while patients 'receive' care. These claims, even if applied to patients suffering from cardiovascular diseases and not (only) to older people, might be suitable in helping me to answer one of my research questions, which is about the meaning and experience of care for older people and whether Telecare changes them. For example, in challenging the social construction that older people are 'passive' individuals that receive care.

3.4 Conclusion

This chapter has provided an in-depth analysis of the theoretical framework I used in my study – the domestication of technology theory. Domestication theory (combining media studies and Science and Technology Studies) describes the process by which a new technology is 'tamed' or appropriated by its users. I explored 'domestication' in two different sections: the first one was informed by Silverstone *et al.* (1992), who conceptualised ICTs such as television, telephones, videos, and computers as objects using the domestication theory. This approach considered the household as a moral economy, expressed by four non-discrete elements or phases: 1) *appropriation*, 2) *objectification*, 3) *incorporation*, and 4) *conversion* and investigated how users, confronted with new technologies, 'domesticated' them. The literature review then showed that technologies cannot (always) be completely 'domesticated' or integrated in the household's routine processes. Critical studies about domestication of technology theory helped me to apply the domestication framework to the study of Telecare that makes its appearance in the households on the basis of a 'health-related need'. In fact, in my study, Telecare entered older people's homes either following an individual triggering event, such as serious fall, or more commonly as a result of a process such as

a gradual deterioration of health or a long-term health condition. Silverstone's moral economy was then linked to care as a moral practice. As such, 'care' needs require practical applications into day to day interactions, characterised by which is the best form of care (according to their health needs) that can be provided to vulnerable and frail people.

The second section of the literature review was informed by the Social Shaping of Technology (SST) theoretical approach, in which the user is understood as having an active role in defining the nature, scope and functions of technology. These studies, some of which suggest that the process of domestication does not always run smoothly, helped me to raise questions about how Telecare can be 'domesticated' by a group of older living in their own homes and how Telecare intertwines with 'home' and 'care'. The following chapter will focus on the methodology I used. In particular, it will illustrate my research approach and my ontological and epistemological views. Then it will move to fieldwork, and different issues related to qualitative research.

Chapter Four

Methodology

4.1 Introduction

Using the domestication of technology theory, this study explores how a small group of older people have come to adopt Telecare in their homes and whether Telecare changes the meanings and experiences of ‘home’ and ‘care’. As such, it requires a qualitative approach. In this chapter, I make the case for symbolic interactionism as a way of understanding meanings and experiences of older people in an everyday context and situate this within a constructivist paradigm that sits between objectivism and subjectivism. In particular, my ontological position in relating to social objects and categories views them as socially constructed. Data collection was based on qualitative research tools, such as semi-structured interviews, observation and opportunistic conversations, which were considered as appropriate to my theoretical position and my ‘quasi-ethnographical’ approach. Data were then analysed using thematic analysis, a rich and flexible form of analysis, the use of which was informed by a significant body of literature, such as Braun and Clarke (2006), among others. It was considered appropriate in the research context and fit my broader methodological approach. Data management was mostly informed by Wolcott’s (1994) suggestion to make sense of data by following three steps: description, analysis and interpretation. Although the third step was not always achieved, due to the nature of data, this method proved to be useful as it enabled me to think carefully about my participants’ accounts and when in doubt, to reread their transcripts. This chapter will also discuss issues about the criteria in evaluating qualitative research. Ethical issues will then be examined, as they play a significant role in social research.

4.2 Research questions

This research looks at how a small group of older people, each living in their own home, came to adopt Telecare and how they understand and experience this technology as well as how Telecare changes the meanings and experiences of ‘home’ and ‘care’ for

them. In order to explore these ‘meanings’ and ‘experiences’ in an everyday context, I used the symbolic interactionism and I situated this within a constructivist paradigm which sits between objectivism and subjectivism. Constructionism affirms that social phenomena and their meanings are continually being accomplished by social actors ‘rather than something external to them and that totally constrains them’ (Bryman, 2016, p. 30). Furthermore, the categories employed by people in helping them to understand the world around them are in fact social products, as their meaning is constructed in and through interaction.

In order to fit this broader methodological approach, I chose to conduct qualitative research that allowed me to provide complex textual descriptions of how people experienced the given research issues. Qualitative research provides information about the ‘human’ side of an issue – beliefs, opinions, emotions, and social relationships. A quasi-ethnographically informed approach, meaning an approach which has some resemblance to ethnography, seemed appropriate to capturing meanings in an everyday context, and answer the following research questions:

- 1) How do older people come to adopt Telecare in their homes?
- 2) How does Telecare change the meanings and experiences of ‘home’ for older people?
- 3) How does Telecare change the meanings and experiences of ‘care’ for older people?

4.3 Constructionism and symbolic interactionism: how these theoretical perspectives informed my research

The constructionist approach distinguishes itself from both objectivism and subjectivism. While objectivism, an ontological position claiming that ‘meaning, and therefore meaningful reality, exists as such apart from the operation of any consciousness’ (Crotty, 1998), implies that knowledge and experience confront us as external facts that are beyond our reach or influence (Bryman, 2016, p. 29), subjectivism, defined as ‘the idea that everything including interpretations and the like reflect[s] nothing but reports of the views of individuals’ (Howitt, 2013, p. 511).

Opposed to objectivism, subjectivism, which appears in structuralist, post-structuralist and postmodernist approaches, affirms that meaning is not created by the interaction between subject and object; on the contrary, meaning is imposed on the object by the subject (Crotty, 1998). Constructionism believes that humans generate knowledge and meaning from an interaction between their experiences and their ideas.

My study is guided by a 'symbolic interactionism' theoretical perspective, which 'views social interaction as taking place in terms of the meanings actors attach to action and things' (Bryman, 2016, p. 697; cf. Blumer, 1969). Blumer (1969, p. 2) sets out three basic symbolic interactionist assumptions: 1) 'that human beings act toward things on the basis of the meanings that these things have for them'; 2) 'that the meaning of such things is derived from, and arises out of, the social interaction that one has with one's fellows', and 3) 'that these meanings are handled in, and modified through, an interpretive process used by the person in dealing with the things he, she encounters'.

The first assumption emphasises the idea that people's actions are based on the meanings they have for them. Thus, in this study, it assumes that older people act toward Telecare on the basis of the meanings they ascribed to Telecare. I therefore explore their meanings and experiences with respect to Telecare.

The second assumption is that the meaning of Telecare is derived from and arises through a social actor's interaction with other persons. Older people who took part in this study came with a concept of Telecare care which had been built and modified through several previous experiences of interacting with their Telecare provider, with their home care network and with the outside world. I therefore needed to investigate older people's care network, of which the Telecare provider is part of.

The third assumption of symbolic interactionism is that meanings are assigned and modified through a process of interpretation. Thus, meanings are not static but modified by the older person dealing with the particular situation. In this study, it was, therefore, important to consider how being exposed to different 'care' experiences in their own homes would influence the meanings of Telecare for older people.

According to Benton and Craib (2011), symbolic interactionism concentrates on process. When somebody uses Telecare, his or her knowledge of it grows and changes

according to the different and more complex purposes Telecare is being used for. More clearly, Telecare is not simply a sum of technological devices (objects) which trigger an alarm in case of need. Telecare is part of a care network, which can reach more and different purposes from those ascribed by the Telecare provider, such as safety. By this interaction, older people '*negotiate* (or construct) the meanings of the objects in [their] world' (Benton and Craib, 2011, p. 88). As 'symbolic interaction may be envisioned as the study of the ways in which people make sense of their life-situations and the ways in which they go about their activities, in conjunction with others, on a day-to-day basis' (Prus, 1996, p. 10), a quasi-ethnographic approach (see section 4.4 for a description) was considered appropriate to investigate the meanings that a group of older people ascribed to Telecare, and how these related to the meaning of 'care' and 'home'.

4.4 Quasi-ethnography

It is important to highlight that 'ethnography is a long process, requiring the ethnographer to spend much time with a group of people, and requiring the ethnographer to "live" with the people being studied in order to establish something of importance about a whole human culture' (Murtagh, 2007, p. 194). Hammersley (1990) describes ethnography as a particular method or a set of methods as social research featuring most of the following characteristics:

- (a) People's behaviour is studied in everyday life and not in a laboratory setting;
- (b) Data are collected from multiple sources, even though observation and conversations (relatively informal) are the main sources;
- (c) The approach to data collection does not follow a detailed plan set up in the beginning. In spite of this, data collection cannot be defined as 'unstructured';
- (d) The focus is a single setting or a single group, not a huge group of people;
- (e) The analysis of the data focuses on interpretation of the meanings and function of human actions. Quantification and use of statistical tools is not used, or at least it plays a subordinate role.

In contrast with ethnography, which tends to involve the researcher being immersed in one social setting for an extended period of time (Bryman, 2014), my study had a

shorter timescale with less frequent visits to the sites of data collection (my participants' homes). The choice of spending less time in the field was motivated by the limited time allowed by my doctoral degree. For these reasons, my study might be defined as 'quasi-ethnographic'. With respect to older people's experiences of Telecare and the meanings that Telecare has for them in relation to 'home' and 'care', I needed to understand the participants' lived experience from 'the inside'. In light of this I conducted participant observation, which involved spending time with the people and gaining knowledge of their everyday life within their home. Spradley (1980) affirms that the researcher, acting as participant observer, should define specific ethnographic questions and then ask herself these questions, answering them using field notes or new observations. He also pinpoints how ethnographic interviews can be of two different kinds: *informal* - occurring when the researcher asks a question during participant observation, and *formal*, when they make an appointment in order to interview a person. Spradley (1979, p.78) claims that ethnographic interviewing concerns two distinct, and at the same time complementary, processes: '*developing rapport* and *eliciting information*'. Rapport, considered as a harmonious relationship between researcher and informer, stimulates the participant to talk about their culture while bringing out information encourages the development of rapport.

In my study, data was mainly collected through observation and interviews (both semi-structured and more informal 'opportunistic' interviews and conversations held and recorded during observation periods). Before starting the fieldwork, I carefully read the notes I had taken during the hours I spent with my supervisors and the CareLink Plus Telecare manager and another member of staff at the Demo House (see Appendix A) and the two days I had spent with Telecare staff members (see Appendix B and Appendix C). This aided my understanding of the different situations in which Telecare had been used. Before starting the fieldwork, I also read my memos (Appendix D). Participants were all visited for an hour or more each time, 1 to 3 times during a period of approximately six months. I focused my attention on a single participant at a time and searched for meanings of my participants' actions. This was done by taking short notes without interrupting the participant's activity (for example, the participant's comments to my questions or his or her everyday tasks, such as preparing dinner or playing with his or her pets). During the first visit, I aimed at gaining participants' trust, thus trying to avoid being physically and psychologically intrusive. For example, I

moved around respondents' homes only if suggested by participants. Also, I tried to make participants feel comfortable while respecting their daily schedule. If my participants had to accomplish unexpected tasks (e.g. going out for lunch with friends), I would leave their homes.

I wrote field notes before, during, and immediately after the observations. In this respect, the relevance of field notes has been highlighted by Atkinson (1992), who claims that 'the work of the ethnographer expands upon his or her capacity to transform the transactions of fieldwork into a written account' (Atkinson, 1992, p. 16) and that 'the ethnographer, then, writes what is "writable", in the light of past writing *and with a view to subsequent writing*' (Atkinson, 1992, p. 21). In line with Atkinson's thoughts, I recorded fragments of conversations during my visits and thoughts, reflections and observations immediately after the end of the visit. Furthermore, my notes were revised, modified and commented even days or weeks after the visits. I used a notebook (two of them at the end of the fieldwork) before, during and after my home visits. Examples of my fieldnotes can be found in Appendix Figure D. I also constructed electronic analytic notes (Appendix E) that would constitute an internal dialogue, that is the essence of reflexive ethnography, as recommended by Hammersley and Atkinson (1995, pp.191-192). All this 'writing down' had the purpose of recording information that otherwise would be lost, such as details of the dwellings, particular states of mind triggered by a participant's answer to a certain question, or just thoughts and/or feelings about a situation, or propositions about the need for further investigation on a topic which had just been discussed. As the fieldnote had been written, it would be used later in acts of writing and would acquire significance, leading to the writing of 'the ethnography' (Atkinson, 1992). Spradley (1980) deals extensively with the topic of fieldnotes, insisting on their relevance. In particular, he mentions different types of fieldnotes, according to the time in which the notes have been taken. To start, those notes taken during field observation 'condense' what has happened during the observation. Those notes can be 'expanded' after a while when the researcher can add details or remember things that were not immediately written during the observation. Spradley (1980) also suggests keeping a journal in which to keep track of all thoughts, ideas and problems experienced during fieldwork. Spradley concludes adding a fourth type of fieldnote, aiming at establishing a connection between the ethnographic record and the final written ethnography.

More empirically, as the subjectivity of the researcher and of those being studied becomes part of the research process, the researchers' reflections on their actions and observations in the field, their impressions, irritations, and feelings, become data in their own right, forming part of the interpretation, and are documented in research diaries or context protocols (Flick, 2009). I conducted one formal, although semi-structured, interview the first time I visited participants. Despite following a specific protocol (introducing myself, my research, and clearly explaining the reasons that led me to visit participants), I made sure that participants could ask any questions with respect to my research project. I also conducted less formal interviews, such as opportunistic ones. Participants were interviewed inside their homes using audio-recorded semi-structured interviews. For an example of in-depth semi-structured interview with sample questions, see Appendix Figure A. However, once in the field, some of those sample questions proved too complex; they were too long, structured and difficult to understand for most of the participants. Furthermore, a few older people suffered from slight to severe hearing impairment, and therefore the initial questions were simplified and/or shortened. Furthermore, after having briefly introduced myself, I considered asking selected questions in one to three different areas of interest (home, care and Telecare, not necessarily in this order) straight away. Sample questions, simplified and adapted to each participant in order to respect the peculiarity of each person's situation, are included in Appendix Figure B.

4.5 Participant observation, and non-participant observation

As Flick (2009) points out, participant observation allows the researcher to observe from a member's perspective but also influences what she observes due to her participation. In this research, participant observation was of vital interest as I had a special interest in meanings and interactions as viewed from the perspective of the older people who would be part of my research. Participant observation (Flick, 2009) is a process by which the researcher first increasingly becomes a participant and gets access to the field and to persons and then he or she starts to conduct his or her observation in a more concrete way focusing on the aspects that are vital for the research questions. However, this data collection method might present weaknesses. Bryman (2016) claims that, while interviews allow to think back in time, thus permitting to unfold certain

events, participant observation does not allow to reconstruct events. Much less recently, Spradley (1980) explored the degree of involvement of participant observers and examined five types of participation that range along a continuum of involvement:

- Nonparticipation, in which the observer has no involvement with the people or activities studied;
- Passive participation, in which the ethnographer engaged in passive participation is present at the scene of action but does not participate or interact with other people to any great extent;
- Moderate participation, in which the ethnographer seeks to maintain a balance between an insider and an outsider, between participation and observation;
- Active participation, in which the active participant seeks to do what other people are doing, to more fully learn the cultural rules for behaviour;
- Complete participation, in which ethnographers study a situation in which they are already ordinary participants.

Although acknowledging the level of detail provided by Spradley (1980) when describing the different types of participation, when discussing my study, I will distinguish only between participant observation and non-participation observation. I will begin with non-participant observation, which is ‘a research technique whereby the researcher watches the subjects of his or her study, with their knowledge, but without taking an active part in the situation under scrutiny’ (Oxford Reference, n.d.).

Examples of non-participant observation would be watching older people move around their home, or preparing a cup of tea, or pressing the alarm button to show me how Telecare worked. During non-participant observation, I used an ‘unstructured observation checklist’ (The SAGE Encyclopaedia of Qualitative Research Methods, n.d.) in order to facilitate the non-participant observation. This means that instead of having an ‘observation schedule’ and looking for certain things happening, I had an idea of what might be salient, but not what specifically would be observed. Once in the field, it was remarked that the activities undertaken by participants were quite different from those expected. Appendix Table A shows examples of everyday activities in which the participants took part in during my visits. One main issue which was brought to attention consisted in the limited mobility of the participants. More than a few respondents, after having let me into their home, took a seat in the living room inviting

me to do the same. Clearly, some of the participants were affected by severe physical constraints and therefore avoided excessive movements. Others, especially the first older person visited, instead had considered my visit as a very formal occasion and as such adopted formal behaviour, such as sitting opposite the researcher on the sofa or a couch in the living room. Making themselves comfortable in their own homes allowed participants to have good eye-contact with me, as a researcher, and this helped those who suffered from hearing impairment to understand my questions better. A couple of participants, however, showed me around their house and interacted with me in lots of different places inside and outside their dwellings. Other participants, with physical and mobility impairment, attempted to describe the different rooms in their homes. Participants were visited and observed on different days and times of the week including Sundays and Bank Holidays. In fact, what really mattered was attempting to grasp the spontaneity of everyday life of a small group of older adults without interfering with their everyday activities, even if I acknowledged the possible limitations of the observational method. Thus, the times and length of observation varied. In order to make participants feel at ease, observation did not start immediately. I engaged in a short conversation that helped me to gain the participants' trust, and only after some time did observation begin.

Observing may involve negotiating access to participants, even though the entry to a particular setting has been already granted. Even when I was in possession of the participants' signed consent form, the people I intended to interview and observe might not allow me to start a conversation. One reason for this might be that participants did not feel at ease with me, saw me as a complete stranger and perceived my behaviour as intrusive. In order to overcome these difficulties, I used one or more strategies, allowing me to gain the participant's trust. For example, I looked around and asked questions about some of the objects or Telecare devices that were visible. In this way, the participant could start a conversation about a particular object or Telecare, that also might be meaningful to him or her and eventually feel more at ease with me. Matthews and Ross (2010) claim that observational methods can be complex, time-consuming, boring, daunting, shallow and could be subject to the Hawthorne effect. In other words, the participant, aware of being observed, might change his or her behaviour. For this reason, participants were given some time to get accustomed to my presence and only when I had made sure that they were comfortable, using strategies such as the one

described in the paragraph above, did observation start. A complex choice, during my visits to older people, was to choose to which extent I would participate in their everyday activities.

Howitt describes participant observation as ‘a form of fieldwork in which the researcher is actually in a particular research situation witnessing personally what is happening’ (Howitt, 2013, p. 506). Using participant observation as a tool of ethnography methods involves not only spending a long time with the people who the researcher is interested in studying, but also ‘[entering] into their social and “symbolic world” through learning their social conventions and habits, their use of language and non-verbal communication, and so on’ (Robson, 2002). Hammersley (1990) claims that observation might involve the researcher in an established role in the setting or in a ‘visitor’ role or in a special created role. During two of my visits, I had the opportunity to be a participant observer, and use quite an unstructured approach. An example of activity in which I was a participant observer would be preparing and having lunch with one participant in her home. During this activity I conducted opportunistic conversations with her about cooking. Another situation in which I conducted participant observation was helping a participant repotting house plants and flowers during the time we spent in his greenhouse located in the back garden. During my second visit, in agreement with him, an enthusiastic and competent gardener, I left two plants that needed to be repotted in his home. Those plants would be then given back to me during the third visit. Again, during my visit to the participant’s greenhouse, I had an informal chat with him during which he explained different greenhouse-related issues to me. Those visits lasted more than two hours as I tried to ‘immerse’ myself in the everyday activities of those older people, therefore becoming a participant observer. Thus, as previously mentioned, I conducted a participant observation inside participants’ homes a few times, as participant observation is appropriate for collecting data on naturally occurring behaviours in their usual contexts. I also conducted a systematic observation of that particular home and the Telecare system, as well as the person visited and with whom I would spend time – I was also an observer-as-participant. In this case, I took no part in the activity, but my status was known to the participants (Gold, 1958, as cited in Robson, 2002).

According to Spradley (1979), there are different stages in the rapport process, which are: *apprehension*, *exploration*, *cooperation* and *participation*. The first stage, apprehension, starts as soon as the interview begins when both ethnographer and participant feel uncertain. The second stage, exploration, takes place when ethnographer and participant try to discover more about each other. The cooperation stage is an evolution of the rapport between ethnographer and participant. It might be that the two actors start cooperating from the beginning. However, at this third stage ethnographer and participant develop mutual cooperation and trust. The final stage, participation, develops after a long time of working together when ethnographer and participant get to know each other quite well. This stage cannot always be reached. During my fieldwork, the majority of participants reached the first stage, while only a minority achieved the last stage, participation, despite my attempts. Among those participants who attained the final stage, one of them allowed me to cook for her while another taught me about gardening. During those mundane activities, I had the chance to develop a more in-depth relationship with those participants and while also conducting opportunistic interviews. Interviews can be very challenging. For example, the interviewer can influence the respondent's answer. Bell (1993) highlights this potential danger, claiming that the interviewer's manners may have an effect on the person being interviewed. During fieldwork I remarked that when I showed more involvement in the everyday lives of older people, these individuals seemed more cooperative. On the other hand, in certain circumstances such as when there was a delay with respect to the established visit time, participants seemed more reluctant to open up to me.

Other issues such as data collection (which is time consuming), the importance of developing interviewing skills, and the difficulty of managing the participants in such a way that they do not shift attention on topics which are not those which the researcher needs to focus on, require the researcher to stay focused (Bell, 1993). Some of my visits, not necessarily the first ones, were difficult to manage. In particular, I found out that introducing myself, and especially the research, required a considerable effort with respect to the use of language. Sometimes participants would not understand my role (I was mistaken for a medical doctor, a social services staff member and a Telecare worker) or would not understand the name of the University I studied at. In addition, I had to make a significant effort to understand participants' regional accents. In this respect, language, and in particular knowing how words are used and the meaning of

specific colloquial terms, is ‘frequently viewed as crucial to an appreciation of how the social world being studied is viewed by its members’ (Bryman, 2016, p. 526). As previously mentioned, in view of a better understanding of participants’ views, I also conducted opportunistic conversations or chats. As suggested by O’Reilly, ‘interviews need not to be formal, pre-arranged meetings between two or more people but can simply take the shape of informal, opportunistic questions and answers’ (O’Reilly, 2009, p. 18).

4.6 Reflexivity

Reflexivity has different meanings in the social sciences. Bryman (2016) suggests that the term can be employed by ethnomethodologists to refer to the way in which speech and action are constitutive of the social world in which they are located. Reflexivity can also mean that social researchers should be reflective about the implications of their methods, values, biases, and decisions for the knowledge of the social world they generate. Hammersley and Atkinson see reflexivity as involving ‘participating in the social world, in whatever role, and reflecting on the products of that participation’ (Hammersley and Atkinson, 1995, p. 17). More recently, Anderson (2006) claims that reflexivity is an awareness of reciprocal influence between ethnographers and their settings and informants. It involves self-conscious introspection as well as the desire to better understand both self and other by examining one’s action and perception in reference to and in dialogue with those of others. While not dismissing the previous definition of reflexivity, the one definition that I applied to my research was Matthews and Ross’s, who claim that ‘as social human beings who are part of the social world they are studying, social researchers bring their own biography, experience and empathy to the data they observe, hear and work with and can reflect on how they make sense of what they themselves are doing and experiencing as social researchers’ (Matthews and Ross, 2010, p. 51).

In my study, I had the opportunity to apply a reflexive approach a few times. In order to make myself more clear, I will include two examples of field notes that I took during study. The first example is an excerpt of the first interview with Hannah, on 19th June 2015 (see the third page of Appendix Figure E). While I was talking to Hannah, I

realised to which extent my behaviour, or my approach to her, might have been influenced by Hannah's physical appearance, her ageing body, and I took a note of this in my block notes. This feeling went through a process over the course of the interview. At first, I concentrated my attention on Hannah's physical appearance, but after a few minutes I focused on her answers to my questions. After the interview, I read my field notes and when I read this note, I thought about the situation I had experienced and realised that my observation might have been biased by feeling of uneasiness about the experience of interviewing a participant who had, among others, mobility issues (Hannah used a rollator walker with table when moving around her place) and sight issues, as she told me: *'I've had two falls in the shower' and later on added 'Because I've just had a cataract done ... three months ago now... My friend from church, she comes and takes me to the eye hospital, if I have to go to one of the hospitals'*. Hannah's accounts of her health issues brought my own empathy to the data I observed, heard and worked with, thus allowing me to reflect on how these data made sense of what I was doing in my research. The second example of reflexive notes (see Appendix Figure G) is part of a group of notes written at home. On that day, I had called two participants in order to reconfirm I would visit them a second time. Both participants had hung up the telephone while I was talking to them. Their reaction had made me feel angry as having been cut off twice in the same day was an unpleasant experience. Furthermore, I felt frustrated, as I thought that I was hitting 'a wall of disinterest' towards my research. I also felt worried as two participants had just dropped out. I then realized that dropouts are part of the research process and that I should not take it personally. Later in the day, I went through their first interviews and searched for clues about their behaviour. While one participant had expressed her intention to drop out during the first visit, the other had not clearly showed any sign of distress or other reason for withdrawing from the study. Thus, I realised that I should have paid more attention to any sign of distress or disinterest towards me as a researcher or the research itself. This seemed necessary in order to avoid any other participants dropping out in the future. A careful interpretation of my negative feelings after having experienced what I thought was disengagement from my research as expressed by a couple of participants who withdrew from my study carried my own experience to the data (the withdrawal, understood as feedback towards my research, and ultimately toward myself). I felt frustrated and even upset about this experience, although withdrawals had been taken into account as part of the process. The two examples above were part of the reflexive notes taken in my notebook during

and after my visits to the research participants.

4.7 The sample

4.7.1 Access to the social setting and recruitment

Participants were recruited via CareLink Plus Telecare Manager Adult Social Care Brighton & Hove City Council. This was possible thanks to my lead supervisor, who had previously established contact with the Telecare manager, asking him for a possible collaboration between me and CareLink Plus, Brighton & Hove City Council's community alarm and Telecare service, which had a database of all customers using Telecare and living in Brighton and Hove. After the expression of interest by the Telecare manager, with the consideration of ethical issues and safety considerations of his customers, he organized a visit with my supervisors in June 2014 at CareLink Plus, Brighton & Hove City Council's community alarm service demo house (see Appendix A). During this visit, the Telecare project manager and another representative of CareLink Plus explained the functions of many Telecare devices (such as alarm unit, alarm pendant, key safe, smoke detector, and bed epilepsy sensor) as well as giving an overview of the job tasks of the CareLink Plus monitoring centre. After a few months, in August 2014, the Telecare manager suggested that the researcher spend an entire day with a CareLink Plus team officer (see Appendix B). The officer's job included demonstrating and testing the equipment in customers' properties and explaining the service to her or him; removing Telecare devices for end of use from the customer; and testing the Telecare system in a household at risk of domestic violence. In this respect, it is necessary to clarify that the Telecare system is also used to provide support to those who feel vulnerable and/or have concerns for their personal safety, and not only for providing effective help to those who feel unwell or have a long-term health condition. Within a week, I spent half of a day in the CareLink Plus monitoring centre, which takes calls from their customers, the Telecare users. I was linked up with a training headset, so I was able to hear both the customer and the CareLink Plus Control monitoring centre worker (see Appendix C). It might be argued that spending time with the Telecare provider's team member officers involved ethical issues. To this regard, it has to be highlighted that the council's Telecare manager had previously asked for a

Disclosure and Barring Service (DBS) check. In addition, a verbal non-disclosure agreement bound the researcher to protect the Telecare customers' sensitive and confidential data. Then, I was able to present a written proposal of a possible recruitment method. After discussion with all the stakeholders involved, the Telecare manager sent me two forms to fill in, the analysis & research team-project form and the informed consent form. The former has not been included in the Appendices as it concerns the local authority Research Governance approval form/CareLink Plus team, and is therefore confidential, while the latter is available in the Appendices (Appendix F). These two forms were sent for approval in October 2014 and were approved in approximately a month. After the approval, the CareLink Plus team identified participants in their database using the inclusion criteria which were: being aged 60+, living in Brighton & Hove, using one or more Telecare devices, not being affected by severe cognitive impairment, and not too ill or distressed to take part in the study. Once all potential participants had been identified, three documents were sent to them by post. The first document was an invitation letter (see Appendix Figure F) in which the project – written by the researcher then slightly modified by the CareLink Plus Project Manager, and finally printed using the CareLink Plus letterhead – was explained. The other documents were the participant information sheet (see Appendix G) and the informed consent form (see Appendix F). All documents had been printed using the University of Brighton letterhead, a pre-stamped and pre-addressed envelope. Those who expressed interest in hearing more about the project were invited to sign the informed consent form within two weeks and then send the stamped addressed envelope together with the informed consent form. The need arises to underline that relying on the CareLink Plus database for participants' identification purposes involved some work for Telecare team officers as they had to search for all people matching the criteria previously mentioned. In fact, some of the people who answered the invitation were not living on their own but with their spouses or co-resident adult children. As the informed consent form had already been signed and sent back to me, two considerations were made: first of all, refusing people's participation into the research project only because they were not living on their own might be a violation of the ethics principles. Secondly, the focus of the research project did not shift substantially from the proposal. Thus, the inclusion criteria were modified to also include those older people who did not live on their own. Again, it must be highlighted that I had no independent access to the CareLink Plus database.

In order to respect confidentiality, I immediately stored the signed informed consent forms in a secure place located in the University of Brighton. Only after having received the informed consent form did I contact the 16 participants by telephone. This process proved to be more challenging and time consuming than expected. In fact, due to a very low participant response rate and to the recruiting process handled by the Telecare provider, invitation letters to potential participants were sent in three different periods of time, February, March and May 2015: 40 invitation letters were sent on 13th February 2015, 63 more invitations followed on 30th March 2015, and then 52 letters were sent on 21st May 2015.

4.7.2 The research participants

I aimed at recruiting 10-15 participants. The rationale for this choice was my time constraints, having to work independently and, more importantly, conducting a study using a quasi-ethnographic approach. In this respect, it would not have been possible to conduct in-depth interviews and observe a larger number of participants, in such a limited amount of time. Eventually, 16 individuals (11 women and 5 men) were recruited. Due to the project flexibility, as for the number of participants, and in order to conduct ‘good’ research, one participant more than the total number agreed was allowed to partake in my research. Once in the field, I visited participants in their homes for one or more hours, up to three times over a six-month period. At these visits I spent time getting to know them and talking to them about their experiences of Telecare. This included talking about how they acquired the Telecare devices, how the devices work, how they use them and how Telecare fits into their home and the way they live and are cared for at home. During fieldwork, some participants dropped out of the research after the first interview. One participant decided to terminate my visits due to serious health issues (very bad eyesight). Another participant abruptly ended the conversation on the telephone, and other older people did not answer my second visit confirmation telephone call. Personalised reminder letters, with stamped return letters included, were therefore sent (see Appendix H, for an example). In these letters I restated the reasons for my research and asked that they send the reply back to me in case of interest in continuing to partake in my research. If they expressed interest I would send a further letter in which I suggested two different dates and times for the following visit (see

Appendix D). In case of no answer, participants would not be visited again. However, all the initial 16 participants were considered, as all of them were visited at least once (see Appendix Table B for research participants' demographics and home visit arrangements).

Soon after the end of field work I sent all participants a personalised 'thank you' letter (see Appendix J) in which I thanked every participant for having made my research possible and reminded them of the reason which had led me to visit them. I also took the opportunity to inform the participants that I would send them a short summary of results in about 6 months. It was felt that older people needed to be reminded that they would receive a summary of the results in the near future, as highlighted in the participant information sheet (see Appendix G). After the end of the fieldwork, participants were sent a personalised short summary, the debriefing and summary of the main findings (see Appendix K) in which I thanked them again for their involvement in my research and explained the main findings of my study in lay terms. Interestingly, soon after receiving this last letter, a few participants contacted me either by telephone or text message to thank me for having let them know about the main findings of the study. Furthermore, one participant's co-resident daughter left a short message on my answerphone informing me that her mother had passed away and therefore could not read the outcome of my research. When I realised that the participant's daughter had taken the time to answer the debriefing letter orally, I sent a sympathy card to her address (a copy of which is not available in the interest of confidentiality). Soon after the end of the fieldwork I collected and grouped information such as participants' living arrangements, type of dwelling and ownership status. Such information was thought to be useful to analyse the 'home' in general and with particular reference to the living arrangement, the type of dwelling and the ownership status. A synthesis of the collected information is provided in Table 1 below.

N.	Name	Age	Sex	Living arrangements	Town of residence	Type of dwelling	Ownership status
1	Katherine	81	W	Living on her own	Brighton	Two flats converted into a single property with caretakers	House owner
2	John	61	M	Living on his own	Brighton	Semi-detached council house	Tenant
3	Jennifer	83	W	Living on her own	Brighton	Council flat	Tenant
4	Benjamin	65	M	Living on his own	Hove	Council flat with part-time caretaker	Tenant
5	Jane	88	W	Living with one of her two daughters	Brighton	Terraced house	House owner
6	Carl	72	M	Living with his wife	Brighton	Semi-detached house	House owner
7	Fiona	67	W	Living with her husband	Portslade	Terraced house	House owner
8	Helen	70	W	Living on her own	Brighton	Extra care retirement apartment	Tenant
9	Craig	84	M	Living on his own	Hove	Housing association flat in a semi-detached corner house	Tenant
10	Claire	93	W	Living on her own	Brighton	Flat with caretakers	House owner
11	Jack	82	M	Living on his own	Brighton	Flat with caretaker	House owner
12	Rebecca	94	W	Living on her own	Hove	Flat with caretaker	Tenant
13	Ingrid	79	W	Living on her own	Hove	Semi-detached bungalow	House owner
14	Hannah	95	W	Living on her own	Portslade	Flat	House owner

Table 1: Research participants' demographics, living arrangements, dwelling information and ownership status

N.	Name	Age	Sex	Living arrangements	Town of residence	Type of dwelling	Ownership status
15	Karen	86	W	Living on her own but temporarily living with a friend	Hove	Semi-detached house	House owner
16	Emily	91	W	Living on her own	Brighton	Flat	Tenant

Table 1: Research participants’ demographics, living arrangements, dwelling information and ownership status

Acknowledging the importance of recognising the uniqueness of each older individual in my quasi-ethnographic research, a brief description of each of them has been provided in Appendix M. Participants all lived in East Sussex in three different towns. In order to respect privacy and confidentiality issues, participants’ real names have been replaced by pseudonyms and names of towns mentioned during the interviews have been either omitted or used only when they could not identify participants. The names of home carer providers mentioned in the following analysis chapters have also been replaced by pseudonyms. A facility for extra care has also been replaced by a pseudonym. Each description begins by providing demographic information, including previous employment (if known), living arrangements, health issues (if any), care arrangements (if any), and a short description of the Telecare devices used, with reference to the experience with the Telecare provider. Participants’ descriptions did not aim at providing any in-depth analysis, but a taste of older people’s domesticities, including their living arrangements and their main health issues. Each participant’s domesticity, as well as his or her unique way of ‘domesticating’ Telecare in their own home, which in turn was the site of care provision, will be examined carefully in the Analysis (Chapters Five, Six and Seven).

4.8 Data Analysis

Qualitative data deriving from interviews or participant observation usually take the form of a wide unstructured textual material. Miles (1979, cited in Bryman, 2016, p.

570) has described qualitative data as an ‘attractive nuisance’, because of the attractiveness of its richness but the difficulty of finding analytic paths through that richness. Thus, qualitative data are not straightforward to analyse. The strategy which was used in this study is Thematic Analysis, which consists in working with raw data to identify and interpret key ideas or themes. The following section will start by explaining the reasons for using this method.

4.8.1 Thematic Analysis

Thematic analysis (TA) is a method for identifying, analysing, and reporting patterns (themes) within data. I will provide an insight of this research tool by drawing on a significant body of literature (Braun and Clarke, 2006; Boyatzis, 1998) whose diverse and rich contribution equipped me with a broader understanding of thematic analysis. According to Braun and Clarke, thematic analysis ‘minimally organises and describes [a] data set in (rich) detail’ (Braun and Clarke, 2006, p. 6). However, it also often goes further than this, and interprets various aspects of the research topic (Boyatzis, 1998). Thematic Analysis can be a constructionist method, which examines the ways in which events, realities, meanings, experiences and the like are the effects of a range of discourses operating within society (Braun and Clarke, 2006, p. 9). Thus, thematic analysis adopting a constructionist approach does not search to focus on motivation or individual psychologies but focuses instead on the sociocultural contexts within which individual accounts are generated. In my study, whose theoretical framework was the ‘domestication theory’, which in turn suited a quasi-ethnographic approach, thematic analysis appeared to be appropriate to explore the richness and diversification of human experience, more specifically older Telecare users’ experience of adopting Telecare. Thematic analysis requires a limited knowledge of the theoretical foundations of qualitative analysis. However, a more sophisticated version of TA was provided by Braun and Clarke (2006). According to them, the process starts when the researcher begins to remark and look for patterns of meaning and issues of potential interest in the data. The endpoint is the writing of the content and meaning of patterns (themes) in the data. Themes can emerge through considering reoccurring instances of salient quotes and statements, specific issues, attributions or emotive words, and assumptions.

Although only partially following Braun and Clarke's step-by-step guide (for an extensive description see Braun and Clarke, 2006, pp. 15-23), I drew on their 'two possible paths' description: the data-led approach, where the characteristics of the data and the coding are predominantly guided by a rigorous analysis of what is in the data; and the theory-led approach, in which the framework for the initial coding is informed by the key elements of the theory being applied by the researcher. Thus, in my research study I adopted both a theory-driven and a data-driven approach (see next section for a more detailed description). For his part, Boyatzis (1998) distinguishes three distinct stages of TA: in the first stage the researcher decides the sample and the design issue; in the second stage thematic codes are developed; and different ways to create a thematic code: a) theory driven, b) prior data or prior research driven, and c) inductive (for example from the raw data) or data driven. Turning to the advantages and disadvantages presented by thematic analysis these are, according to Braun and Clarke (2006), its flexibility and accessibility, and the generation of unexpected insights respectively. Nevertheless, flexibility might also constitute a possible disadvantage due to the wide range of things that can be said and count as data. Also, it might have a 'limited interpretative power beyond mere description' if it is not used within an existing theoretical framework that anchors the analytic claims that are made (Braun and Clarke, 2006, p. 97). I was also inspired in the choice of thematic analysis as a research tool, from Braun and Clarke's claim that 'indeed, your¹³ method of analysis should be driven by both your research question and your broader theoretical assumptions. As we have demonstrated, thematic analysis is a flexible approach that can be used across a range of epistemologies and research questions' (Braun and Clarke, 2006, p. 28). The emphasis of these research fellows on the term 'flexibility' informs us that the nature of thematic analysis can be particularly suitable to manage the richness and 'messiness' of qualitative data. In the next section I will draw on another meaningful although diverse body of literature (Wolcott, 1994; Howitt and Cramer, 2011), whose suggestions on how to manage data were helpful.

¹³ The (reiterated) rhetorical use in this paper of the possessive adjective 'your' might represent the authors' intention to allow unspecified readers to be 'in' the text, thus capturing their full attention.

4.8.2 Managing data: description, analysis and interpretation

As anticipated at the end of section 4.8.1, Wolcott's (1994) approach to qualitative data helped me to make sense of the significant amount of data in my possession. I was informed by Wolcott's use of three terms to define qualitative inquiry: *description*, which addresses the question "What is going on here?"; *analysis*, which addresses the identification of essential features and the systematic description of interrelationships among them, i.e. how things work; and *interpretation*, which addresses processual questions of meanings and contexts: "How does it all mean?", "What is to be made of it all?" (Wolcott, 1994, p. 12). As a qualitative researcher, I first provided an essentially descriptive account of the research participants and 'what was going on' in their own homes. This account, which was built using fieldnotes, interviews and observation, took the form of a 'narration' of the everyday life of my 16 participants. In order to organize it I did not follow a chronological order but a 'researcher or narrator order' (see Wolcott, 1994, p. 18). More clearly, I followed the order which made sense to me. Later on, I also made sense of the fieldnotes taken during the time I spent with the Telecare provider. These first steps allowed me to describe my data. Then, I started to analyse the data. This process proved to be more time consuming and complex than I expected as I used different approaches. Initially, I used a theory-driven approach. This was done in order to make sense of those data which dealt with the domestication of Telecare. Later on, when I turned to a data-driven approach in order to identify themes related to my initial headings of 'home' and 'care', I modified the method of managing and organising my data.

Turning now to the first steps of analysis, I used NVivo10 for Windows, a qualitative data analysis (QDA) computer software package, with the intent of analysing data directly on the computer screen. All data (interviews, observations, opportunistic conversations and fieldnotes) were uploaded in NVivo10 and it was made an analytical effort in order to generate themes. Informed by Howitt and Cramer, who describe this kind of effort in different components: 'a) the process of getting familiar with the text so that understanding will be achievable; b) the detail of study of the data, that can vary between a wide approach, aiming at summarising the main themes, to a line-by-line analysis; c) the extent to which the researcher is ready to process different times the data in order to better analysing them; d) the extent to which the researcher is confronted

with difficulties during the analysis and those difficulties are resolved, and e) the willingness of the researcher to check and recheck multiple times if the analysis does fit to the original data' (Howitt and Cramer, 2011, p. 333), I familiarised myself with data by reading and rereading the interviews and observations. Then I took notes on my notebooks and on scrap paper. In this first part of my analysis, I drew on the domestication theory; thus, the main stages of domestication theory – *appropriation*, *objectification*, *incorporation* and *conversion* – were the areas of interest, relating directly to the research questions around which I sought to organise the data.

I then began to analyse the data within each stage/theme, this time using an inductive approach. For example, within the *appropriation* heading, six themes were identified (see Appendix Figure H-1). Then I imported the references from my interviews. By references I mean information about units of observation, chunks of data considered meaningful. Once I had all useful references imported, I looked for initial interpretation and then for categories. The themes identified under the four headings (*appropriation*, *objectification*, *incorporation* and *conversion*) were then refined, as I developed a more critical approach and attempted to interpret data. For example, the six original themes identified in the *appropriation* stage (see Appendix Figure H-1) were reviewed. Eventually I identified the following three themes: 1) the triggering event; 2) the role of neighbours, friends, family, and more formal (care) networks, and 3) the significance of specific Telecare devices (choice of). The same procedure was used to identify themes emerging from data related to the other 3 stages of domestication – *objectification*, *incorporation* and *conversion*. (For an example of a transcript see Appendix N and for the transcript analysis see Appendices Figures H-1, H-2 and H-3).

Once the identification of themes in the four stages of the 'domestication' had come to an end, I started to identify themes for my other two main headings: 'home' and 'care', which were two of the main topics of my research. This was the second part of the analysis. In contrast with the first part of the analysis, the second part relied mainly on data available. I used an inductive approach to identify themes in this second stage. Once again, I used NVivo in order to organise and make sense of my data. This process was similar to the one I had used in the first part. However, it soon became clear that the way I was using NVivo was not suitable to provide me with the level of in-depth analysis that I was looking for. Thus, I started to code, i.e. identify themes, manually

and did not import any reference in NVivo. Previously, I affirmed that I used an inductive approach. This is only partially true, as I constantly turned to my literature review in order to identify and refine themes. When looking for relationships in the data, for example how older people's diverse care arrangements might have influenced their attitude towards 'care', I developed basic maps of initial themes. For example, I hand-wrote basic maps of themes related to the main topic 'care', such as 'formal care', 'informal care', 'occasional care'. During the analysis, I also tried to develop a more in-depth mapping, with overarching themes and sub-themes or categories associated with them. However, I realised that diagrams would not help me think through possible relationships between the categories. Eventually, I listened again to all my interviews, then I read the transcripts and started to write a few lines for each theme and sub-theme. This process allowed me to focus on what I was looking for: meanings and experiences of 'care'. The same process was followed to analyse how older people understood 'home'.

After having analysed my data, I attempted to interpret them. For example, when I claimed that an interpretation derived from my qualitative inquiry, I tried to link it to my data. Drawing from Wolcott (1996) I built questions which had not emerged from analysis in order to go beyond simplistic explanations of phenomena or always looking at issues from the same point of view. I also turned to theory on different occasions, in order to provide structure to my interpretation and to link my interpretation to previous studies. Wolcott (1996) points to the difficulties of reaching a balance between description, analysis and interpretation. Indeed, during my analysis I wondered whether I was over-describing and under-interpreting my data. Ultimately, I think that the balance of my inquiry tended towards an over description and a tension towards analysis, with a 'taste' of speculative comments.

4.8.3 Reliability, generalisability and validity in qualitative research

As mentioned in the above sub-sections, reliability and validity are important in assessing the quality of qualitative research. Nevertheless, the issue of measurement validity seems to carry connotations of measures, which is not a primary preoccupation among qualitative researchers. Thus, the issue of validity would not particularly affect

qualitative studies (Bryman, 2016). A certain number of standpoints have been taken by qualitative researchers. Some scholars claim that reliability and validity should be assimilated into qualitative research without changing the meaning. Others, such as Mason (1996, p. 21, as quoted in Bryman, 2016) argue that *reliability*, *validity*, and *generalizability* are ‘different kinds of the quality, rigour and wider potential of research, which are achieved according to certain methodological and disciplinary conventions and principles’. In fact, these meanings are actually the quantitative research’s meanings accorded to those criteria. According to Leung (2015), while in quantitative research, reliability refers to exact replicability of the processes and the results, in qualitative research the essence of reliability for qualitative research lies with consistency. Data might differ in richness but should be ontologically similar. Flick (2009) points to the importance of reliability, in which it has been viewed as a criterion for evaluate qualitative research only against the background of a specific theory or issue and about the use of methods. In ethnographic research, the quality of recording and documenting data becomes a central basis for assessing their reliability and that of succeeding interpretations.

Validity in qualitative research means ‘appropriateness’ of the tools, processes, and data. Whether the research question is valid for the desired outcome, the choice of methodology is appropriate for answering the research question, the design is valid for the methodology, the sampling and data analysis is appropriate, and finally the results and conclusions are valid for the sample and context (Leung, 2015). In this respect, I carefully identified the research questions and I redefined them during the research process in order to fit in the questions I wanted to ask. Drawing on Ploeg, who claims that ‘sampling decisions are made for the explicit purpose of obtaining the richest possible source of information to answer the research questions’ (Ploeg, 1999, p. 36), my sample – although I would rather avoid this term, as more used in quantitative research – was chosen with the purpose of identifying a slightly flexible number of older people (10-15 individuals with specific characteristics, as explained in section 4.7) and was small, as I aimed at conducting a qualitative study. Data collection techniques (observation and semi-structured interviews) are commonly uses in qualitative research. In my quasi-ethnographic study, I used observation, questions based on ‘semi-structured interview guide, which is a presentation of questions or topics and need to be explored by the interviewer’ (Jamshed, 2014, p. 87), but also on pre-defined closed questions,

which I needed to make sense of the context in which Telecare was adopted. My strategy also included opportunistic interviews, conducted when the opportunity arose to spend more time with participants. Thematic analysis was appropriate and fit with my theoretical position (domestication of technology) and the findings allowed me to answer my research question (see section 4.2).

Generalizability or external validity for qualitative studies can be assessed by examining whether the results of a study can be generalized beyond the specific research context in which it was conducted (Bryman, 2016, p. 691). This is relevant for me as the findings of my study might be not generalised beyond that specific research context, a medium size town in the South of England, where Telecare had been used widely. The way the Telecare provider dealt with older Telecare users was based on the development of a close relationship between Telecare users and Telecare staff members. In other contexts, such a relationship might have been much more impersonal, for example due to different job schedules. Another specificity was the community's dimension. Based near the centre of a medium size town in East Sussex, the Telecare provider was in an ideal geographical position. Such a location allowed Telecare workers to visit many different older users on the same day and return to their company's headquarters. As a matter of fact, during the approximately 8 hours that I spent with a CareLink Plus (the Telecare provider) worker, we visited at least seven different households, and we had the time to return to the headquarters. This would not have been possible in a bigger city. Furthermore, Telecare workers (at least some of them) were trained to work both *in situ* (on the premises) and in the field. This means that some of them had to accomplish diverse tasks and that those tasks had to be carried out in different locations. When the team workers (as defined by the company they worked for) were on the premises, i.e. the monitoring centre located in the Telecare provider's headquarters, they had to monitor the Telecare alarms and reacting accordingly (responding to emergencies; reassuring and calming down customers experiencing psychological or physical pain, or both; remaining calm regardless the circumstances). Outside the premises, the Telecare workers had to carry out a variety of tasks involved with visiting older people such as: demonstrate the Telecare equipment, install it, add other devices, verify that the equipment is working properly, or remove the equipment. I can also assume that the workers had received lone worker training. Turning to generalisability, 'the findings of qualitative research are to generalize to theory rather than to populations' (Bryman,

2016, p. 399) and ‘it is the quality of the theoretical inferences that are made out of qualitative data that is crucial to the assessment of generalization’ (*ibid.*). In contrast, Yardley (2000), cited in Bryman (2016, see p. 387), suggests possible alternatives to reliability and validity, and proposes four different criteria:

- Sensitivity to context: sensitivity not only to the context of social setting of the research but also to possibly relevant theoretical positions and ethical concerns
- Commitment and rigour: significant engagement with the topic, having the significant skills, and through data collection and analysis
- Transparency and coherence: research methods well defined, a clearly expressed argument, and reflexivity standpoint
- Impact and importance: leaving an impression and significance for theory, practitioners, and the community on which the research is carried on

In my study, I attempted at being sensitive to the context of social setting of the research (participants’ homes), and I dealt with ethical issues related to different aspects of the recruitment and the fieldwork. For example, while visiting people I tried to be as transparent as possible with regard to the aims of my study. To me, being committed to my research meant, on one hand, spending time and energy in order to develop appropriate methods to analyse my data, and on the other hand making sure that the methods I used (observation, in-depth and opportunistic interviews) were not causing any harm to my participants. My research methods were clearly defined before going in the field and had been deemed appropriate to my theoretical framework and to the context. My study aimed at making a contribution for the community of older Telecare users that I visited, as well as for the Telecare provider, who received a non-evaluative short report at the end of my fieldwork. Despite its limitations, such as the small number of older households, this report attempted to provide to the Telecare provider some of the most significant findings about the experience of using Telecare in a small group of older people. I would also like to mention that my study, using for the first time (to my knowledge), the domestication of technology theory to study Telecare, had broader implications for developing theories of technology, with particular reference to new care technologies and Ageing in Place. After having refined the specifics of each theme, I wrote the analysis chapters. Drawing from Hammersley and Atkinson, who claim that it is essential that the researcher takes some responsibility in his/her writing as ‘*how we*

write about the social world is of fundamental importance to our own and others' interpretations of it' (Hammersley and Atkinson, 1995, p. 255), I took responsibility in the final outcomes of my data analysis; I developed, tested, or modified previous ideas and concepts, in order to give a contribution to the pre-existing literature from which I drew my ideas.

4.8.4 Ethical issues

Ethical approval for this study was sought and obtained from the University of Brighton's Faculty of Health and Social Sciences Research Ethics and Governance Committee (FREGC). On 22nd January 2015, I received an email from the committee's chair confirming that my project had been approved. Since the research project was developed in collaboration with CareLink Plus (Brighton & Hove City Council's Telecare alarm service), ethical clearance was also sought and obtained. On 18th December 2014, I received an email from the Telecare Project Manager (Adult Social Care Brighton & Hove City Council) who confirmed that the Brighton & Hove Director of Adult Social care (Local Authority) had provided ethical approval. Before explaining how I complied with the ethical requirements of qualitative analysis, an outline of literature on some relevant aspects of ethical issues will be considered. Miles and Huberman (1994) underline how any qualitative researcher has to face moral and ethical questions, such as the worthiness of the project and the respect of the privacy of people participating to it. Sieber (1992) mentions a list of core principles in order to guide ethical choices. These principles are:

- beneficence: the maximisation of good outcomes for science and humanity and the individual research participants while minimising unnecessary harm, risk or wrong;
- respect: protection of the autonomy of (autonomous) persons, showing courtesy and respect for individuals as persons, including those that are not autonomous (for example infants, the mentally retarded, senile persons);
- justice: the procedures used by the researcher have to be reasonable, non-exploitative, and fair. There has to be a fair distribution of costs and benefits among persons and groups, in particular those who take the risk of research should be those who benefit from it.

With a view to minimising the potential distress induced by the researcher in those being interviewed, not only because of the sensitive topics involved but also because of the possible vulnerabilities of this age group, Holloway and Wheeler (2010) insist on particular issues to consider when carrying out research with frail old people. Aged people are sometimes reluctant to be interviewed for research purposes and should be recruited in a diplomatic way. Interestingly, Russell (1999), in his study about the interpretation of social isolation in a group of lonely elderly people, claims that interviews have to be dialogical in style and therefore need to be repeated so that a personal relationship between the interviewer and interviewee might develop. This is important to the extent that people will know each other better and as a result more quality data will be available. Regarding the ethical considerations in this research, there were four main areas to be considered: 1. Informed consent; 2. Measures to minimise harm and risk at all stages of the research; 3. Anonymity/confidentiality; 4. The worthiness of the project.

1. Informed consent

Before commencing the study, participants were sent a letter which summarised the main topics of the research project. In case of willingness to partake in the study, older people were asked to sign a consent form summarising the pertinent information about their role in the study and send it back to my office using the stamped envelope provided. Participants were also reminded that they had the right to withdraw from the study at any point and without giving any reason and without any detriment to their care.

2. Measures to minimise harm and risk at all stages of research

If participants experienced distress due to any topic or particular questions, interviews were stopped. Participants were allowed to take a break and interviews would restart shortly after. However, in case of persistent anxiety and/or distress, participants would have been provided with contact details of a helpline Brighton & Hove City Council Adult Social Care Emergencies Call Access Point.

3. Anonymity/Confidentiality

Considering that I was studying a small group of people, special care was taken to ensure their anonymity. The interviews remained confidential and no participant was

identified in the transcript. Participants have been referred to using pseudonyms. Only my supervisors and I had access to the collected data. Specific measures were taken in order to guarantee data protection. Collected data was kept in a locked filing cabinet in the lead supervisor's office. Semi-structured interviews were transcribed verbatim by myself and then stored on a password protected file. Shortly after analysis, the data collected was to be destroyed. No participants would be identified in any consequent publication.

4. The worthiness of the project.

Participants could express themselves freely and without time constraints. Due to the nature of interviews (semi-structured, and sometimes unstructured), the research topics were widely discussed. Also, feelings of loneliness and fear (of dying, suffering, having to move to another house due to physical constraints) were discussed. Thus, this research had a larger significance, meaning that it aimed at studying issues related to the use of Telecare from the older user's perspective. The participants had also the chance to express their feelings about 'care' and 'home'.

4.8.5 Payment to participants

Participants were not offered any payment or incentive. According to Long and Johnson (2007), it is common to inform participants that, whilst they may not benefit personally from their involvement, the study findings may benefit other people. My research project is consistent with the situation described by Long and Johnson (2007) who state that 'the study findings may inform practices used with future users of health and social care services to their advantage' (Long and Johnson, 2007, p. 15). In other words, in the future some people might benefit from their participation in the research. As my research was conducted inside the participants' homes participants did not incur any transportation costs. Also, I preferred not to risk an inappropriate inducement to take part in the research project.

4.8.6 Feedback to participants and final considerations

In view of safeguarding ethical principles as much as possible, participants received feedback on two occasions: after the end of fieldwork and after the end of analysis. The first kind of feedback took the form of a personalized thank you letter (Appendix J), sent to every participant by regular mail, with the scope of thanking and especially ascribing meaning to interviews and observation conducted inside the participant's homes. The second feedback was embodied in the debriefing & summary of the main findings (Appendix K), a clear summary of the main findings of the research study, tailored to the characteristics of the research participants and devoid of academic terminology or jargon. Following receipt of the debriefing, a few participants contacted me by means of mobile telephone messages or calls. One person, the co-resident daughter of an older adult, felt the need to leave a message on my voicemail. The content of the message was sensitive, as the co-resident daughter wanted to inform me that her mother, who had participated in the study, had passed away approximately six months before. Feeling that the person who had left the message had been kind and considerate, I sent her a condolence note by regular mail, as previously mentioned. My understanding of what 'good research' should be and how it ought to be conducted was informed by the reciprocity of the relationship with participants. In this case, reciprocity added significant value to the quality of the research.

4.8.7 Feedback to CareLink Plus

The CareLink Plus Telecare manager received a written report, 'Older People's Experience of Telecare' (see Appendix L), whose language was adapted according to the target audience. The purpose of this report was twofold: first, it had been formally requested by the Telecare Manager before the start of the research project in order to illustrate the outcome of the research; and secondly, it provided the researcher with the opportunity to develop a diverse method of dissemination, which focused on the practical implications for policymakers and practitioners. According to The Research Ethics Guidebook (n.d.), *dissemination*, which goes beyond publication of one's own research, should aim to sow the seeds of change in policies, services, or beliefs about whoever has been studied. In this respect, the report for the Telecare local provider

becomes a way of involving all those actors involved and possibly raising questions related to the research findings.

4.9 Research participants: brief description and living situation

It was felt that the systematic, theoretical analysis of the methods applied to my study could benefit from a thorough, albeit brief, summary of my 16 research participants and their living situation. Thus, I provided a brief description of each participant (see Appendix M), focusing on the following aspects: demographics, living situation, home, assistive devices, and Telecare.

4.10 Conclusion

This study explores how a small group of older people have come to adopt Telecare in their homes and whether Telecare changes the meanings and experiences of 'home' and 'care'. The theoretical framework I chose, the domestication of technology theory, required a qualitative approach. In particular, I explored meanings and experiences of older people in an everyday context through the lens of symbolic interactionism. The research tools I used for analysing my qualitative data (in-depth interviews, observation and opportunistic interviews) was thematic analysis, which I considered appropriate to my theoretical position and my 'quasi-ethnographic' approach. Data collection, data analysis and data management were informed by a significant body of literature. More specifically, the work of Braun and Clarke (2006) and Wolcott (1994) contributed to the unfolding and the 'making sense' of a large amount of qualitative data. The use of a software specifically designed for qualitative data analysis helped me in the initial management of my data, when I used a theory-driven approach. This chapter also discussed issues of reliability, validity and generalisability in qualitative research. Then, I turned to ethical issues such as the feedback to research participants and the Telecare provider. The following three chapters (Chapter Five, Six and Seven) are the analysis chapters. They will discuss the domestication of Telecare; meanings and experiences of 'home' for older people; and meanings and experiences of 'care' for older people.

Chapter Five

The domestication of Telecare

5.1 Introduction

The domestication of technology theory combines science and technology studies and media studies and describes the processes by which a new technology is ‘tamed’ or appropriated by its users. Initially, ‘domestication’ was used by Silverstone *et al.* (1992) to understand the adoption of new media technologies in the ‘90s, such as television, videos and computers.

By domestication I mean something quite akin to the domestication of the wild animal: that is a process by which such an animal is accustomed ‘to live under the care and near the habitations of man’, a process of taming and bringing under control, a process of making or settling as ‘a member of the household; to cause to be at home; to naturalize’ (OED). (Silverstone, 1994, p. 83)

By using the domestication theory, I am aiming to bring a deeper understanding of technology issues to social gerontologists and trying to get them to think more critically about technology. In fact, I identified a gap in the understanding of the relation between older user and technology, Telecare in particular. ‘Domestication’ will allow me to explore in an everyday context (older peoples’ homes) the factors which shape the ‘domestication’ of Telecare.

Guided by the domestication framework, I investigated whether and how Telecare changes the meanings and experiences of ‘home’ and ‘care’ for older people. In contrast with media technologies, which can be used for entertainment, education, business and the like, Telecare is used mainly for health and social care purposes. Data for this chapter were analysed using a specific framework, the four phases of the domestication theory. As to overcome the risk of presenting data too concisely, and at the expense of clarity, each stage of domestication: 1) *appropriation*; 2) *objectification*; 3) *incorporation* and 4) *conversion* was analysed separately.

5.2 The *appropriation* of Telecare

According to Silverstone *et al.* (1992, p. 21), ‘an object – a technology, a message – is appropriated at the point at which it is sold, at the point at which it leaves the world of commodity and the generalized system of equivalence and exchange, and is taken possession of by an individual or household and owned. It is through their *appropriation* that artefacts become authentic (commodities become objects) and achieve significance’.

Things also tell us who we are, not in words, but by embodying our intentions. In our everyday traffic of existence, we can also learn about ourselves from objects, almost as much as from people. (Csikszentmihalyi & Rochberg-Halton, 1981, p. 81)

Telecare devices, whose basic package consists of an alarm unit and a pendant alarm (for an extensive description of Telecare items see Table 2, p. 99), might send a message about the self of those people who use them. In this respect, Csikszentmihalyi & Rochberg-Halton claim that ‘the most basic information about ourselves as human beings – the fact that we *are* human – has been traditionally conveyed to us by the use of artefacts’ (Csikszentmihalyi & Rochberg-Halton, 1981, p. 92). In the case of Telecare devices, the message about the self might be the need to feel safe at home or feel independent. But these artefacts, although being ‘material’ also have a social life and are socially created. They also display a sociomateriality. In fact, they are socially created and have a social life, a vitality, of their own. In this respect, Oudshoorn and Pinch, referring to the cultural and media studies, ‘articulate a perspective on user-technology relations that emphasize the role of technological objects in creating and shaping social identities, social life and culture at large’ (Oudshoorn and Pinch, 2003, p. 14). Telecare might also be thought of as a care network. Such a network would comprise Telecare items, which might be active or passive (for example, while the last generation of alarm pendant, the so-called fall pendant, can trigger on itself in case of fall, the least recent pendant needs the user’s active intervention), the Telecare provider (the Telecare staff who work on shifts at a monitoring centre and also install/uninstall Telecare devices and take care of their maintenance) and all those involved in older people’s care – leave the world of commodities (basic goods used in commerce) and enter the household, to become embedded in the practice of care. The object, once in the

household, acquires meanings, which are not necessarily the same as those found in the world outside the boundaries of the household. In other words, Telecare has been considered not only as a sum of those devices and sensors which aim to connect the home in which it has been installed, but as a care network, in which technology and health professionals provide care to older and frail adults living in their own home. The 'object' of study (Telecare) will be studied using the domestication theory, which is particularly appropriate to study what users, in this case Telecare users, do with technology once at home.

In this study, research participants are 'appropriating' Telecare, which is different from other technologies in a number of ways. To begin with, Telecare devices are not usually bought on the market, as are laptops or mobile telephones, but they are rented from the Telecare provider. Since April 2015, when the Care Act was introduced, eligibility for care and support services were modified (see Brighton & Hove City Council, n.d.). Older people might be eligible for Adult social care services; in order to evaluate eligibility a need assessment will be carried out by City Council social services. Should older individuals be eligible to receive support at home, they can be provided with equipment and home adaptations and also Telecare. According to the assessment's outcome, older people will be provided home adaptations and Telecare for free or they will have to pay for care and support. The point here is not to deny that the Telecare system is ever bought on or offline, but to underline how users, who are generally older people, usually rent it, probably because this might have been the recommendation of their care network (e.g. medical doctors or social services). This was confirmed by my participants, as will be explained later in this section. The process of determining eligibility implies that users have not, most of the time, actively chosen to have Telecare devices. However, things are not so straightforward. In fact, 'in the process of domestication, technologies become familiar, but [they] also develop and change' (Silverstone & Haddon, 1996, p 60). This implies that older people are not passive consumers of technology, but 'elders [who] creatively utilize technological artefacts to make them more suitable for their needs even in the face of technological design and availability constraints' (Joyce and Loe, 2010, p. 172). Nevertheless, Telecare

differentiates from other technologies as it is usually acquired for health reasons¹⁴. Analysing how Telecare has been ‘appropriated’ by older people, I identified three factors: 1) triggering events or processes; 2) the role of neighbours, friends, family, and more formal (care) networks and 3) the significance of specific Telecare devices (choice of). These features relate objects to what the trigger for ‘appropriating’ Telecare was, who was involved in the decision to ‘appropriate’ Telecare, what devices were installed, and what kind of meanings people gave towards the ‘appropriation’ of Telecare.

5.2.1 Triggering events or processes

While older people shared similar reasons for registering for Telecare (health issues), not all Telecare acquisition is ‘triggered’ by a single event. Rather, older people acquired Telecare as a result of a process – most commonly a gradual deterioration of health, often associated with a long-term health condition, such as epilepsy, type 2 diabetes, multiple sclerosis, heart disease, chronic lung disease, joint pain and autoimmune diseases. Besides physical health issues, feelings of vulnerability and loneliness were also understood as processes which led to the registration for Telecare.

In the passage below Jane, 88, explains how the gradual deterioration of her health led her to install her Telecare Services.

‘It’s quite a while now. When I, I had a fall, and, erm, broke my wrist, and, hem...And... had a lot of problems, because they wanted, they wanted to put a plate in, and I had to lay flat on my back, and I’ve got all twisted spines, I couldn’t lie on my back, I [indistinct word] felt sick every time. [...] So they had to it heal itself, but when I was, when I came out of hospital went home after a few weeks, I had lost confidence in walking, so I had, you know, they [social services] wanted me to answer, they [social services] showed me...’

Jane revealed that her ‘appropriation’ of Telecare was triggered by a process which

¹⁴ Telecare may also be installed in case of domestic violence issues or to allow those who suffer from learning disabilities to live independently.

began with her experiencing a number of physical health issues, such as a broken wrist and back problems, and then escalated into walking difficulties. In particular, the mobility problem seemed to have increased the Jane's frailty. However, it was only following hospital discharge that social services suggested that she register for Telecare. A possible interpretation of this suggestion was the increased need for safety after Jane's discharge from a health care institution.

Helen, 70, had started to use Telecare many years before the study period, due to her long-life illness, multiple sclerosis. Her condition caused serious disability and worsened progressively, therefore Helen would not be able to keep on living on her own. Helen's living arrangements were seriously influenced by her life-long illness and the progressive worsening of her mobility. During home visits, she recalled that, as she started experiencing dexterity problems she could not push the alarm button in an emergency situation:

'I had a stroke. And when I woke up, I lay for seven hours, right, because I couldn't press the button. Erm, that's why when I come out of hospital I asked if there's anything from [local Telecare provider] that I can use so, to help me to get through to [local Telecare provider]. And they come up with this idea. You either blow it. Or you draw it in, draw it in. It's called 'Sip or Puff'. Yeah. So, you either blow down it, or blow into it or blow out, or draw it out. Yeah.'

Telecare use was also triggered by a series of adverse events such as repeated falls, which proved to be quite common as the majority of older adults explained that they had fallen at different times. Among them Emily (91), Hannah (95), John (61), Jennifer (83) and Doris (88) had experienced serious falls causing bone fractures (broken wrist, shoulder or hip). Other participants, such as Katherine (81), Helen (70), and John (61) had suffered heart attack or heart disease. For example, Katherine and Helen had experienced strokes, while John suffered two 'electrical attacks'. Two research participants had had or were waiting to have surgery: Jennifer (83) had surgery on one of her fingers during the field work, while Benjamin (65) was on a waiting list for a colostomy and had already had a temporary colostomy.

In contrast with physical health issues, Jack (82) explained how the death of his partner two years previously had made him feel more vulnerable. Most likely the process of grieving as well as his changed living situation (cohabiting with his partner and then living on his own) made him feel more unsafe. This is a possible interpretation of the passage below:

I: So that's why (indistinct words). Why did you decide to get this Telecare, or did the GP, somebody...suggest it...?

Jack: Well, no...I, er, my partner died about 2 years ago...

I: Oh sorry.

Jack: And I had a very bad time.

I: OK.

Jack: And, um, I had all sorts of...anyway, I was very ill for about a year.

I: OK. Ah-ha.

Jack: And, so, being on my own...

I: OK.

Jack: I decided to do it.

Jack experienced health issues ever since the death of his partner. The claim that 'older people are especially vulnerable to loneliness and social isolation – and it can have a serious effect on health' (NHS Choices, n.d.a) appears to be in line with my findings, which suggest that health issues, both physical and psychological (such as bereavement), intertwine with older peoples' frailty and can trigger the appropriation of Telecare.

5.2.2 The role of neighbours, friends, family and more formal (care) networks

Telecare is being 'appropriated' by the older people who use it but also, arguably, by all those who are part of the individual's care network. First of all, older people's acquisition of Telecare was influenced from the very beginning by their social networks, meaning friends or neighbours. For example, one participant, Ingrid, revealed how her relatives had contacted a health professional in order to install Telecare in her

home. They had probably suggested that Ingrid adopt Telecare as they were aware of the technology because Ingrid's sister-in-law already used it. Similarly, Claire and Jack decided to adopt Telecare following, respectively, neighbours' and friends' suggestions. Another participant, Craig, had decided to install Telecare of his own free will, following his participation in a local Telecare event. The majority of participants had been recommended Telecare either by social services or by their general practitioners or other health professionals such as rheumatoid nurses in Fiona's case. This finding seems to suggest that the acquisition of Telecare is strictly influenced by social service workers or medical doctors, and therefore by formal networks, leaving more informal social connections such as families, friends and neighbours in background. Yet, the latter play a much more significant role in the *appropriation* of Telecare. In order to be installed, Telecare needs at least two keyholders, who are family members, friends, or neighbours. Those participants who had close relatives such as adult children or spouses had nominated at least one of them (exception made for those adult children who lived far away) as keyholder. Older people who had no close relatives relied on neighbours, which appeared to be as the most represented group, as 5 participants had nominated them as keyholders. Three other participants had nominated their friends as keyholders. However, even more formal acquaintances such as caretakers and home care providers acted as keyholders for 6 participants, equally divided between caretakers and care providers. The only participant who lived in a housing facility with round the clock onsite care left a spare key with her home care provider and another with the facility. This description shows that, in order for Telecare to be 'appropriated', both an informal and formal care network needs to be mobilized. The acquisition of Telecare appears to be strictly linked to the availability of an informal care network – which might comprise family, friends or neighbours – probably because Telecare changes its status from a suggested care technology into a real form of care, which enters the boundaries of older people's homes. Without such a network, Telecare could not be adopted. Although the installation of this care technology could happen even without the two keyholders – a key safe could replace them – the actual delivery of care does imply the interaction among multiple 'care' actors. In fact, in order for Telecare to work, the Telecare provider staff, formal and informal caregivers, paramedics (in case of need) have to interface. The examples above were included to provide a better understanding of how Telecare is 'appropriated'. My argument is that, while in my study the adoption of Telecare was being triggered by social services or health professionals, the actual

appropriation of this technology needs the participation of neighbours, friends and family.

5.2.3 The significance of specific Telecare devices (choice of)

Another factor influencing what the appropriation of Telecare looks like is the actual device or devices being acquired. Older people are ‘appropriating’ at least the home unit alarm and the alarm pendant, which are specific Telecare devices and constitute the basic Telecare items. Furthermore, Telecare users need to have either two or more nominated keyholders (usually neighbours, friends, or adult children) or a key safe (a secure metal box). Keyholders have a copy of the older people’s home keys and can be called at any time in an emergency to provide access to the home. In this respect, the relevance of a network of care, of which keyholders are part, emerges clearly in the *appropriation* process. Should it not be possible to have two keyholders, Telecare users must have a key safe, usually wall-mounted, which is secured next to the older people’s front doors. Single or double copies of the home keys are placed inside but can only be retrieved by someone who knows the correct code to open the box, such as the local care provider staff, family, friends or neighbours. Besides the above basic devices, most participants had additional devices such as those which provided safety from fire, gas leaks and flood. The local Telecare provider, CareLink Plus, provides the alarm unit and the alarm pendant. The latter can be wrist-worn or neck-worn. Other devices can be supplied by the Telecare provider, according to the specific health needs of the older person.

Carl (72) suffered from epilepsy seizures. In consideration of his long-term illness, his bedroom had been equipped with a ‘bed sensor’ and other devices specifically designed to give peace of mind to him and his wife. Another participant, Helen, who was affected by multiple sclerosis and had reduced dexterity, had been supplied with the ‘easy press’, a device that fits onto the pendant alarm button and makes it very easy to activate; a ‘pull cord’, fixed to the ceiling of her bedroom, in order to make an alarm call more easily; and the ‘sip-and-puff’, a device that uses air pressure by “sipping” (inhaling) or “puffing” (exhaling) on a straw; and the ‘smoke detector’. Uncommon devices (among the participants of this study), in particular the ‘bed sensor’ and the ‘sip and puff’, shape

the appropriation of Telecare in different ways from the basic device, the alarm pendant. The older users who ‘appropriated’ them displayed more agency towards the devices, that is on what they are, how they work, and how they can shape their daily lives. In the passage below, Helen and one of her best friends Patricia (who was visiting her at the time of my first visit), show me how the ‘sip and puff’ works and how it can get Helen in touch with the Telecare provider:

Helen: Shall I show you how it works?

I: Yeah, I mean if you don't mind, it's interesting.

Helen comes into the bedroom to show me how the device works.

[...]

Helen: Good job you come round. You've got your uses, haven't you? Ooh. Right. You might have to come round there a bit. Ah, you are good. I can sing to you (laughs).

Patricia: It's not near your mouth, is it?

Helen: No. It will be.

Long pause. Then you hear an automated response from CareLink [the Telecare provider]

Helen: Open that door Patricia, if you can.

Patricia: Which door?

Helen: This.

You hear the device dialling.

Helen: No, slide it.

Patricia: Ah.

Helen: That's it.

More dialling noises.

Helen: Are you impressed by that?

I: Incredible.

Interestingly, Helen addresses the ‘sip and puff’ device in a way which let me understand that she considers this object like a ‘technological’ friend, about which she can make jokes. Thus, care provided by a technological device can be as good as the care provided by a physical carer. Of interest here is the analogy with Pols and Moser (2009)’s Health Buddy, which provided safety to patients with chronic obstructive

pulmonary disease (COPD) and was defined by one of the study participants as her ‘body guard’ or ‘buddy guard’. I also observed that the chronic health conditions (epilepsy and multiple sclerosis, respectively) of those participants who used, respectively, the bed sensor and the ‘sip and puff’, prevented them from adopting those devices acritically and passively. In fact, such conditions probably increased those older individuals’ interest towards an understanding of how those particular Telecare items could affect their lives, as well as their formal and informal carers’ lives. Table 2 below shows the different Telecare devices used by research participants.

Name	Age	Keyholders	Key safe	Alarm unit	Falls pendant	Amie pendant	Pull cord	Easy press	Smoke detector	Carbon monoxide detector	Flood detector
Katherine	81	Her adult children, her caretaker		✓		Neck-worn			✓		
John	61	His neighbour	✓	✓		Neck-worn and wrist-worn			✓		
Jennifer	83	Her home care provider and her neighbour		✓		Wrist-worn			✓	✓	
Benjamin	65	His caretaker, his friends	✓	✓		Neck-worn	✓		✓	✓	
Jane	88	Her co-resident daughter	✓	✓	Neck-worn				✓		
Carl	72	His wife	✓	✓	Neck-worn				✓		
Fiona	67	Her husband		✓		Neck-worn			✓		✓
Helen	70	Her home care provider, the facility she lives in		✓		Neck-worn	✓	✓	✓	✓	
Craig	84	His neighbour		✓		Neck-worn			✓		✓
Claire	93	Her caretaker		✓	Neck-worn				✓	✓	
Jack	82	His friends (3 people)	✓	✓		Neck-worn			✓		
Rebecca	94	Her son	✓	✓		Neck-worn			✓		
Ingrid	79	Her neighbours (3 people)	✓	✓		Neck-worn			✓	✓	
Hannah	95	Her neighbours (3 people)		✓		Neck-worn		✓	✓		
Karen	86	Her temporary co-resident friend	✓	✓		Neck-worn			✓		
Emily	91	Her home carer	✓	✓		Neck-worn			✓		

Table 2. The Telecare package: the basic devices

The *appropriation* of Telecare for this group of older people was shaped by the following factors: 1) triggering events or processes; 2) the role of neighbours, friends, family, and more formal (care) networks and 3) the significance of specific Telecare devices (choice of). I will now turn to the second stage of the domestication of Telecare: *objectification*.

5.3 The *objectification* of Telecare

If appropriation reveals itself in possession and ownership, objectification reveals itself in display and in turn reveals the classificatory principles that inform a household's sense of itself and its place in the world. (see Czikszenmihalyi and Rochberg-Halton, 1981, in Silverstone, 1994, p. 127)

The theoretical position of Silverstone towards physical artefacts (in this case, Telecare items) 'identifies in their arrangement and display, as well in their construction and in the creation of the environment for their display, [...] an *objectification* of the values, the aesthetic and the cognitive universe of those who feel comfortable, with them' (Silverstone, 1994, pp. 127-128). In other words, artefacts might express the values, tastes or style of older users through their display in the home. But Silverstone goes beyond the pure materiality of objectification. He claims that 'objectification is not, of course, confined to material objects' (Silverstone, 1994, p. 128). Significantly, he was referring to the objectification of television, which is a media, and most of all, a piece of technology very different from Telecare devices. In fact, the Telecare system, whose network includes Telecare devices, Telecare staff members, keyholders, neighbours, friends and family, home carers, health practitioners and potentially all those who might be aware of Telecare, does not appear to be 'objectified' in a similar way. More specifically, the older people visited (most of them) seemed to be reticent, or at least discrete, when displaying their alarm unit, alarm pendant, or smoke detector for example. The location of Telecare devices (both fixed and portable) was identified as the factor which shaped the *objectification* of Telecare devices.

5.3.1 Location of Telecare devices (both fixed and portable)

In line with Silverstone et al.'s understanding of media technologies, it was found that the location of Telecare devices, or 'the physical disposition of objects in the spatial environment of the home (or in extensions of the home)' (Silverstone et al., 1992, p. 22) to be important to participants. Location appears to be related to whether there were fixed devices or portable (wearable) devices. Some Telecare items are fixed, such as the alarm unit, which needs to be plugged into the telephone line, or the carbon monoxide detector, or the smoke detector, which are usually located either in the kitchen or in the corridor, or in the living room. However, other devices are portable, or wearable. Among them, the alarm pendant, which by definition can be neck-worn, or wrist-worn, or even pinned up (to a sweater, for example), or the easy-press, a transparent adapter which increases the area which can be pressed by the user. These items can be worn or placed (or even forgotten) on the bed, in the living room, or purposely placed on a table or assistive devices such as a rollator walker with the table. This means that users have some agency about where to 'display' these devices.

The difference between fixed devices and wearable devices appears to be not only technical but more substantial. Telecare items such as the smoke detector or the carbon monoxide detector are similar to conventional smoke detectors and carbon monoxide detectors and do not require any kind of 'engagement' or 'action' from the users. Once those devices have been ceiling-mounted, no further action is required by the users, who can actually forget about their existence. Thus, they might be defined as 'passive' devices whose visibility is limited. When activated by fire or carbon monoxide leak, respectively, they will send an alarm call through to the monitoring centre. The alarm unit, which is the basic unit of Telecare, is another fixed device, which needs to be connected to a pre-existing telephone plug, and therefore theoretically close to the landline, although sometimes it can be located in less obvious parts of the home. For example, Claire (93) hid it on the top of her kitchen furniture, with the cable pulling from the bottom upwards. Instead, Fiona (67) kept the alarm unit 'under the chair'. This location is not as unusual as it might appear at a first sight. As a matter of fact, a few participants, among them Fiona, admitted that they preferred to locate the alarm unit discretely. 'Discretely' meant in

neither an obvious nor practical location, such as a small table or console for the telephone, that might be positioned in different areas of the home, such as the living room, the kitchen, the corridor, and the bedroom. The need to locate the alarm unit far away from the gaze of friends and neighbours who might be visiting might be interpreted as being related to the stigma associated to the use of Telecare, at least for Claire and Fiona. In contrast with the smoke detector and the carbon monoxide detector, which are more similar to conventional pieces of technology and are becoming increasingly common in the UK homes (in 2015 ‘90% of homes had [a smoke detector] installed (Department of Communities and local government, 2015)), the alarm unit, which is installed only in Telecare users’ homes, might symbolise frailness and vulnerability. For this reason, older people might tend to display it more discretely. Jack (82) is another good example here. He hid the alarm unit under different objects located in his living room. Another possible reason why older people might hide such a substantial Telecare device might be the design of the non-customisable alarm unit which comes with no-frills design. Jack and Claire, both of whom seemed to pay attention to the appearance of their home – both of them displayed antiques and paintings – had foregrounded ‘aesthetics’ instead of the safety and peace of mind provided by Telecare. In this regard, the home environment can be defined aesthetically, either visually (shape, colour, style, etc.) or aurally (sound); these features, which define the appearance of the home, could be modified, or even disrupted by Telecare, for the reason that technology devices, in particular, are designed by suppliers who are not necessarily thinking about the aesthetics of devices. For example, the Telecare provider studied in my research provided a non-customisable alarm pendant: neither the design nor the sound of the alarm pendant could be customised; the different ‘generations’ of the alarm unit, despite the different ‘restyling’ (for an overview of the basic Telecare package provided by CareLink plus see the CareLink Plus Leaflet, 2016) still look similar to wireless modem routers. Thus the ‘materiality’ of Telecare items, which translates into the technological devices as design, might not please the users.

Turning now to portable devices, wearable devices such as the alarm pendant, might be ‘passive’ or ‘active’. The last generation of alarm, the falls pendant, so called because it can detect falls while they are happening, is a ‘passive’ device as it does not require user action. However, it might be claimed that, in order for the

alarm to work, the user still needs to wear it so there is an element of user agency even here. In contrast, the ‘amie pendant’, the previous generation of alarms, is an ‘active’ device. This alarm needs to be activated by the user, by pressing the red button, located on the device. This feature might explain why sometimes older people ‘forget’ to press the alarm, as suggested by Jack (82) as explained in the section on the relations between Telecare and (older) user, in Chapter 5.5. Or, they cannot press it, due to dexterity issues. That is why Telecare users can add an extra layer to their ‘active’ alarm, the so called ‘easy press’, which makes pressing the button easier. Wearable or portable devices such as alarm pendants allow more agency, as Fiona explains:

‘Yes, it’s [the alarm pendant] on my bed at the moment, um... When, um, when David [Fiona’s husband] goes out I automatically put it straight on...’.

This excerpt points out that wearable devices are mobile as they move with the user. Far from being trivial, this observation highlights how the user can have agency. For example, he or she can wear the device but can also decide to place it at the moment on the bed, or in another place in the home. This second choice might be for different reasons. When Fiona’s husband, on whom she profoundly relied on, was at home, she felt safe without wearing the alarm pendant. The reasons that might induce older people not to use Telecare devices will be discussed in the section about the ‘incorporation’ of Telecare. The passage, however, is very meaningful in relation to the provision of care, and how it might influence the use of Telecare. Fiona’s husband acted as both informal care provider and care recipient (during interviews and opportunistic conversations Fiona mentioned that she took care of her husband) and was so reassuring that Fiona did not feel the need to wear her pendant when he was at home. In contrast, Hannah (95) lived on her own and perceived the alarm pendant as a device to be worn with no exceptions:

‘I’ve got it always on there. Except when I go out in the back garden. I put it on then ... So, I’ve always got it there with me. And, I, I take it to bed at night with me and hang it on the side of the bed (laughs)’.

Helen (70) showed that her alarm pendant's appearance (clean) was relevant, as she explained that: *'I leave mine [alarm pendant] over there [on her electric wheelchair] cos mine's a bit grubby at the moment'*. This finding arrived quite unexpectedly, as the cleanliness (or not) of Telecare items had not yet been considered as an element which might exercise an influence on the decision to wear (or not wear) the pendant. The *objectification* of Telecare seemed to be shaped by one factor, the location of Telecare devices (both fixed and portable). I will now turn to the third stage of the domestication of Telecare, *incorporation*.

5.4 The *incorporation* of Telecare

'Through the idea of incorporation, we want to focus attention on the ways in which objects, especially technologies, are used. Technologies are functional [...]. To become functional a technology has to find a place within the moral economy of the household, specifically in terms of its incorporation into the routines of daily life' (Silverstone *et al.*, 1992, p. 24).

Domestication involves not only *appropriation* (the actual purchase), *objectification* (where the item purchased has been located) but the *incorporation* of this technological object into the household. In other words, understanding what users do with technologies. And how users, through their interaction with technology, through their 'taming' of it, can construct a meaning (Hynes, 2007). In what ways do household members incorporate an object into their everyday practices? I identified two factors which shaped the *incorporation* of Telecare: relations between Telecare and (older) user; and Telecare technical issues.

5.4.1 Relations between Telecare and (older) user

Oudshoorn and Pinch (2003) underline that users and technologies are often viewed as separate objects of research and have instead aimed at considering them as two sides of the same problem. Among the different approaches to user-technology relations, the one developed by cultural and media studies focuses on the

importance of studying users ‘from the very beginning’ (Oudshoorn and Pinch, 2003, p. 11). In this respect, domestication processes study the use of technology in a specific location, the household, which becomes the place in which the relationship between user and technology will take place. And it is inside the home that technology, as described in the beginning of this chapter, is *appropriated*, *objectified*, *incorporated* and *converted*. Inside the home the user is seen as a part of a much broader set of relations than user-machine interactions, including [the] social, cultural and economic aspect’ (Oudshoorn and Pinch, 2003, p. 15). More recently, Oudshoorn focussed again on location as important in shaping user-technology relations. In fact, places shape how technological devices are used and contribute to redefine the meaning and practices of the spaces in which they are used and introduce new spaces in which people and objects interact. (Oudshoorn, 2011, p. 23). In my research, which is studying how Telecare is ‘domesticated’, and in this dedicated section, how it is incorporated and used, it seems relevant to consider the user as being old and frail. In fact, this specific user is using Telecare, which is a technology used by those who suffer from health issues. And in which circumstances do older people use (or not) Telecare and why?

In order to answer this question, the focus needs to be on the relationship developed between user and technology. On this matter, Pols and Moser claim that ‘in order to create affective ties, the technology needs to *bring something of value* to the user. There are different values one may hold dear, but a characteristic of values is that they are affective and motivating: values like “beauty”, “freedom”, “health” or “friendship” may move people into doing things, such as adopting and using technologies’ (Pols and Moser, 2009, p. 166). Similarly, values and affective ties relate to the moral economy of Telecare. Drawing on Silverstone *et al.*, who define ‘the household [as] a moral economy because it is both an economic unit, which is involved, through the productive and consumptive activities of its members, in the public economy, and at the same time is a complex unit in its own terms’ (Silverstone *et al.*, 1992, p. 18), I considered Telecare as a moral economy because it is both an economic unit, involved through the activities of its members (Telecare older users) within the household (the place in which the domestication of this technology takes place) and in the wider world it is defined and informed by a set of values (safety, security, independence, and peace of mind), which are themselves defined and informed by the Telecare users’ past historical events

and individual circumstances .

I will now turn to the circumstances in which older people used the basic device, the alarm pendant. With regard to this, the wearing of, and therefore potential use of the alarm pendant, seemed to be shaped by the availability of alternative forms of care, such as family. Those participants who lived with their spouse or adult child(ren) affirmed that they would not wear the pendant when their partners or children were at home. Two participants, Carl and Fiona, would wear the alarm only when their spouses were not at home. Another respondent, Jane, living with one of her adult children, behaved similarly; she made use of the pendant ‘...when she [*Jane’s daughter*] is not at home’. It appeared that participants decide to wear the basic Telecare device, the one which provides safety in case of falls or other health issues, only when they were concerned about their safety, and not just because they had installed Telecare and therefore felt they were supposed to use it. Non-use of the alarm pendant seems therefore linked to the presence of alternative forms of care. In fact, being at home with another person (partner or adult child), increases the feeling of safety, whether or not the other individual has health issues. This claim was supported by Fiona, whose husband suffered from strokes. Fiona explained that when her husband was not feeling well, she did press the button for her husband. Thus, remote care assistance seems, when co-present with care in person, (partner or adult child in the previous examples), to be used when the latter is not available.

As previously noted, Telecare devices were used with respect to the alarm unit and the alarm pendant only. There are 3 main reasons for triggering the alarm:

1. testing and maintenance
2. emergency help for oneself
3. calling for help for others

1. Testing and maintenance

Each month older people were required to make a test call to their Telecare provider by pressing their pendant. At that point, the monitoring centre would answer their call, speak to them and close the call appropriately as a test call. If the alarm pendant battery was running low, the test call would trigger a silent low battery alert

to the monitoring centre, enabling it to arrange a Telecare worker to come out and change the battery (free of charge) at the older person's home. Testing and maintenance was a significant event for a number of reasons:

1. It made sure that Telecare devices worked properly
2. It created the opportunity for older people to interact with Telecare workers
3. It created a routine

I will now deal with each reason separately. In order for Telecare to work properly, devices must be tested on a regular basis (in this case, monthly). Testing allows the provider to verify the correct functioning of the alarm pendant, checking batteries for example, thus making sure that the device would trigger an alarm in case of emergency. The second point, the interaction between older people and Telecare workers, is relevant for a number of reasons. During the test call, older people are prompted to communicate to the Telecare workers any change in their living situation. In particular, older people are required to confirm their address, the keyholders' names and addresses (see above) and the contact address of their general practitioner. Furthermore, they have to inform Telecare workers whether they will temporarily (or not) leave their home (e.g. in case of a doctor's appointment, a consultation with a specialist, or a pre-scheduled hospitalisation). Besides these formal requests of updating all useful contact information, in my study the monthly test call was an opportunity for older people, most of them living on their own and not having many chances to interact with other people, to have a chat with Telecare workers. These chats were also understood as a 'shared' process, in which Telecare workers and older people shared meanings and experiences of Telecare. Furthermore, one of the possible outcomes of the monthly testing is the booking of an appointment with one of the Telecare workers, who came to the home to replace batteries or, in case of a malfunctioning device, replace it with a new one.

Roberts *et al.* suggest that 'Teleoperators attempt to build relationships via the system and when there is a requirement to make weekly test calls to make sure the equipment is working, this can lead to formation of emotional attachments' (Robert *et al.*, 2012, p. 498). Confirming the literature, I claim that the regular testing of Telecare, and

consequently, the regular contact between older people and Telecare workers, can lead to the development of a relationship of trust between the older person and the Telecare worker. Second of all, the monthly test provides peace of mind to older people, as it guarantees a response from the Telecare system. It seems relevant to highlight that, should older people forget to test the Telecare equipment, the Telecare provider would contact them. It could be speculated that this ‘forgetfulness’ might be a form of ambivalence towards the incorporation of Telecare. Finally, the monthly scheduled Telecare testing is a routinised process, which eases the process of incorporation of this technology in older people’s households. The regular testing and maintenance seemed to follow a common pattern for the majority of older people. However, a few participants conducted the testing in different ways. Claire (93) was one of such participants. While Telecare users are supposed to call the Telecare provider by pressing the alarm pendant or the alarm unit, Claire used her telephone. This unusual behaviour was explained in the account below:

Claire: Yeah, I just phone them.

I: Ah.

Claire: Well I phone the number of CareLink [the Telecare provider]

I: Ah so the long number.

Claire: Well, the number that’s in my book.

I: I see! Because you can actually just push that down.

Claire: I didn’t know that. No, no.

Claire seemed to be unaware of the procedure suggested by the Telecare provider to test her equipment (just pressing the alarm button or the alarm unit button) and therefore she called the provider using her landline. Claire had incomplete knowledge about scheduled maintenance: she knew that she had it to complete it but she carried it on following a different ‘script’ (using the telephone instead of the alarm pendant or alarm unit) from the one ‘written’ by the Telecare by the developers and, ultimately, by the Telecare provider. However, although Claire’s alleged ‘misuse’ of the testing process might have suggested an uncomplete incorporation of Telecare, the latter had found a place in the moral economy of the household specifically in terms of its incorporation into the routines of everyday life. As a matter of fact, Claire had found her own way of coping with the monthly maintenance. More clearly, she had modified the original

'script' of one particular Telecare device (the pendant) and had decided to use another technological item, the telephone, to perform the monthly Telecare testing.

Other participants such as Craig (84), Jane's daughter, and Ingrid (79), seemed to strictly follow the maintenance protocol. Craig looked like a disciplined user: *'Look, I've got to test it, so I'll test it now... Cos every month I test it... And I haven't tested it for August'*. Jane's daughter was more articulate in her explanation: *'Every month, we, er, press the button and they respond straight away. And then they press the bathroom one [the shower pendant] as well'*. Her mother confirms this adding that *'it depends, because then sometimes if you are not satisfied with something, they'll [Telecare provider staff members] come and change it...you know'*. As for Ingrid, she provided a detailed account of her maintenance experience with the Telecare provider: *'... I tested it [the Telecare system] about, about a week ago I think it was...I might have written it...I've got a thing where I'm supposed to write it down. I don't always remember to write it down, but um. Er, the 7th October... And they [Telecare provider monitor centre] answer, and you say it's testing...And they say, "oh your bell's [the alarm pendant] working alright, are there any changes to your people [the nominated keyholders] people that we call? ... Everything's alright"'*.

Ingrid, among only a few other participants, kept note of the exact day in which she had to test Telecare. This shows how important it was for her to make sure that care at a distance worked. Ingrid and Craig not only lived on their own, but also had neither formal nor informal carers. However, Craig relied on fortnightly domestic help provided by a care agency. As for Jane (88), she lived with her adult child, who worked on a part-time basis. Thus, Jane needed to make sure that the Telecare system worked properly, as she spent daytime on her own. These accounts show that, for a number of older people, Telecare had been incorporated in their everyday lives. As a matter of fact, Jane considered the monthly testing of her equipment as an important task, which ensured that her devices worked properly (otherwise the Telecare provider would have replaced them). Craig instead identified the monthly testing as an opportunity to inform the provider about changes concerning the nominated keyholders.

Hannah, for her part, clarified that: *'Well I have to check with them [the Telecare provider] that everything's still working...oh yes, Er, sometimes I forget and then I have*

to apologise when I'm late'. Hannah seemed to be totally aware of the maintenance tasks required by the Telecare provider. In fact, she claimed: 'But they [the Telecare provider staff members] like to know that... If they haven't heard from you or had an accident... They like to know that everything's in working condition, you see... So you just press your button, let them just say, "I'm reporting in to let you know I'm alive" [laughs]... And um the button is working... And then they say "That's quite alright, thank you it's working this end" and then we're quite happy with each other'.

Hannah explained that *'so far I haven't had to have a new battery in anything because the original one I first had...in this box on the telephone [the alarm unit]...er, was bigger... And they came one day and said, "We're giving you a new box" ... And I got the new box there, which is smaller'.* In her experience, maintenance had been run smoothly from the Telecare provider, who was easily accessible (*'you just press your button...'*) and regularly updated the alarm unit to the most recent model.

2. Emergency help for oneself

Older people used Telecare in order to ask for help for themselves, and they did because technology brought something of value to them (see Pols and Moser, 2009, p. 166). For example, Telecare brought *reassurance* to one of the participants, Emily, who used her alarm pendant to call the monitoring centre and let them know that her home carer was late. In this case, Emily's emergency was not physical (she had not fallen, she was not feeling weak) but psychological as she needed to be reassured that her carer would eventually arrive.

Helen, instead, ascribed another value to Telecare - *safety*:

'I didn't wear mine one day. You can write this down...I didn't wear mine one day and I fell on the floor. I had the flu. And I'd just taken some medicine. And I was...you know when you take medicine, you're a bit drowsy. I fell on the floor, I couldn't get up. I laid on the floor for thirteen hours...Thirteen hours, from 1 o'clock in the lunchtime...Til 1 o'clock in the morning...Yeah, I laid on the floor and I, I put loud music on... And there was no way. Then my door was ajar...It wasn't locked, but somebody could have pushed it to get in, but I didn't know anyone that could do it. That was because I didn't have this [pointing to her alarm pendant] round my neck'.

Later, she added:

'But somebody did hear it [the loud music she managed to put on]. He [the neighbour below] heard it and he called the, um, the paramedics'.

Helen's account showed clearly that, for her, the alarm pendant was very useful. In her view, it was a 'lifesaver' as she might have died when she fell on the floor not wearing the alarm. She lived on her own and her disability did not allow her to get up autonomously. Thus, she had to use her survival skills in order to alert her neighbour to help her back into her wheelchair. Helen's traumatic experience led her to conclude her narrative with these words: *'Mine's [her alarm pendant] on me, mine's on me all the time'.*

Jennifer's experience with the pendant also suggests that this device made her feel safe. In fact, she described the devices as *'...wonderful. I wouldn't be without it. I wouldn't be without it...It's wonderful'*. However, she did not contextualise this claim, which was the answer to an open question about how she felt about Telecare.

Even for Craig (84), Telecare represented safety and peace of mind. Craig considered Telecare as insurance: *'It's like insurance, you know. You hope you won't need it. But you've got it'*. In Craig's view, Telecare shared with an insurance policy the characteristic of being necessary independently from its effective use. In fact, being able to count on Telecare in case of need made him feel safe. In the same way in which Craig might need an insurance policy, even though he might never use it, he needed Telecare.

Telecare embodied values such as reassurance, safety and peace of mind. However, a few participants displayed ambivalent behaviour towards the use of the alarm pendant. Jack is one such participants, as he twice forgot to trigger the alarm after falls. In contrast, he did go out wearing the alarm pendant around his neck. In the following excerpt, Jack expresses his 'forgetfulness' by suggesting that he was very scared after his two falls and thus he had focused his attention on his possible body injuries entirely:

'(Nervous laugh) Well, I fell twice...I fell twice and smashed that, that's a... new one, but smashed that... I don't know how I woke up...twice I had fallen: And I forgot about it. Totally forgot (laughs)'.

During the following visit Jack remembered what had happened after his two falls and explained why he did not press the 'button':

'There's only one thing, which is probably interesting for you. Is that, when I had a bad fall twice... You never think of using this. Because first of all, like I had a very bad fall over there... You never think of using this because you're not thinking about it... So, you've fallen... And all you do is want to... make yourself safe. So, twice it happened and twice I forgot to use this... I, I always wear it'.

Asked about how he managed to get back on his feet, Jack answered: *'I don't know, I can't remember, it was a very bad fall... And I, I just remember crawling up to here. And then, how I got upstairs later on, I don't know'.*

Later, Jack recalled his second fall: *'...Three months ago... That was, er, pretty, about the same time. Maybe a week earlier... But you can imagine... But you can imagine if you fell and hurt yourself and you're thinking 'I've got to get out of this'... You don't think of this [the alarm pendant]. You really don't. But I mean, I'm glad I have it'.*

Jack's admission of being glad to have the pendant and his claim of wearing the alarm all the time tells a different story. In other words, his behaviour of wearing but not using might account for a sort of rebellion against the alarm and what it represents or might represent an admission of frailty. Possible interpretations of his behaviour might be his attempt to negotiate the use of technology, that is wearing the pendant, but at the same time trying to keep in control and therefore not pressing the button when he should have, an expression of the illusion of being able to manage his fall, or to feel independent. For Jack, the acknowledgement of the need to install Telecare in order to feel safe but at the same time the imperative to affirm his own independence, which paradoxically might have been limited by the need of pressing the button in case of emergency, has been interpreted as a quest for independence.

3. Calling help for others

Telecare can also be used for helping other people such as family, friends or neighbours. Two older people, Fiona and Jennifer, recalled having pressed the alarm button not for themselves but for other people. While Fiona used the alarm following a potential

stroke experienced by her husband, Jennifer required the help of the Telecare provider for her neighbour who had fainted, apparently, due to substance abuse.

I will now turn to the second factor which shaped the *incorporation* of Telecare:

5.4.2 Telecare technical issues

Older people described having experienced a number of technical issues with Telecare. Interestingly, these issues provoked different feelings in different participants. A small group of older people felt inadequate or embarrassed. Hannah (95), for example, explained to me that she tested her alarm unit once or even twice a month, in case she *'accidentally touches it'*. Beyond the verbal communication, her non-verbal expression showed embarrassment when she admitted that she had involuntarily triggered a false alarm. Kathrine (81) and Helen (70) felt embarrassed about a possible such mistake. Kathrine explained: *'It's the second time I messed this up. They definitely don't mind'*, while Helen showed a similar reaction after having involuntarily triggered the alarm. A possible interpretation might be the feeling of being a burden towards the Telecare provider. Or, not being confident enough in one's organisational skills.

Another group of older people was more critical towards technical issues. Among them, John (61) recalled: *'Well when I had the original first one back...In 1994 I think. And that lasted. I never saw anybody for a couple of years, but... now it's like every sort of six months. Coming up to do a battery change. It's everything. It's like that clock there... That's a battery-operated clock. The battery only lasts 2 weeks. I mean how can you justify paying for a battery for that'*. John's last comment about the insufficient performance of batteries might be understood as a not fully expressed complaint towards the Telecare provider and the cost of care at a distance. However, behind his complaint, he hid the fact that the short battery life made him anxious, as the system would not have worked without them.

Katherine remarked that: *'They [the Telecare provider staff members], they come and change it [the battery] every month'*. She observed that: *'I mean, they [the batteries] are sort of, ehm, incredibly expensive, I think, er, this current one, it's about £150'*.

Another source of complaint concerned the over sensitivity of the smoke detector. For example, John claimed that: *'The only snag is every time I open the kitchen when I'm cooking, it sets the alarm off, so...so they're always phoning up... The smoke detector, yeah... They just say it's got to go where it's going to be most effective... You know when it's really bad when it sets the fire brigade one off as well... Because I've got one from the fire brigade and one from... Um, er... The CareLink [Telecare provider]'*.

This passage illustrates that the, apparently over sensitive, local Telecare provider smoke detector automatically sounded an alarm in John's home and sent an alarm call to the monitoring centre because it detected smoke. The monitoring centre then alerted the fire brigade. However, it was not completely clear which smoke alarm had warned the fire brigade: the one installed as part of the Telecare system or the one installed by the fire brigade. What is relevant here is John's technical problem due to the extreme sensitivity of the detector (described by him as 'a trigger-happy'). Thus, his user experience might be defined as insufficient, inadequate to his expectations (that the system works effectively).

Craig reported a similar issue, in respect to his extreme temperature sensor: *'And it's too... If the kitchen is getting too hot or too cold, and a few weeks ago, the temperature, literally, a few weeks ago, the temperature got to 40 and I was asleep, and my CareLink [the Telecare provider] care keyholder, oh, I disturbed at 6 o'clock in the morning, he comes "Are you alright?" It turned out that the ... was on that was the cold, too, so, I had to keep the living room door open when I am asleep... and ehm, [indistinct words] the heater and here we are ... The bedroom...'*

Hannah reported that her alarm pendant was over sensitive and that she had to keep it on the rollator walker: *'There I've got it hanging there because it's so sensitive now... With my arthritis... Er, I couldn't press the button properly... So they've put a shell on it... And so I don't wear it round my neck now'*. Hannah also revealed that the smoke detector, or the carbon monoxide detector (it was not clear) had been triggered by false alarm when *'...cooking bacon out there... And I forget, just walked away and let it fizzle a bit more than it should... Immediately it sets the alarm off'*.

The same kind of technical issue was recounted by Ingrid, who recalled: *'It's a... funny... toaster, and went up and smoked, and the smoke alarm went off and people*

[Telecare provider monitoring centre] kept calling, I said: "I'm trying to get this smoke out ... it's all" ... But I said: 'I can't get rid of the smoke'.

A complete different issue, allergy, was introduced by Craig. It was decided to include this as a technical issue, even though it is a health issue, because his allergy prevented him from using a particular wearable item. Craig explained that in the past, due to health issues, he could not wear his neck-worn alarm pendant, and so the Telecare provider had provided him with a wrist-worn pendant (a 'bracelet', in Craig's words), so that he could use the alarm pendant in spite of his health issue. As it was not clear from what kind of allergy Craig suffered from: *'I had a bit of um ahh um antihista, I had a bit of itching here, histamine, hay fever, and er...'*, what should be acknowledged is that the Telecare provider was able to solve the issue by replacing the neck-worn alarm with the wrist-worn alarm.

Another technical issue, device malfunction, was reported by Jane's daughter Stephanie, who mentioned that her mother's shower pendant had been replaced due to it malfunctioning. Jane added that it had been replaced three times. Other issues regarded the over sensitivity of the alarm pendant, which *'is just so fragile...but they don't mind, they are all...'*. Clearly, the pendant alarm had technical issues due to its triggering of unwanted alarms. However, the Telecare provider team members *'were not bothered by unnecessary calls'*. Jennifer (83) also reported a technical malfunction of her alarm unit: *'last week...I had to use it...Um, the machine had gone and it was making a funny noise...And er so I pressed the button and um er they [the Telecare provider staff members] came in the evening with a new one'*. Fiona highlighted that the smoke detector worked fine, remembering *'that time the bacon burnt [when] it set it off, so it works and it's checked every so often'*.

Broadly speaking, older people did not report unresolved technical issues. In fact, even when they forgot about their recommended monthly maintenance task, the Telecare provider reminded older users to get in touch with them. For example, Jack (82) once forgot to call the Telecare monitoring centre and was therefore contacted by the Telecare provider. Carl (72), who had previously installed trueCall (a telephone call filter), experienced difficulties in the Telecare instalment. These issues were eventually

solved by the same engineer who designed the Sip-and-Puff device and who visited Carl in order to fix the problem.

Ingrid experienced another technical issue, but it might be better defined as unintended consequence, as she faced this issue in quite unusual circumstances. Ingrid recalls: *'I don't know how it's worked it. On odd occasions when I go out, I keep putting it [the alarm pendant] in my bag; I don't wear it when I go out, but I put it in my bag cos in case I should fall going down to the garage...to get the car out and I think on some occasions I might have put it in the car in a bag and it might have hit against something...And gone off because on one occasion several weeks ago, the lady from two doors away was called and she came round and I wasn't here and the lady next door said, "Oh, she's just gone out." So, I must have done something as I got into the car...No no, this went as though I pressed it... Yes, and they [Telecare monitoring centre] phoned but they couldn't talk to anybody...And they worry...and they'd call my nearest person. She [her nearest keyholder] came round with the key and she got in and I wasn't here, and the next-door lady neighbour said she'd seen me go out. So, it must have hit something in my bag...And it triggered it [the alarm pendant] off...It's a false alarm call, yeah'*. Ingrid's experience of unanticipated and undesired consequences following her use of the alarm pendant outside her home distressed her. In fact, as her alarm pendant triggered a false alarm, her neighbour, acting as keyholder, was called by the Telecare provider, thus probably making feel Ingrid anxious and even guilty (for having caused distress in another person). Interestingly, although a small number of older people felt inadequate, embarrassed or distressed by the unwanted triggering of the alarm pendant, on the whole participants explained that they were not bothered by false alarms. Two factors seemed to have shaped the incorporation of Telecare: 1) relations between Telecare and (older) user: how those relations shape the wearing and the (potential) use of the alarm pendant and 2) Telecare technical issues. I will now turn to the last stage of the domestication: *conversion*.

5.5 The *conversion* of Telecare

Whereas objectification and incorporation are, principally, aspects of the internal structure of the household, conversion, like appropriation, defines the relationship

between the household and the outside world – the boundary across which artefacts and meanings, texts and technologies, pass as the household defines and claims for itself and its members a status in the neighbourhood, work and peer groups in the ‘wider society’. (Silverstone *et al.*, 1992, p. 25)

The *conversion* phase in domestication theory is concerned with the relations between households and the outside world. It is also concerned with how users talk about and display these technologies (Haddon, 2007). ‘Display’ in this context means publicly exposing technology, either symbolically or materially, and in so doing demonstrate belonging to a peer group or reference group. The *conversion* of Telecare proved to be quite dissimilar to that as intended in media studies. According to Silverstone and Haddon (1996), *conversion* indicated the importance of display and involved the various things consumers do to signal to others their participation in consumption and innovation. In other words, consumers communicate to the outside world which meanings have been ascribed to technological artefacts. For example, conversing about television programs, computer software, or telephone conversations, which allow talk and gossip of everyday life (see Silverstone, 1994 for a wider discussion). In contrast with these technologies, Telecare presents different features. Being usually adopted for health reasons, it lacks the ‘leisure’ aspect of the technology, which might be found in those technologies studied by Silverstone (1994) is, or at least, appears to be absent. Furthermore, older Telecare users do not feel that Telecare is something to display to peers or reference groups. It cannot be ignored that older people might have internalised ageist prejudices, and thus would not feel at ease in displaying this care technology to their peers, even if they too are aged. However, in my study I did not find enough evidence of stigma associated with the visibility and therefore use of Telecare devices. Silverstone *et al.* (1992) claim that ‘information and communication technologies are doubly articulated: facilitating conversion (and conversation) as well as being the objects of conversion (and conversation).’ Telecare technology, due to its features, and to the reasons that lead to its adoption, does not appear to be ‘articulated’ in a similar way. This study will show that it can be the subject of an (incomplete) conversion and an even more incomplete conversation. One factor seemed to shape the *conversion* of Telecare: discussing Telecare with the wider outside world: interactions between Telecare users and the world beyond the home.

5.5.1 Discussing Telecare with the wider outside world: interactions between Telecare users and the world beyond the home

‘Wider outside world’ is a broad term which defines the world outside of the home boundaries. In this study, it refers to everyone outside the household except the Telecare provider that, having installed the technology, is not estranged from it. Thus, the outside world includes relatives, friends, neighbours, health professionals and any other person interacting with the Telecare user. Due to the scope of Telecare (to provide safety and security to older people living on their own), the interactions between older users and other people not related to Telecare, such as friends and neighbours not acting as keyholders, seemed quite limited among older people. This finding contrasts with those identified in the media studies, where users of technologies such as television were more likely to share their experience about technological artefacts with friends and neighbours and have a conversation about them. Possible interpretations of the older Telecare users not having conversations with the outside world might be the embarrassment related to the use of a different kind of care, or the stigma associated with the alarm pendant’s visibility and therefore use. In this regard, Pritchard and Brittain, claimed in their study that the alarm pendant ‘worked as a signalling device, highlight[ing] their disability and age and thereby emphasis[ing] their limitations’ (Pritchard & Brittain, 2015, p. 129). Although acknowledging the wider literature and its focus on stigma I do not feel that I have enough evidence of this in my study. In contrast, I feel non-use of Telecare is about the presence of alternative care, such as the one provided by family. In fact, older people living with their spouses or adult child claimed that they would not wear the pendant while their relatives were at home (see section 5.4 for more in-depth considerations). A small group of participants, such as Ingrid (79) and Craig (84) revealed that they would not talk about Telecare with other people. In particular, Ingrid admitted that she would mention Telecare only in case of a direct question and that Telecare is ‘not really’ a subject of conversation. This claim was inconclusive as no further explanation was offered by Ingrid.

In the account below Craig (84) explains that he would talk to other people about Telecare ‘only if anybody asks’.

I: OK. So, asking another question about Telecare, imagine you invite a friend here, hmm.

Craig: Yes.

I: Imagine you invite a friend here...

Craig: Oh yes, yes.

I: And, um, he's not aware that you use the pendant and um stuff. Would you be, do you think you would explain to him that you are using, would you show him the, your Telecare stuff?

Craig: If the friend, um, asks what it is, I would explain.

I: Hmm, hm-mmm. And do you actually talk about it with your friends?

Craig: No.

This passage clearly illustrates that Craig, in contrast with other older people who were at ease discussing Telecare with other people, did not feel comfortable with displaying Telecare devices to his friends' network. Nor was Craig willing to introduce Telecare as a conversation topic. Possible interpretations of his behaviour might be the embarrassment linked to the use of a different kind of care. Again, it could also be speculated that older people might have internalised ageist prejudices. However, in my study I did not find enough evidence of stigma associated with the visibility and therefore use of Telecare devices.

Some participants seemed to feel at ease discussing Telecare with others. For example, Carl claimed that should people come visiting him, he would show them his devices; while Helen regularly conversed about Telecare with Dee, one of her best friends. Dee, who I met on my first visit to Helen, seemed to be familiar with the sip-and-puff device, a Telecare item advertised on the *Next*, a local newspaper and therefore 'discussed' beyond the boundaries of the household.

Dee's thoughts¹⁵ about the sip-and-puff have been transcribed below:

Dee: There. You blow into it.

I: Oh. I've never seen it.

¹⁵ It is noted that older people's adult children, either living with them or just visiting them, as well as friends or neighbours showing up during my home visits, were considered relevant in terms of adding meaning to the topics investigated.

Dee: Yeah, this man George.

I: Ah OK!

Dee: He made it and it was in the Argus [Brighton & Hove's local newspaper].

I: Ah. How d'you call this blow, blow, blow device.

Dee: Blow...well, yeah because instead of pressing.

During the last home visit, Hannah explained that her friend from Lancing tested her Telecare equipment.

I: Hm-mmm. Yah, it's efficient. No, I wonder...your friend from Lancing, she said she tested it.

Hannah: Yes.

I: Did she call them, or did?

Hannah: Yes.

I. She pushes...

Hannah: She, she called them and told them.

I. By telephone?

Hannah: She...yes.

I: By telephone.

Hannah: And she said...

I: Ah OK.

Hannah: Shall we use that as a testing run this month?

I: OK.

On his part, Carl recalled talking about Telecare with his friends. Some of them seemed to think that Telecare could be useful.

'Oh yeah. I do. Yeah. I tell I'll tell you what, both machines [trueCall filter and Telecare system] and like, you know...They're, they're um, they're um fascinated about...because um most of them are in their late seventies...Er to late, to late eighties... They are...a lot of them they wear these things in the house themselves...Because a lot of them have had the old buttons...And have had them for years and they, they're, they're quite happy with them... Um but there's quite a few of them since I told them I've got that fall one... have thought, Ooo that's a good idea

having something like that because if you, you know, you're not able to press the button for whatever reason um that... does it for you... Well, it doesn't press the button but it...wakes the machine for you... And the beauty of that is if I'm in the garden or in the greenhouse...And I fall, it will activate it from there...It's got, it's got a, you know, a reasonable, you know, distance...Yeah'.

Fiona revealed that she would talk to her relatives about Telecare, emphasising the fact that her family found the remote care 'very good'. Jane and her daughter apparently considered Telecare as a subject of conversation, at least in certain circumstances, as Jane's daughter claims: '*... I know that some people complain, but, you know...they [Telecare team members] do everything they could for you, you know, more than I thought of actually... [chuckling]*'.

5.6 Conclusion

This chapter is the first of three analysis chapters, which aimed at answering the three research questions and has used the domestication framework as a useful approach to investigate how older people come to adopt Telecare and how they use it in their everyday lives. Using the domestication of technology theory, I identified three factors which shaped the *appropriation* of Telecare: 1) triggering events, such a serious fall, or processes, such as the gradual deterioration of health, 2) the role of neighbours, friends, family and more formal (care) networks (most of whom were nominated keyholders) and 3) the significance of Telecare devices (those participants who used uncommon devices such as the epilepsy bed sensor and the 'sip-and-puff' device showed more agency towards those technological items). In the second stage of the domestication of Telecare, I identified the location of Telecare devices (both fixed and portable) as the factor that shaped the *objectification* of Telecare devices. Location appeared to be related to whether there were fixed devices or portable (wearable) devices. Some Telecare items are fixed, such as the home unit, while other devices are portable, or wearable. Among them, the alarm pendant, which could be either neck-worn, or wrist-worn, or even pinned up to a sweater. These items could be worn or placed (or even forgotten) on the bed, or elsewhere, showing that users have some agency about where to display these

devices. Other devices, such as the alarm unit, were located discretely (or even hidden) by a few participants.

Two main themes shaped the third stage, the *incorporation* of Telecare: 1) relations between Telecare and (older) user and 2) Telecare technical issues. The wearing of, and potential use of the alarm pendant, seemed to be shaped by the availability of alternative forms of care, such as family. Telecare technical issues revealed, counter-intuitively, that technical issues did not negatively affect the relationship between older users and the Telecare provider. Although a few participants seemed to be embarrassed by technical issues such as false alarms, on the whole the Telecare provider did not appear to be bothered by unwanted alarms (mostly triggered by the oversensitivity of the devices). The monthly testing of Telecare was a significant and positive event for older people as it provided an opportunity for getting in touch with the Telecare provider. Furthermore, the regular testing of Telecare and consequently the regular contact between older people and Telecare workers led to the development of a relationship of trust between the older person and the Telecare worker. The *incorporation* stage was shaped by both feelings of ambivalence and the quest for independence. More importantly, I felt that non-use of Telecare was about the presence of alternative care, such as that provided by family members such as spouses or adult children.

The conversion stage highlighted how the majority of older people were reluctant to discuss Telecare with friends and neighbours, and more broadly, with the outside world. It could be speculated that older people might have internalised ageist prejudices, and thus would not feel at ease in displaying this care technology to their peers. However, I felt that my findings did not provide enough evidence of stigma associated with the visibility and therefore use of Telecare devices. Importantly, I feel non-use of Telecare is about the presence of alternative care, such as the one provided by family members, such as spouses or adult children. Therefore, conversion seemed to have been reached by only a few of the older people studied. However, the (in)complete domestication of Telecare did not prevent most of the participants from wearing their alarm pendant most of the time, using it by pressing the red button when needed, and accomplishing the monthly testing of the Telecare equipment. The next analysis chapter will discuss the meanings and experience of

'home' and how they are influenced by the presence of Telecare, and provide an answer to the second research question: how does Telecare change the meanings and experiences of 'home' for older people?

Chapter Six

Meanings and experiences of ‘home’ for older people

Homes, as I have suggested, are more than houses. The home is the product of our practical and emotional commitment to a given space, and as such it can be seen to be a phenomenological reality in which are identities are forged and our security maintained. (Silverstone, 1994, p. 45)

6.1 Introduction

The previous chapter analysed how Telecare is ‘domesticated’ by a small group of older people in their everyday lives. To my knowledge, this is the first time that the domestication of technology theory has been used to study Telecare. My findings showed that the four stages of domestication: 1) *appropriation*; 2) *objectification*; 3) *incorporation*; and 4) *conversion* were not reached by all participants. The (in)complete ‘domestication’ of Telecare has been explained by a number of unresolved issues such as ambivalence, fear of stigma, and the need for independence. However, I felt that, in order to understand in-depth this process, I had to analyse how Telecare interacts with ‘home’ and ‘care’. As explained in Chapter Five, Telecare enters the boundaries of older people’s homes and modifies meanings and experiences of ‘home’. However, as ‘homes’ are the elected place in which care is provided to older people, Telecare modifies meanings and experiences of ‘care’, too. While those meanings and experiences will be discussed in Chapter Seven, this chapter will focus on how Telecare interacts with both ‘home’ and ‘care’, thus answering my second research question: How does the adoption of Telecare change the meanings and experiences of ‘home’ for older people? Then, Chapter Eight will bring analysis together and discuss findings.

6.2 Meanings and experiences of ‘home’ for older people

I identified a number of themes related to older people’s meanings and experiences of ‘home’: 1) ‘home’ as a place of attachment to the environment in which it is located, 2) ‘home’ as a place of emotional attachment, 3) ‘home’ as a place of attachment to (significant) objects and their role in maintaining a sense of self, 4) ‘home’ as a place in which different forms of care are experienced, and 5) ‘home’ and social isolation (risks of). These will now be discussed.

6.3 ‘Home’ as a place of attachment to the environment in which it is located

‘Attachment to place is a set of feelings about a geographic location that emotionally binds a person to that place as a function of its role as a setting for experience. In other words, life experiences may have an emotional quality that suffuses the setting to produce an affective bond with the place itself. Attachment and attachment behavior have traditionally been viewed as arising from early life experiences’ (Bowlby, 1958, cited in Rubinstein and Parmelee, 1992, p. 139). I have begun this section with this quote as I want to explain that my understanding of the meanings and experiences of ‘home’ for older people has been informed both by understanding of attachment as related to early life experiences (Bowlby, 1953) and attachment related to a life course perspective. With respect to this, Parmelee and Rubinstein suggest that ‘attachment to key former places is one way of keeping the past alive and thus relates to the later-life tasks of maintaining a sense of continuity, fostering identity, and protecting the self against deleterious change. Second, attachment to a current place may be a way of strengthening the self [...] Third, attachment to a current place may be a way of enacting or representing independence and continued competence (Rubinstein and Parmelee, 1992, p.149).

Thus, attachment to place is particularly relevant for older people, some of whom have spent a significant part of their life in their home with a significant other (partner or adult child(dren)). Over the years, those older people have cumulated memories, such as significant objects and those memories have strengthened their self. Also, attachment to

home has promoted older people's independence. Despite their ageing, older people were able to keep on living in the same home that they inhabited when they were younger. The importance of the environment in which the dwelling is located has been confirmed by the findings of environmental psychologists and gerontologists. Literature dealing with Ageing in Place (Milligan, 2009; Mowl, Pain and Talbot, 2000; Langan, Means and Rolfe, 1996) focuses on the premise that the home is the elected place in which to grow older and maintain independence as the years go by. Peace *et al.* (2006) look at the symbolic meaning of the way older people present themselves through the way in which they present their home. Importantly, Oswald & Wahl suggest that 'an elder's home might be a comforting, familiar place despite the fact that it is becoming burdensome to maintain and unsafe (and therefore a source of anxiety)' (Oswald & Wahl, 2005, p. 5).

Places that are especially relevant to one's past have also been found to be particularly valued by the old because of the memories that places can stir. (Howell 1983; Lowenthal, 1975, cited in Belk, 1988, p. 148)

Confirming the literature findings (see above), which insist on the importance of 'keeping the past alive', one of my research participants', Jack, after having spent a few years in London as a young man, moved later to a small town in the South of England and eventually decided to make Brighton his home:

'I lived in [small town in the South of England] for a while and bought a house there and I stayed for a year and left. No, you can't live anywhere else but Brighton'.

Later adding:

'Brighton's like a little London, you know. And, you know, you can go and meet friends. And you don't have to go onto a tube. You don't have to go on a bus. You don't have to get all those crowds. And it's, it's got the atmosphere, like, like London you know. And London is so packed and ugly, you know, the Victoria Station, you can't move. You know, I'm very happy with Brighton'.

Interestingly, the features which Jack found more attractive about Brighton are both this town's similarities and differences with London. In Jack's account, the local

environment seems to be very significant. Despite being smaller, Brighton has the same atmosphere of the metropolitan city while allowing people to move around without public transport. This last aspect seemed important to Jack as he does not drive anymore. It could be speculated that living in a smaller town allows Jack to be more independent as he does not need a car or public transport to go out.

6.4 ‘Home’ as a place of emotional attachment

Peace et al. (2006) draw attention to emotional attachment to place, while Judie and Andrew Sixsmith, in their discussion of the home-life of the unemployed and the elderly, claim that home can be divided into three experiential domains: the personal, intended as a private space, an escape, a place of and for, memory and solitude; the social, a place for family life; and the physical, a place of comfort and security. Each of these three domains may be both positively or negatively experienced. Home can become refuge or prison, privacy or isolation (Sixsmith & Sixsmith, 1990).

Confirming the meaningfulness of ‘home’ and its relevance as a site of attachment, as highlighted in the previous literature findings, both in interviews and observations most participants showed attachment to their own dwelling and showed the important role two ‘living centres’: the living room, during daytime and the bedroom, during night-time. In my study, home visits mainly took place in living rooms, which were the elected place for interviews, and sometimes in bedrooms. Bedrooms were shown by older people for illustrative purposes, such as the display of assistive devices or Telecare devices. Turning to my participants’ experiences, Claire, when asked about what her home represented for her, answered: *‘Well I feel safe here’*. Claire and her husband, who later died, had to move from a five-storey house in a small village in the South of England. She recalled that they *‘had to get rid of a lot of furniture’*. Despite Claire’s unpleasant experience of clearing her previous dwelling, she developed attachment to her current flat. She revealed, in fact: *‘I have one very good friend here. In the next block down. She’s sort of in her 60s. But I was very, very friendly with her mother that has now died of course. People do die (laughs)’*.

This passage shows that, in spite of Claire's attachment to her previous house (located in a small town not far from Brighton), a house that she used to share with her husband, she was able to 'rebuild' attachment towards her current dwelling. The latter is a medium size flat located in a residential area in Brighton. One of the reasons for getting attached to her most recent accommodation is the friendship she developed with a neighbour. It could be speculated that attachment to one's home is all but clear-cut. In particular, feelings of attachment to a dwelling might be influenced by friendship relationships with neighbours.

A different example of attachment was shown by Benjamin, who expressed fear of leaving his house to be hospitalized for colostomy repair:

'I have to plan. Last summer I was here [in the hospital] for 3 months, so I am going have someone for 3 months, I need planning. I have, first of all, intensive care, for 3 or 4 days, two weeks in high intensive unit, but up to 3 months.'

Benjamin needs surgery again and he is on a waiting list. Due to the complexity of his intervention and to the long postoperative recovery, he will need 'to plan'. What he means is that he would have a professional caregiver at home up to three months from the day of the surgery. Benjamin's words demonstrate that the need to plan made him anxious, especially because he had already gone through this experience the year before.

During the following visit, Benjamin returned to the subject of his surgery:

'I cannot make any plans.... Well, this is a joke... [indistinct words]. To say... Getting a hospital... and they [medical doctors] said: 'Be prepared to stay overnight': And the last time I was operated, I was in hospital for three months. And the time before that, nearly one month. So, I rang the specialist, and I said: 'This is overnight'. 'I am not staying overnight' [laughing]. She said: 'Let me ring them and tell them', 'Fine'...the main manager, you know [laughing]...'

Benjamin's worries about the lack of information about the effective time he would spend in hospital and eventually about the unpredictable and prolonged recovery might show his attachment to his own home.

Two participants, Jack (82) and Katherine (81) accounted for the comfort offered by living in the same home, despite the self-reported difficulties. When I asked Jack whether he would consider moving to another dwelling, Jack replied that: *'... Well, I like it here because it's quiet. And also, um, it's reasonably protected. And, um, it's a house actually for a young person, not for an older person because of the staircase... The toilet upstairs. Um, no, and I wouldn't move because I have a cat, and I'm... And you can't take a cat into... a flat'*.

Jack's words show how attached he is to his home. Despite practical difficulties such as the upstairs toilet, he feels comfortable in his own home. Furthermore, being a cat owner, Jack feels that his pet would suffer from moving to a flat without a garden. During another home visit, however, Jack seemed open to moving to another dwelling.

'Well, one day I will have to because... The toilet's upstairs... You see, and um, so... The house is getting er...I couldn't manage it if I didn't have my cleaning lady... And my gardener, I couldn't manage it, you know...But the ideal thing would [to] be able to have everything on one level... But I like it here, you know, it's quiet and I, I just...'

This passage illustrates Jack's reluctance to leave his house to move to a safer dwelling. His fear of not being able to climb stairs on his own and to take care of domestic duties emerges clearly. However, he showed willingness to negotiate a possible move.

Similarly, Katherine shared Jack's awareness of the possible inappropriateness of her home. Katherine's home was large and she could not easily manage to take care of it. However, she reveals her fear of moving: *'...it's much too big a flat for a single woman, but I can't think of where to go next, you know, I mean...'* In contrast with Jack, who might be willing to move to a more suitable place, Katherine seemed to be more worried about being able to maintain a sense of continuity than the overcoming of practical difficulties related to the size of her apartment. A number of participants showed attachment to their home, intended as a place in which to feel secure. For example, Jane (88), when asked how she would feel if she had to move, replied: *'I wouldn't move, no. I wouldn't move, no'*. Then adding, *'Well, everything has been fixed up here, so I don't have to move anywhere...'* For Jane, who was affected by serious mobility issues, her terraced house was a safe place in which she had been living for more than sixty years. At first, she had lived there with her husband, then with her

daughters and eventually with one of her two adult children. Jane's house, charged with affective and emotional meanings, had been chosen as the place in which grow older. Thus, Jane's dwelling had been 'fixed up': she relied on Telecare and a number of assistive devices such as grab rails in the bathrooms and a stair lift. This example shows how the presence of Telecare (and other assistive devices) allowed Jane to feel safe despite her health issues and thus made possible for her to age in place.

Later on, Jane added: *'I can't complain of anything. People say, "Uh, social services don't really work, care" ... I've got the toilet seat, they put one in the bathroom, we have so many of these from my husband, and we got some more grab rails in the ... the alarm in the front, you know... the gate...'* As previously explained, Jane had been living in the same house for most of her life. Since her husband's illness, Jane had begun to install assistive devices (grab rails, stair lift and alarms), long before registering for Telecare. Jennifer (83) had also adapted her dwelling and made it safer. Jennifer had been living in her semi-detached council house for twenty-two years. She explained: *'... and I've had the bed changed. Instead of it down here, it's over there now. My friend's done it... I put a bit of the carpet there, 'cos carers come in...'* Jennifer kept her house in order and showed interest for aesthetical appearance, not only for herself but for other people who visited her on a regular basis, such as her home carers. This shows that home for Jennifer was a place of emotional attachment as well as a place which sustained her sense of self.

Fiona (67) had been living in her house with her husband David and two pets for approximately eleven years. She described her house with the following words: *'Yes, yes, it's er, it's er just the one bedroom, which is all we want, and... the conservatory David had built on, so... you can go out into the conservatory when it's sunny... And, got a nice garden, and just over the back are where all the horses are, they've got um fields with the horses in. Which is nice, so you can see them'*.

Fiona's account revealed how much she (and her husband) were emotionally bound to their house.

A room does not necessarily have to be large to be pleasant, but it needs to provide opportunities for people to do the things they want to do. (Pennartz, 1999, p. 104)

Likewise, for Fiona, home did not have to be a huge place to be comfortable. As long as her dwelling was comfortable and aesthetically appealing (the conservatory was visible from the living room, in which she spent most of her day time and from the garden she could see horses), her home was a place of emotional attachment for her. Later on, Fiona explained: *'It's very quiet round here, even at the weekends it's quiet. It's mostly working people, um, and retired people, and um, there is one or two youngsters about, but not many, and um, [pause] you sort of um [pause], how can I put it, it's not like years ago, and you have neighbours and you're always visiting them, and people would be coming in, that doesn't happen anymore, people seem to, um, keep to themselves... I just don't think they want to know... Some are busy, and then some just don't want to know, and um... but we've got some good friends...'* In light of this last account, Fiona's experience of her house went beyond the boundaries of her dwelling. In fact, she explained that the quiet environment in which her house was located was inhabited by new people, with whom it was difficult to socialise. This contrasted with her previous neighbours, who would exchange visits with Fiona, thus allowing her to socialise more. Fiona's description is crucial in highlighting the importance of the environment which surrounds her house (see section 6.3). Such environment, in fact, seems essential in allowing her (or not) to have a social life. Fiona's last account proved to be particularly meaningful as it showed how attachment to the environment in which 'home' is located can merge with emotional attachment to one's home. This subsection, which focused on how older people were emotionally attached to their own homes, highlighted how 'home', can be a place where older adults feel safe and comfortable. However, 'home' can also be a place of abuse and not only a place where the older person feels safe and secure (Taylor *et al.*, 2006). One of the participants, in fact, was attacked in his own home by a carer and no longer felt safe with his formal caregivers.

6.5 'Home' as a place of attachment to (significant) objects: the role of objects in maintaining a sense of self

Rubinstein outlined some of the ways in which personal objects are significant to older people. He suggests that 'significant personal objects well represent significant aspects of older persons' identities and, as part of this, significant ties to others. An important

aspect of objects is that they may convey personal meaning nonverbally. While objects may be “conversation pieces” and spoken about, they also serve as highly condensed symbols of core aspects of personal identities’ (Rubinstein, 1987, p. 226). Objects can refer to the self, to personal traits and personal accomplishment past and present (e.g. photos of themselves); can act as defences against negative change and events, such as loss, boredom, loneliness (e.g. books or radio); can elicit feelings of care (e.g. dogs and plants, who need care); can elicit significance that were affective and qualitative in nature (e.g. treasured photographs and letters) (Rubinstein, 1987). Offering support to the findings of Percival (2002), who claims that ‘it is important to develop our understanding of the way in which people use the home space to display meaningful objects and artefacts to facilitate memory prompts, to enhance reflection, and to invest their home with personal meaning’ (Percival, 2002, p. 745), objects such as photo albums, family pictures, familiar furniture or sets of dishes could also be seen as representation of the past for the majority of participants in my study. ‘There is a natural, almost symbiotic relationship between cherished possessions and home in later life’ (Sherman and Dacher, 2005, p. 3). Lewis and Butler (1974, cited in Sherman and Dacher, 2005, p. 66) argue that objects provide a sense of continuity, comfort, and security. These are important as fear of their loss is a frequent preoccupation among older people.

According to the symbolic interactionist perspective, anything can become a social object for the human actor. Charon suggests that ‘we define social objects; we use them to achieve our goals in a situation; and we change them according to our changing goals’ (Charon, 2010, p. 47). With respect to personal objects, a number of participants (Jack, Katherine, Carl and Benjamin) clearly expressed a significant attachment to them. For example, Jack, (82) looked at a few paintings during one of my home visits. The following excerpt illustrates the importance of such paintings:

‘... All these [the Madonnas] and upstairs and everything I, I, I... I gave a lot to friends. I don’t like selling them. I had an exhibition, and quite a lot went. I think there were twenty pictures, twenty-two and twenty were sold. She said it’s the most pictures they’ve ever sold. [Laughs] But er [...] Yeah, but every... I give...all my friends have pictures of mine. I can walk into any house, there’s always a picture of mine, and the man who did

my curtains here years and years ago. He came into the house, and he said, 'Oh bloody hell', he said 'I bought one of your paintings' [Laughs].

Jack was engaged in giving away many of his painting. As suggested in Rubinstein, the dialectic of 'giving and getting' (Rubinstein, 1987, p. 232) may characterise the relationship with significant objects. In contrast with the stereotype that sees older people as keeping everything until they die, in my study participants were engaged in the mundane processes of giving and receiving. Under a symbolic interactionist frame, Jack's paintings might be symbols that are social objects. These symbols communicate and represent something to others and to ourselves. In this particular case, Jack's willingness to give away paintings to his friends might mean that he was aiming at taking a distance from his past, for example.

Csikszentmihalyi and Rochberg-Halton found that 'possessions [such] as photographs, athletic trophies, and mementos are most treasured by grandparents. The reason most often cited for possessions being treasured by this group is that possessions have the ability to symbolize others, often because they are gifts from these important others' (Csikszentmihalyi and Rochberg-Halton, 1981, cited in Belk, 1988, p. 148). Confirming literatures' findings on the relationship between possessions and their symbolic meanings, one of my research participants, Katherine (81) seemed to be particularly attached to certain objects such as old photographs representing her family and past memories of a journey to Paris.

'Uh, that's an old photograph, ehm... He's, he's now 12, he grew up quite a lot... Yes. That, that's Pete... And the little girl is a neighbour's child...that was there for the day. She doesn't belong to us. But she just wanted to come for the visit. Very nice little girl... She is also 13! ... uh, this is the family that was! Ehm, that, was my husband who is dead. That's Uncle Philip who's dead. That's my son William. And Pete. He is now 13... They are very nice children! She has done a good job on those!... they are nice, and this is, when we were in Texas...this is my husband, that's his boss, the famous Matthew Green and that's two more foreign assistants, so that's, French and Latin American, oh, they are English, and then Dr Green, was the American union trait... Yeah...It's all we had then! Ehm, you could get, recently, colour of what the photography is. This is one of the best, the first, captured in 1988. We went to Paris for

the weekend. It was very nice... When I first started all photographs were black and white, and then we gradually got to colour, that's in the last twenty years I think'.

Significant memories come up from old pictures, some of them in black and white. These pictures created links between past, present and future while increasing the sense of belonging of Katherine. For her pictures are *social objects*, which are meaningful (they are understood by those who use them) are used to represent (they refer to a particular place, or to a particular situation, or to a particular period of one's life). When these objects (such as photographs, collections) are intentionally used by actors (Katherine, in the example) who understand their meaning and their purpose is to communicate to others and to ourselves (here, Katherine), then symbols become 'intentional acts of communication' (Charon, 2010, p. 49). The memories by which Katherine was surrounded might symbolize Katherine's need to maintain her self-identity (which was threatened after the death of her husband, to whom she was deeply attached), or the need to reaffirm it, in light of the threats posed by her ageing process, which involved suffering from serious health problems, such as strokes and eye-issues.

Carl (72), together with his wife Julie, spontaneously showed his collection of Chinese metallic medallions and decorative plates. In the passage below, Julie provides details of their collection:

'These are...metallic medallions that come from China. We've been collecting them for years. We pick them up at car boot fairs and jumble sales'.

Later Carl explained: *'And gradually we er, Julie, bought, bought the others...Yeah. The cup goes, goes with...Yeah, that's right. You've got this mug, this cup... Goes with this plate. That size with that size... Yeah... Six, six plates...Six mugs and twelve plates...Er they are from Brooks & Bentley. They're a Danish company'.*

The conversation with Carl and his wife reveals that both of them are eager collectors of all sorts of objects. Among them, metallic medallions from China, mugs, porcelain plates, and a stamp collection from around the world, including mint, used, old and new. The different collections located in Carl and Julie's home, with the exception of books and world stamps, were organised randomly, thus impossible to distinguish whether the items belonged to Carl or his wife. However, the house was filled with a sense of order.

Interestingly, Carl's collections were located not only inside his house but also in the greenhouse in the back garden. Such greenhouse was heated by an integrated system and contained a number of plant pots, in all different sizes, as well as various plants, the latter being manually irrigated. As for the garden, it featured different species of trees and numerous varieties of flowers. Carl, who took care of both the garden and the greenhouse, seemed to feel pride of having been able to purchase the greenhouse, organise it and care for the plants. Opportunistic conversations with Carl revealed feelings of intimacy with his 'outside of the home' collections, as he seemed emotionally involved with his trees, flowers, plants and even plant pots. Carl's behaviour, both verbal and non-verbal, showed how much he valued being able to spend time and relax in an open as well as closed unshared space (the garden and the greenhouse were both private spaces located within the boundaries of Carl and Julie's house). With respect to their collections, opportunistic conversations with them showed feelings of intimacy with the objects they collected. However, while Carl had allocated space for his collections (and for himself) both inside and outside his home, Julie seemed to be more at ease within the boundaries of the house, such as the living room and a room in which she kept her books, mugs, and porcelain collections. Carl and his wife¹⁶ seemed to share significant relations with many different kinds of objects. While Carl felt a more significant relationship with his plants and trees than with other objects in his home, his wife seemed to rely on her porcelains and books, or electronic tools such as her Kindle (an e-reader which enable users to browse, buy, download, and read books). The alarm unit, which lay near the telephone with its trueCall filter and the PC, had caused a bit of a problem. In fact, Carl explained that, due to the trueCall, the alarm unit could not be connected immediately. Thus, they had one of the Telecare engineers visit the home in order to solve the issue.

Benjamin (65) also showed a passion for collecting. Benjamin's flat displayed many collections of cats and elephants, in porcelain and other materials, mainly in his living room, where he spent most of his awake time, and in the corridor. He also collected greeting cards and had a collection of photographs of his adopted child, now an adult, and his family. Benjamin pulled these significant objects out of a drawer located in the living room that contained a number of photograph albums and spent time describing

¹⁶ Participants living with their spouses or adult children were analysed without ignoring their family members, as they are part of the household.

photographs of himself and his adoptive son's family. In doing so, Benjamin seemed to strengthen both memory of the past and relationships with his closest family members. Benjamin had five brothers and two sisters with whom he had no contact. The only member of his family with whom he seemed to be in touch with was his half-brother, David. In common with the participants mentioned previously, Benjamin shared a passion for collections. Once again, objects (photographs, collections of animal figurines) are *social objects*, which are meaningful (they are understood by those who use them, in this case by Benjamin) and are used to represent (they refer to a particular place, or a particular situation, or to a particular period of one's life). When these objects (photographs albums, collections) are intentionally used by actors (here, Benjamin) who understand their meaning and their purpose is to communicate to others and to ourselves (here, Benjamin), then symbols become *intentional acts of communication*. From this perspective, Benjamin might have attempted to communicate the relevance of his adopted son and his son's family, and how much he was bound to the native country of his son.

Csikszentmihalyi and Rochberg-Halton claim that 'not surprisingly, chairs, sofas and tables are most often mentioned as being special objects in the home' (Csikszentmihalyi and Rochberg-Halton, 1981, p. 60). 'Clearly, the notion that chairs and tables are more comfortable in an absolute sense is not true: they are so only within a pattern of cultural habits and expectations' (*ibid.*). In line with literature findings, two of my research participants, John and Ingrid, showed a particular attachment to their rise and recliner sofa chairs, while another participant, Jennifer, just mentioned the comfortable seating provided by her sofa. Summing up, the previously identified meanings of 'home' seem to reveal that 'home' is also a site which allows the collection of significant objects to which different meanings can be ascribed. Objects such as family photographs and greeting cards might act as reference to the self or representation of the past (memories).

Chapter Five introduced Telecare as human-made object(s) or as a symbol, according to whether Telecare was considered as the mere sum of devices or as a complex care network comprised of both devices and meanings ascribed by the care network (older Telecare users, Telecare provider, older people's family, friends and neighbourhood, etc.). As anything can become a 'social object', items such as assistive devices can be considered social objects, too. Assistive technology is a human-made object, indeed as

it was commodified, or ‘industrially and commercially processed, creating both material and symbolic artefacts and then turned into commodities for sale in the formal market economy’ (Silverstone 1994, p. 124). Assistive devices are also symbols as they represent safety and independence for vulnerable and frail people. From a Symbolic Interactionism perspective, symbols are social objects, as ‘we create and use symbols to communicate and represent something to others and ourselves’ (Charon, 2010, p. 47). Assistive devices are also objects of ‘attachment’ for older people, as the majority of participants use them in everyday life. These items are kept in one’s home. ‘The structures and spaces of the home are arranged in order to facilitate privacy and intimacy, and visitors are screened before they can move freely in front hallways, living or dining rooms, bedrooms and bathrooms’ (Twigg, 1999, cited in Angus *et al.*, 2005, p. 163).

As home is characterised by boundaries between inside and outside, the introduction of assistive devices might alter the material spaces of the home while providing a sense of safety and empower older people. Using the same analogy, in my study Telecare, making the boundaries between public and private space more ‘blurred’, alters and potentially disrupts the home space. A careful observation of older peoples’ houses displayed a significant number of assistive technology devices (see Appendix Table C), such as mobility and bathroom aids. During home visits, it was observed that the presence and use of mobility aids (walking stick, rollator walker, wheelchair, etc.), vision aids, and hearing aids was mostly in the living room, as older people spent much time watching television there, with their landline telephone easily-accessible. Two participants, John and Joan, also used, respectively, a rise and recline sofa and a rise and recliner sofa in the living room. Bedrooms were sometimes fitted with daily living aids (bed-hoists, special bed, adapted bed, or pull cord). As for the bathroom, almost all older people used aids such as grab rails, raised toilet seats, anti-slip floor, bath transfer bench, shower chair, or walk-in shower.

Jane (88) explained: *‘We had a lot of grab rails from my husband because he was blind, on the wall over there, so they came to the toilet, and [indistinct word] small grab rails... I could get around. They were very good. Actually, they’re still there, and they had helped me in getting the stairlift’.*

Moving from the mere description to a more critical perspective, it is well known that assistive technology can make a great difference to those with disabilities such as mobility, visual, or hearing impairment. This was confirmed by participants who showed me around their houses and provided me with an explanation of some or all of their assistive devices. When asked about their assistive devices, participants displayed a certain competence in their use and suggested that they were essential in allowing them to take a shower without risking a fall, or in helping them to get out of their bed safely. Two participants, John and Joan, showed me how to sit and stand in their reclining chairs. Helen, who lived on her own in a modern living accommodation for older people, moved around her adapted apartment using her electric wheelchair. She showed me plugs and light switches at wheelchair-accessible height, her automatic swing door opener and her widened doors. Being affected by multiple sclerosis and living on her own, Helen needed a number of assistive living arrangements. Showing her bed, Helen said: *'Look, there's this, lifts up... It goes back... It's been good, but it gets a bit uncomfortable... Sometimes the cushion gets a bit uncomfy. It goes back. It goes up [Helen demonstrates the adjustment]. And the bed, so you see I can lean back in it and have a sleep... Yeah. And the bed turns, my bed turns'*.

Some assistive devices were quite uncommon, such as the one that, Rebecca (94) used in order to read. Being affected by a mole in her eye, she needed special sunglasses and a magnifier, provided by the NHS. Two participants, Jennifer (83) and Benjamin (65), used nebulisers because of lung problems, while Jane had had a stairlift mounted in order to reach her first-floor bedroom. Repeated observation showed that some older people preferred to keep mobility assistive devices such as folder wheelchairs, canes and walkers, out of sight, for example in their bedroom. As for the bathroom aids, these were only shown to me by a few participants. The displaying/hiding pattern was not so unequivocal, as those older people who could not move around without assistive aids such as wheelchair, rollators and canes, obviously displayed them. Thus, although older people might not be pleased with the use of health items, which in turn might have been perceived as displeasing, they came to terms with them in view of a vital scope: remaining at home. Living independently was so important that participants were ready to negotiate the appearances of their home, ready to exchange aesthetics for safety. Thus, the display of assistive devices was negotiated. Older people used them because they allowed mobility (walkers, for example) and increased safety (grab rails or raised

toilets in the bathroom). On the other hand, older people were not willing to display them to visitors, possibly because of the stigma attached to those who use health devices, and therefore they displayed only some of them. I argue therefore that assistive devices seem to share more than a few similarities, and, ultimately, meanings with Telecare. These common points are: the embodiment of stigma, safety, and independence. Finally, assistive devices and Telecare are both materialisations of care 'at a distance'. I will return to this and on how care 'at a distance' can be as good as care 'in person' in the Discussion chapter.

An extensive body of literature has attempted to conceptualise the relationship between 'home' and 'identity'. Starting from Giddens' (1990) definition of ontological security, home has been interpreted as a site of identity. Ontological security, as discussed in the section about 'home' and care, also involves having a positive view of self, the world and the future. It can be defined as 'the confidence that most human beings have in the continuity of their social and material environments' (Giddens, 1990, cited by Milligan, Mort and Roberts, 2010, p. 23). Ontological security can also be reached through home ownership, as suggested by Saunders (who claims that 'home ownership can offer individuals a means through which they can attain a sense of "ontological security" in their everyday lives. This sense can be reached through feeling in control of one's environment, free from surveillance, free to be themselves and at ease, in the deepest psychological sense, in a world that might at times be experienced as threatening and uncomfortable' (Saunders, 1994, 1996, cited in Dupuis and Thorns, 1998, p. 25). Furthermore, the length of residence might develop a strong relationship between attachment and sense of self (Rowles, 1993). More recently, Haak has claimed that together with associations with the past, proximity to family, or long-established neighbours, familiarity, and a sense of being a part of neighbourhood life, the home environment supports the self as people age (Haak et al., 2007). As mentioned in the section discussing home and the attachment to significant objects, 'cherished objects such as furniture might increase older people's extensions of themselves; depriving an older person of such objects might involve the destruction of his or her self' (Csikszentmihalyi and Rochberg-Halton, 1981, p. 101). Along the same lines Rubinstein (1987, p. 225) claims that 'personal objects can play an important role in maintaining personal identity in late life and may function as a distinctive language for the expression of identity and

personal meaning'. The relationship between object possessions and identity for older people has also been discussed by business and marketing academics. According to Kleine and Baker, 'age studies find older people relating to special possessions differently than younger people, reflecting stage-of-life and developmental issues' (Kleine and Baker, 2004, p.2). For example, according to Csikszentmihalyi and Rochberg-Halton (1981) and Wallendorf and Arnould (1988), older Americans' favourite possessions represented familial and other interpersonal ties more often than possessions of younger respondents (as cited in Kleine and Baker, 2004, p.13). Belk claims that 'integral to a sense of who we are is a sense of our past. Possessions are a convenient means of storing the memories and feelings that attach our sense of past' (Belk, 1988, p. 148), adding: 'Thus, cherished possessions are not likely to be a random assortment of items that recall our pasts. Just as we pose family photographs to capture the "good" (happy) moments of our lives and then selectively edit the best of these into albums' (Chalfen 1987; Milgram 1976; Sontag 1973, cited in Belk, 1988, p. 149), 'we are also likely to mostly treasure those possessions associated with pleasant memories. These possessions are likely to include objects such as newspaper clippings and trophies representing past accomplishments, mementos of past romances, and souvenirs of enjoyable travel experiences, and to exclude others such as belongings of estranged former spouses, poor report cards, and gifts from suitors who later rejected us' (Belk, 1988, p. 149). This literature review had the scope to draw attention on how 'home', 'objects' and 'identity' are intermingled. In this respect, my study's findings confirmed that older peoples' homes are shaped by materialities such as objects, which symbolise the past, either past experiences (immaterial) or memories (material or immaterial). In turn, all the meanings ascribed to the different kind of objects maintain older people's identity or even reinforce it. An example of identity reinforcement driven by possessions is provided by Jack (82) who affirmed his identity at home by collecting paintings, some of them painted by himself. These memories made his home a site of 'embodiment of identity and self-expression' (Milligan et al., 2010, p. 69) allowing Jack to remember the past and provide a continuity in his lifespan.

6.6 'Home' as a place in which different forms of care are experienced

Home can be a place of ontological security, which has been defined by Giddens (1991) as a sense of order and continuity in regard to an individual's experiences. 'As a site of ontological security, the home becomes a familiar and "safe space" from the threats, so extending the individual's ability to successfully age in place' (Milligan, 2009, p. 68). For these reasons, the place – and in particular the home – is important in the care and support of older population. Milligan highlights that 'it involves understanding of older people's experiences of, and engagement with, the home and its immediate environs, the social, emotional and physical characteristics of these spaces, and how they influence the quality of life, health, and mental wellbeing of older people and their family carers' (Milligan, 2015, p. 1567). Informed by Milligan (2009; 2015), this section aims to understand meanings of home as place in which care, intended as 'provision of practical or emotional support' (Milligan and Wiles, 2010, p. 2) is being provided formally, informally, in person and at a distance.

In this study, participants were interviewed and observed with particular interest in which practices of care they were engaged in. The delivery of such practices was investigated by means of questions that I asked myself before each visit. Examples of these questions are:

- Do older people rely on formal or informal carers?
- Does Telecare co-exist with formal or informal care in person?
- Do older people use assistive technology, too? This last question emerged by carefully observing participants' homes and realising that many of them did make use of these devices, too.

Four participants, Emily (91); Jennifer (83); Helen (70); and John (65), made use of formal care at home. By formal care I mean the use of care agencies, which provide home care on a daily basis, one or more times a day. Two participants, Craig (84) and Fiona (67), received help with household tasks. Craig was visited on an infrequent basis ('*once a fortnight*', according to him), by a charity working for older people, while Fiona was provided help at home by social services once a week. Other participants, Hannah (95), Christopher (72), and Victor (82), paid a house cleaner on a regular basis. Beyond that, some participants received occasional help from their caretakers and/or

gardeners. With respect to the traditional definition of care and carers, it might be argued that house cleaners, caretakers, and gardeners are not carers. However, it was decided to consider them as (informal) carers by virtue of their providing assistance to older people, especially those living on their own. In fact, it was attempted to draw a picture of care as inclusive as possible, as care was considered as a network, of which the Telecare system (keyholders and Telecare provider staff) intersected at times with the wider care network comprising of home carers, health professionals, social services, families, friends, neighbours and acquaintances. The complexity of this network was visible when, for example, a participant contacted the Telecare provider under certain circumstances (her home carer was late and the participants became anxious about the delay) or when a participant contacted the monitoring centre in order to ask help for her neighbour, who had collapsed. A few participants received help from their family (partners, daughters, sons and nieces) but this type of care was not usual. Besides Jane (88), who lived with her adult daughter, no other participants lived with any adult child. Carl (72) and Fiona (67) lived with their spouses. The majority of older people lived on their own, in spite of their frailty and illnesses, although some were cared for by one or more of their relatives, who were not physically proximate, living in places located far away from the aged person they cared for. Claire (93), for example, explained that her niece, who lived in Edinburgh, shopped online for her. Although Claire was keen to communicate that she took care of her flat herself, explaining:

'It gives me something to do

adding:

[if] I sit about all day, that's not me'.

It seems that, for Claire, being responsible for household tasks makes her feel useful. Furthermore, domestic responsibilities allowed her to do regular physical exercise, thus escaping physical inactivity and boredom.

Emily (91) was cared for 'at a distance' by her son, who lived in the same town and helped her with instrumental activities of daily living such as keeping track of finances. He also collected information about how to best apply for disability allowance, as Emily was affected by a serious eye condition which can cause vision loss or blindness. Emily was able to live on her own but was cared for 'in person' by her home carer, who helped her with activities of daily living, such as bathing, dressing and toileting. Emily seemed

to be fond of the care provided at home and during my visit asked her carer whether, if she were to have a live-in carer, she would still need Telecare (see also Chapter Five, section 4). The carer's answer reassured Emily and insisted on the safety provided by Telecare. The interactions between Emily, her non-resident adult child, her home carer, and Telecare highlight that different forms of care can coexist. I also argue that the definition of care 'in person' is broad and a-specific. Thus, more specific terms, such as 'proximal care in person' and 'non-proximal care in person' would allow more understanding about the delivery of traditional forms of care. Furthermore, this kind of distinction would reduce the dichotomisation which seems to characterise care, and that focuses on broad concepts such as 'in person' and 'at a distance'. Moreover, the boundaries between care 'in person' and 'at a distance' are not so obvious. In fact, a family member such as an adult child can have different care options: she can be a live-in carer, if resident, and thus provide proximal care. But another adult child, or a sibling, can live in the neighbourhood, or in another town, county, or country. For each of these different options we will have a different level of proximity. And the question which could arise would discuss the ultimate meaning of 'in person' (proximal) vs 'at a distance' (non-proximal).

In such a complex care network, Telecare might sit together with the non-proximal in person care, or it might not. As I explained in Chapter Five, in order for Telecare to cross the threshold of older people's homes, a minimal care network including at least two keyholders is needed. This basic network can then become wider should an emergency occur and prompt other caregivers, such as paramedics, medical doctors, and the like, to provide help. This process would be prompted by the Telecare monitoring centre, which in turn is not an abstract entity, but the material sum of a number of people, who activate the delivery of 'care at a distance', which then becomes less 'at a distance' and more 'in person'. Ultimately, these different forms of care coexist and actually work together.

Katherine (81) was cared for by her daughter and her son, who lived in the same town as her. While Katherine's daughter provided regular informal care (at least two or three times a week, including overnights according to her job schedule), Katherine's son cared for his mother occasionally. Katherine was also cared for by her building caretaker (on an occasional basis), who borrowed books from the local library for her

and her two neighbours, who did occasional shopping for her. On the whole, Katherine felt safe at home, not only because she could rely on a diversified care network, but also because her daughter, who had a dedicated room in Katherine's apartment, spent time with her mother while doing activities such as painting. Katherine's situation suggests that she was cared for by (almost) proximal (her daughter) and proximal caretaker and her non-proximal son. Even for her, caregivers are both 'in person' and 'at a distance'. Thus, Telecare is no longer the only form of care 'at a distance'.

Ingrid (79) did not have any professional caregivers but, during the first visit, revealed to me that she was cared for by her niece, who lived in a town located approximately five miles away and cleaned Ingrid's house on a weekly basis. Ingrid felt that her niece's help with daily tasks at home was a form of care as she could rely on it. Ingrid, who still drove her car locally in order to do her shopping, felt that she could not drive too far. Ingrid also had a friend who could drive to local hospitals and three other friends:

'Mmh. Well, if I cannot drive, I take a taxi to get there, if my friend cannot take me there...But I've got three friends who... help me...Well, I know people who go to the church and I know they are well...Help each other...Apart from different groups'.

Ingrid, whose house was surrounded by a garden, did not take care of it on her own, but received occasional help from her gardener, who 'does other things for me'. Ingrid explained that her gardener 'usually comes once a fortnight'. On the whole, Ingrid's home was a place where care in person was administered from a complex network, which included her niece, three or more friends, and her gardener. Thus, when Telecare entered the boundaries of such a complex network, it added further complexity as other people became part of this network, such as keyholders and Telecare staff. Benjamin (65), despite suffering of serious health conditions that needed to be treated on a regular basis (he had colostomy pouches which needed to be changed every 5 to 8 days or even more frequently), received care from friends of his and not from a formal caregiver, exception made for a nurse, who had apparently explained the steps for changing the pouches to him after his first colostomy operation. It was not clear whether the nurse visited Benjamin or when. Over the time I visited Benjamin (three times over six months), Benjamin received visits of an occupational therapist who provided him with

information about his next surgery, which had not yet been scheduled. During field work, Benjamin revealed that in the past he had experienced robbery and physical attack from a formal carer, and that experience had profoundly influenced his trust in social services. This episode led him to the choice of hiring some of his friends as caregivers. He felt he could trust them and let them enter his house with peace of mind. Benjamin's experience differed significantly from all other participants. In contrast with the majority of older people, for whom home represented security, Benjamin's experience highlighted how home did not always represent security but could also be a place of abuse.

Summing up, participants perceived their own home as a protected space providing ontological security. In this space, similarly to a private theatre, different performances (kinds of care) were represented and coexisted, not without a certain tension. More clearly, older people were keen to receive different forms of care (formal, informal and occasional). Formal care, defined as paid care from home care providers, was provided for a minority of participants. Informal care, defined as home care provided by family and friends, was provided for the majority of older people. In fact, seven participants were cared for by family members. Occasional help and care, that provided by building caretakers, friends and neighbours, seemed to provide a significant contribution in allowing older people to live on their own. This complex framework was characterised by the presence of Telecare, which coexisted with the more traditional forms of care previously mentioned and provided a sense of security and safety. Lastly, I appreciate that this section provided only a brief account of the interconnections between 'home', 'care' and Telecare. This choice was made so as to be able to focus more in-depth on which are the meanings and experiences of 'home' and 'care' beyond the adoption of Telecare. Telecare entered older people's homes in which more traditional forms of care were delivered, such as care in person or non-proximal care, and which embodied a variety of meanings and experiences which existed before the introduction of Telecare. Then, when remote care made its way into the same homes, it may 'disrupt' the everyday life of older people, for example by means of triggered false alarm. A more comprehensive analysis and interpretation of these relationships will be presented in Chapter Eight.

6.7 'Home' and (risk of) social isolation

Social isolation can be understood as the complete or near-complete lack of contact between an individual and society. It differs from loneliness, which reflects a temporary lack of contact with other humans. Social isolation can be an issue for individuals of any age, though symptoms may differ by age group. Critical literature about 'home' and Telecare highlight how older people spending most of their time at home and using Telecare might be facing risks of isolation. In this regard, Percival and Hanson (2006) claim that technology should not decrease the person's connection with a social world and Milligan (2009) suggests that the decrease of social contact, due to the adoption of new technologies, might be a risk.

In my study, at least six participants (Benjamin, Jane, Carl, Fiona, Rebecca and Emily) were understood as being homebound. As they might have stayed home for days or weeks at a time due to lack of access to social situations, or never or rarely being contacted or called on by anybody other than on the telephone or by their Telecare provider, the issue of social isolation might have been a significant theme. However, those older people who rarely went out, excluding consultations in hospitals or in local general practitioners' clinics, did not verbally bring up the issue of social isolation. I considered as homebound those participants who left their house only to attend medical appointments. The participants who were not homebound were not socially isolated, either. This was a specific feature of my participants and may not apply to older people living at home generally. My findings suggest that those older people who displayed community engagement – participation, physical activity and engagement in social activities such as volunteering, going to church, and going out for lunch – had fewer difficulties in accessing public transport, not necessarily because they were able to leave the house on their own. John (61), for example, who volunteered for different local organisations, both formal (the NHS) and informal (local church, among the others), could only leave his home when accompanied by his home carer. In contrast, Ingrid (79), whose dwelling was not close to public transport, could still drive, although only for short distances, and participated in different social activities. Every Monday Ingrid partook in extended exercise for people with back pain and every Tuesday she went to the local football club official charity, run by a physiotherapist. Hannah (95) used the local community bus which provides accessible, safe and affordable transport to

community groups, voluntary sector organisations and individuals with mobility issues. As the community bus driver provided help by taking her bags inside her home, Hannah used this form of transport to go shopping in a local supermarket on her own. By means of the community bus Hannah could also participate in regular tea parties in a nearby town's community centre where *'they play quizzes, etc.'* once a month. Another participant, Claire, explained: *'...and I do belong to the WI, that's the Women's Institute... And they have a meeting every month which I try to get to... We meet in a church, funny enough'*. Claire was also a member of a [well-known local museum], which holds *'good lectures'*. Jennifer (83) was also involved in social activities: *'... But I'm going out now er to 2 dinners. On a Monday. Um, I go er to er [her town district]. Er, there's a [pub]. And for 2 hours... Er, you can have a lunch... And er you can have a...er you have a lunch then we have a little talk. Well, it's only 2 hours and then the coach ...bus, the mini-bus brings you back. And the bus comes and gets me. Er, that's on a Monday. Tuesday, I now go to um [a local Christian church and charity]. Er, which again is up in [her local district]. And er to the church there. And again for 2 hours. You can have a lunch; then they have a sing-song... Or a quiz, um er, for the 2 hours. Yeah... And on a Thursday...: Um, Wednesday's free, Thursday I go to [a local community centre], which is just under the bridge along here and... And um that's run by a lady, um Linda. And she does beautiful lunches. Again it's 2 hours... But it gets me out you see'*.

Community inclusion, which seems to play a significant role in preventive individual exclusion from meaningful relationships, can be influenced by environmental control, intended as having more control of the environment outside their home. Taking a step forward, the outdoor environment might influence participation in physical activity and engagement in social activities. Summing up, older people using Telecare (whose sensors will work only within their home and garden) might have presented an increased risk of social isolation. However, the majority of older people in this study were engaged in the community as they volunteered, went to church, went out for lunch, partook in physical activities or were members of associations.

6.8 Conclusion

This chapter examined the meanings and experiences of ‘home’ for older people and how Telecare influenced them. Older people were significantly attached to the environment in which their homes were located, and emotionally attached to their homes and to significant objects which were part of their homes. Telecare entered the boundaries of ‘home’, but older people did not express any concern about feeling monitored by Telecare sensors. However, Telecare had an influence on older people’s homes in different ways. For example, Telecare devices occupied a space inside ‘home’, thus entering private spaces such as living rooms and bedrooms. A few participants attempted to hide Telecare devices, maybe because of the clash with their aesthetics of the house. Older people’s homes were already a place in which different forms of ‘care’ were experienced. In this respect ‘care’ proved to be a complex network in which Telecare was located and coexisted with more traditional forms of ‘proximal’ or ‘non-proximal’ care. Crucially, Telecare did not increase the risk of social isolation, as most older people were engaged in the community. However, this may not apply more widely to older people living at home. The next chapter, the third and last analysis chapter, will answer the third research question: ‘how does Telecare change the meanings and experiences of ‘care’ for older people?’

Chapter Seven

Meanings and experiences of ‘care’ for older people

7.1 Introduction

In the previous chapter, I analysed the different meanings and experiences of ‘home’ for older people and how Telecare changed these meanings. I identified themes related to ‘care’ as older people’s homes were the elected place in which both formal and informal care was delivered. This chapter will address the third research question, which is how Telecare changes the meanings and experiences of ‘care’. In Chapter One I explored definitions of ‘care’, ‘support’, and ‘assistance’, highlighting how I was informed in the understanding of these significant concepts by Barnes (2012) and her three distinct ways of defining ‘care’: as a relational approach, as a set of values or moral principles, and as a practice. With respect to Telecare, I highlighted how Milligan *et al.* (2011) understood ‘support’ to vulnerable and frail adults by a form of care ‘at a distance’. Informed by Barnes (2012), I argued in Chapter Two that ‘dependence’ and ‘independence’ should be understood as opposite ends of a continuum and that over the course of their lives human beings will become ‘interdependent’ on each other. I drew on the relationality of care by explaining that, despite being cared for, older people can also care for (their spouses, or other family members in need, or friends). I then explored relationalities of care and gerontology, with particular reference to social gerontologists such as Lloyd (2012), who drew attention to the ethics of care and in particular on the interdependence of human beings and how this insight opens up a different way of understanding health and well-being as the outcome of social relationships. I also explored how ‘care’, ‘home’ and Telecare intertwine and how the three are interlinked with gendered practices. In this chapter, I investigate older people’s diverse care network. This is why the chapter will start by introducing participants’ diverse care arrangements. Then, it will introduce the discussion on different forms of care: formal, informal, and occasional, and how they can co-exist in different (Telecare) homes inhabited by different older people. Meanings and experiences of ‘care’ will be analysed in order to provide an answer to the third research question.

7.2 The provision of care

In order to answer to the third research question: ‘How does Telecare changes meanings and experiences of ‘care’ for older people?’, I identified older people’s care arrangements. I found that care, delivered in different shapes and forms, could be distinguished into three main types: 1) formal carers, 2) informal carers (family and friends), and 3) occasional helpers and carers. Table 3 below, although not exhaustive, will provide a clearer understanding of each participant’s care arrangements. The table will not mention Telecare, which was considered as a ‘transversal’ form of care, provided to all participants and whose boundaries between formal and informal were not so clear-cut. I will return to this in section 7.2.4.

Name	Age	Formal carers	Informal carers (Family/friends)	Occasional helpers and carers
Katherine	81		Her adult children (daughter and son)	Her son, the caretaker (who borrows books from the local library for Katherine), her two neighbours (who do occasional shopping for her)
John	61	Trust Care (every day)		
Jennifer	83	Aged Care UK (twice a day) and an evening carer. From 1/9/15 Hollybean Care is the new care provider		Her house cleaner (her neighbour), the gardener, and the pharmacist (who delivers her medicines personally)
Benjamin	65	Formal carers (but they are friends of him), nursing care (periodically) and occupational therapy (under certain circumstances)		His next-door neighbour, who makes sure Benjamin is at home
Jane	88		Her co-resident daughter	Her gardener Jane's non-co-resident daughter helps when Jane has to go to hospital
Carl	72	His house cleaner	His wife	
Fiona	67	Her house cleaner (remunerated from the Brighton & Hove City Council), two hours once a fortnight	Her husband	

Table 3: Research participants and their diverse care arrangements

Name	Age	Formal carers	Informal carers (Family/friends)	Occasional helpers and carers
Helen	70	Hollybean Care (3 times a day) and on-site care staff (24 hours/7 days)		
Craig	84	Be With You HELP AT HOME charity home assistance services (two hours once a fortnight)		
Claire	93		Her niece, living in Edinburgh with her family (doing online shopping for Claire)	Building caretaker
Jack	82	His regular house cleaner (three times a week), who always takes him fruit and gardener, (every Monday morning). Both people are ' <i>like friends</i> ' in Jack's words	His best friend (friend calls him twice a day, at 10am and 10pm, every day)	His friends
Rebecca	94		Her son, who lives with his family in the same town	
Ingrid	79		Her niece, who cleans the house on a weekly basis, and a friend of her drives to local hospitals	Her gardener

Table 3: Research participants and their diverse care arrangements

Name	Age	Formal carers	Informal carers (Family/friends)	Occasional helpers and carers
Hannah	95	Her housecleaner (once a week)	Her friend from church (she drives her to the hospital)	Her neighbour (occasionally he does shopping for her) her grandson (occasionally, if she is in need), who lives in Fishbourne, a village close to Chichester
Karen	86			Her gardener
Emily	91	South Watch Home (twice a day, at 7/8 am and at 12 pm)		Her building caretaker

* Helen is living in a recently built housing facility that provides housing with care, assisted living, close care, continuous care housed, and community alarm service.

Table 3: Research participants and their diverse care arrangements

The identification of the research participants' care arrangements was the first step towards the understanding of how 'care' is delivered inside their homes. In fact, the description and the subsequent analysis shows that each participant had different arrangements. Thus, I identified the following themes: formal care, informal care, occasional help and care, care 'in person' and care 'at a distance', and meanings and experiences of 'care'. I will begin by exploring the first theme, formal care.

7.2.1. Formal care

In my study, when not including the provision of Telecare, only 6 participants out of 16, despite their multiple health issues, were provided formal care by a home care provider or by social services. This situation might imply that older people, discouraged by the complexity of the care system and access-related difficulties, opted for a more informal care network (see Chapter Five, section 2). Five participants, all suffering from long-term illnesses, clearly mentioned that they were provided formal home care by the following care agencies: South Watch Home, Aged Care UK, Hollybean Care, and Trust Care. Three participants were affected by lung respiratory disease. On the whole, most participants were affected by a number of health conditions. For example, John, who had become disabled following a car accident, suffered from heart attacks, among other illnesses. Benjamin had had a colostomy and was on the waiting list for scheduled surgery. Jennifer suffered from poor blood circulation and osteoporosis while Emily was prone to falls, one of which caused a shoulder bone fracture. As a consequence of her injury not being surgically treatable, Emily had been suffering from chronic stiffness in her shoulders ever since. One participant, Helen, had a different living arrangement from other participants. She had been suffering from Multiple Sclerosis for twenty-five years and lived in a housing facility which provided on-site care 24 hours a day every day. Two other participants, Craig and Fiona, were provided domestic help by a charity and social services, respectively. While Craig, who suffered from industrial injury deafness and had been denied industrial injury disablement benefits, did not have any formal carers (except Telecare), Fiona, who suffered from rheumatoid arthritis was cared for from her husband.

7.2.2 Informal care

Confirming Twigg and Atkin's (1994) claim that co-residence can be an important element in the construction of care, in spite of not necessarily being a part of it, my study's findings illustrated how 'care' can be supplied in multiple forms, or that the boundaries of care can be extended to include not only institutional, or statutory care but also an informal care. For example, familial care was predominant in this research. Jane, Katherine and Rebecca were provided care by their daughters and sons, who lived with their mother (in Jane's case) and elsewhere (in Katherine and Rebecca's case). It might be therefore thought that living with one's spouse, or with adult children, or at least being cared for by a significant relative might decrease the need for formal care for those suffering from long-term illnesses. This claim might be supported by another example of spouses who take care of each other. Carl and Fiona were cared for by, respectively, wife and husband. Although Fiona's husband suffered from heart issues and was therefore in need of care himself, they assisted themselves reciprocally.

'And most of the times it's just Frank and I looking after each other. To be perfectly honest [...] Well, I mean, it started off with, um, Frank looking after me. Then, unfortunately, David had this slight stroke, um, a few years ago, and, um, (pause) we managed...it was difficult, it was difficult, um, cos I could just about get us a meal together. He couldn't get out of bed, and my buggy was used a lot to take things through to the bedroom. But, we look after each other'.

In contrast with Fiona's husband, Carl's wife was still working and did not have care needs. Furthermore, Carl could be provided care by his sister, who did not live in the same town.

Describing an experience in a hotel during a holiday abroad, Carl reported:

'Um, yeah well, Julie [Carl's wife] and Eleanor, my sister, um when I was feeling, feeling a bit groggy one night. Er, I didn't want to go down for a meal, so what I did, I stopped in, I stopped in bed...And er the girls went down, had their meal, came up to check on me... And, er found me on the floor. And as you know, er, hotels and that abroad... And most buildings have all got these tiled floors, haven't they? ...They're very [...] They're not very forgiving at all [...] Yeah, so...they then put me to bed [...].

Yeah. So, at times Julie had to put a 'Do not disturb' notice so that I could just sleep it off...'

Although acting as an informal caregiver, Julie, Carl's wife, appeared very reliable and competent. In the following excerpt, Julie proved aware of the medicines taken by Carl. More importantly, she seemed to know how to deal with the epileptic seizures experienced by her husband. Interestingly, this account highlights how informal care might not be sufficient, should the caregiver need assistance, too. As a matter of fact, Carl suggested that, instead of having his wife calling the medical doctor after her husband's suspected stroke, she could have contacted Telecare. Carl's wife's comments about how long they had to wait for an ambulance suggests that it would have been preferable to get in touch with Telecare and not with the emergency services.

Carl: Yeah I, what I have, I have um, oh, [pausing]. What's the one I take Julie with the extra codeine in?

Julie: It's a codeine and paracetamol.

Carl: Then three days after that... [24-hour blood pressure monitor]

I: Oh, I see.

Carl: I had a seizure.

I: OK.

Carl: And it was a good job Julie came out of the bedroom when she did because if she hadn't, I think I might have finished up down the bottom of the stairs... Um suspected stroke, so it would probably, um, be different now because when I had my suspected stroke, Julie was trying to get um the doctor...

I: Hm-mmm.

Carl: To come out and, how long was it Julie?

Julie: Oh, I phoned them about...I can't think what time I phoned them actually.

Carl: Fairly early in the morning first off, wasn't it?

Julie: Fairly early, but it was the middle of the afternoon before the doctor came out.

I: Hm.

Julie: And then they took him into hospital and by the, by the time he'd been seen in observation and they'd found him a bed it was about half past eleven at night, wasn't it?

Carl: Yeah. So, so what we would do now if, if Julie was in the same situation...

I: Hm-mmm.

Carl: What, what she would do, she would contact CareLink [the Telecare provider] ...

I: OK.

Carl: And, and go through, go through that way. I think that would be probably be just as fast.

Likewise, Jane's co-resident daughter, who worked part-time, cared for her mother whenever she was not working.

Jane's daughter: Yeah, because I mean ... I am here a lot more now because I used to work full time, but now I'm...

I: Retired, maybe?

Jane's daughter: Well, almost.

I: Almost, ok [chuckling].

Jane's daughter: I am just doing, like, 3 afternoons a week.

Extended family members also played a role in the provision of informal care, both in person and at a distance. In this respect, Ingrid's niece, who lived in the same town, cleaned Ingrid's house on a weekly basis, while Claire's niece provided care at a distance, by shopping for Claire online, '*Oh, I have my food, don't laugh, don't laugh [...] Via Edinburgh... Because my niece...Lives in Edinburgh. With her husband, and she does it all through her computer...The next day, Sainsbury's at the door*'. This passage reveals how care can be provided in multiple and sometimes unexpected ways, such as purchasing groceries and other mundane products over the internet, which is already a form of shopping 'at a distance'.

In between traditional formal care and informal care, Benjamin, who suffered from serious health issues due to colostomy surgery and long-term breathing issues, relied on two friends for daily care. Benjamin's friends were regularly paid for the provision of care. This finding challenged the common definition of formal care as paid care vs informal care as unpaid care and therefore needed careful consideration and interpretation. Asked about the reasons which led to this choice, Benjamin replied that quite a long time before he had been sexually assaulted by a formal carer, working for the local social services.

Benjamin: Ah, ehm, I had problems with that carer.

I: Oh!

Benjamin: I had big problems. Uh, I had [indistinct word] with social services and told him to go out and never come back.

I: What, what happened? Something...?

Benjamin: He, he raped me.

Following this extremely distressing experience, Benjamin reported the incident to social services and the carer was apparently dismissed by the Adult social services of his town. However, due to the highly sensitive matter, I considered it too distressing for an aged and vulnerable person such as Benjamin to insist asking intrusive questions about his experience. Therefore, the matter was not further investigated, and I opted for an open question about carers, which led to the following passage:

I: So, how many carers do you have now?

Benjamin: Two.

I: Two? And they come twice a week, or...?

Benjamin: Ah, yeah, twice a week, yeah. John and Mary. Yeah. They are very, very good. Very reliable.

I: Good.

Benjamin: Very reliable.

I: And they come in the morning?

Benjamin: Erh. In the evening, very early, late afternoon. Yeah.

I: Or early afternoon.

Benjamin: Yeah.

I: Ok. So, what do they do? They take care of the house? Also, they prepare the meals?

Benjamin: Yeah, they take care of the house, etc. I hope, is my [indistinct words] rich fruit cake.

Benjamin explained that his carers are 'personal friends, people, friends' as he 'wouldn't have anybody from an agency'. He was also helped at home by 'Lily, who comes the weekends' adding:

'Yeah. And my next-door neighbour, who has a key. If he doesn't see me, he knocks on the ... he knocks, he comes in'.

During the interview, Benjamin spontaneously mentioned the significant relationship he had built with two surgeons: *I have got trust in Mr. Roberts, the surgeon... If it's not done here, it will be done ... and the surgeon for this side [indistinct words] ... Mr Clinton is also very good, he is very blunt, of course I have got so much respect for him. He sees me so much, not my GP. He is a personal friend.... And he is still, he is still in Brighton, at the Field service... I didn't know, I asked him when I moved here, "can I stay with him?" and he said "yes" but he couldn't do, he couldn't do home visits. But he does, he does do home visits to me. Every time I am at hospital he comes'.*

Benjamin's care experience revealed that he was surrounded by a small group of friends who cared for him and acted as keyholders. His caretaker was a nominated keyholder, too. Finally, his neighbour 'checked on him'. Benjamin's care arrangements are an example of how informal (friends and neighbours) and occasional (building caretakers, in this case) care intertwine with Telecare. Benjamin's care provision also shows how informal and formal (Telecare) forms of care develop a steady bond. As the very existence of Telecare relies on the availability of at least two nominated keyholders (family members, friends or neighbours, as discussed in Chapter Five), formal care such as Telecare intermingles with informal care and becomes something more than the sum of different forms of care. Benjamin was also on good terms with two surgeons, one of them 'a personal friend'. A possible explanation for Benjamin's closeness to health practitioners is the long-term condition of which he is affected. Benjamin, in fact, underwent a colostomy in the past and is now on the waiting list for reparatory surgery. Meanwhile, Benjamin's medication list needs to be reviewed and updated prior to the surgery. During home visits Benjamin revealed that he was also visited by two health professionals. The first was a nurse whose tasks consisted, among others, in changing Benjamin's stoma bags and making sure that he followed correct hygiene practices. The second health professional was an occupational therapist who accessed Benjamin's flat 'under certain circumstances', such as before his scheduled invasive reparatory surgery. Crucially, Benjamin's operation had already been planned and postponed different times for non-clinical reasons, such as insufficient beds available on the ward. The abundance of informal and formal carers in Benjamin's life tells us that 'care' can be extremely complex (and complicated, as in Benjamin's surgery, continuously postponed) and also that Benjamin's relationship with Telecare is complex. When a Telecare user knows that he will leave his home for any reason, in this case for being

administered surgery or another treatment, he or she needs to inform the Telecare provider about this absence. Thus, Benjamin's repeatedly scheduled and rescheduled surgery seemed to imply that either Benjamin or his caregivers had informed the Telecare provider so they knew about potential periods of absence, suggesting how interdependent Telecare is on more traditional forms of care.

A few older people opted for private domestic services. In spite of their health issues and of their not being particularly wealthy (two of them revealed that they had financial issues), they self-funded domestic services rather than home carers (see Table 3). Of these participants, three of them lived on their own and therefore could not count on family carers. A significant attachment to home for old and vulnerable people might influence the use of financial resources, even when limited, to employ house cleaners to make sure that their dwelling was clean and tidy. Craig (84) and Jennifer (83), who both lived alone in inexpensive accommodation (Craig in a tiny one-bedroom flat and Jennifer in a council house), were willing to employ, respectively, a charity home assistance service (even if only on a fortnight basis), and a neighbour, (occasionally). Jack (82), who lived on his own and had more financial resources, employed a house cleaner three times a week, while Hannah (95), who also lived alone, used domestic cleaning services once a week. I am mentioning domestic services as I understood care in a broad sense, therefore including the completion of household tasks such as cleaning.

7.2.3 Occasional help and care

In terms of care practices, older people revealed to what extent care provision can differ. For example, not all participants needed a day-to-day care, although they might need help and care in some special cases. Half of the older people interviewed and observed explained that they might rely on occasional care and help. In particular, participants whose property included a live-in caretaker (Katherine and Claire) mentioned that they could get in touch with the caretaker in case of need. Those caretakers were also nominated keyholders, thus making it possible for Katherine and Claire to have Telecare. Katherine added that her caretaker borrowed books for her from the local library. Barnes (2012) suggests that a concierge system, involving someone having

overall responsibility for the property and for ensuring the security of not only the building but also the people within it, carries the possibility of the development of trusting relationships. Confirming the literature, those participants who relied on their caretakers for occasional help or for holding their keys, thus nominating caretakers (Telecare keyholders), did trust them.

Participants received occasional help from their relatives (Hannah's grandson helped her with the shopping, Jane's daughter drove her mother to the GP), neighbours (Hannah's neighbour did occasional shopping for her), or friends (Jack received a telephone call twice a day from one of his friends), or gardeners (Jane, Karen and Jennifer had a gardener, who was hired on an occasional basis). Although all of them relied on occasional help, each participant had different living arrangements. Jane lived with her co-resident daughter, who took care of household tasks, while Karen lived on her own (although temporarily sharing her accommodation with a friend) and did not rely on other occasional help. Jennifer was helped at home by a house cleaner and had her pharmacist deliver her medicines at home. These examples suggest that a number of older people relied on a wide occasional care network, whose boundaries shifted according to their individual circumstances. Care 'in person' and care 'at a distance' also seemed to have blurred boundaries, as I will explore in the following section.

7.2.4 Care 'in person' and care 'at a distance': blurring boundaries?

Traditional forms of care understood as formal (home care providers) and informal care (family care) did not seem to be replaced by the provision of Telecare. In contrast, care 'in person' coexisted with care 'at a distance' with no significant tension. None of the participants suggested that Telecare had negatively interfered with the provision of care 'in person'. In contrast, one of the participants, Carl, suggested that his wife, in the event of his suspected stroke, might have contacted the Telecare provider instead of the medical doctor. Crucially, Telecare (as already explained in Chapter Five, section 2), relies on the availability of keyholders, thus highlighting how so-called remote care at a distance is not so 'remote' and even less 'at a distance' when considered in the everyday lives of older users. Thus, I suggest that older people might experience, in their everyday lives, a provision of forms of care 'in person' and 'at a distance', whose

boundaries seem to blur. In the following section, I will discuss the meanings and experiences of ‘care’ for older people.

7.2.5 Meanings and experiences of ‘care’

The previous sections on formal care, informal care, and occasional help and care highlighted that older people relied on a wide and diversified care network. Meanings and experiences of care seemed to depend on the closeness of care recipient and caregiver. Those participants who were provided informal care by their spouses or adult children (either co-resident or not), seemed to have a more positive experience of ‘care’. In this regard, Carl and Fiona (who lived with their spouses), discussed care provision and even complained about it under certain circumstances but not as much as those participants who had to rely entirely on formal care. Carl recalled that ‘...in 2004 when I had my first stroke diagnosed um I didn’t go out for five and half months. I was too frightened to in case I fell down. And um I had um physios come to see me then, but that wasn’t, that wasn’t the same, that wasn’t the same group. It was another group that were down from the um outpatients at the Becker County Hospital, and they [physiotherapists] came out actually to the house to see me because I was in such a state. And gradually over the weeks and months, they gradually built me up to... strength and able to go out because I just wasn’t able to go out. And when I did start going out with Julie a little bit it was always me on her arm, but only a short distance with the dog’. In Carl’s experience, physiotherapy provided by the NHS allowed him to improve his health. However, his rehabilitation process appeared to be significantly influenced by his wife Julie, who took the time to support Carl, both physically and psychologically. Thus, it might be claimed that physiotherapy was not sufficient to allow Carl’s complete recovery.

Fiona shared a similar experience of informal care, as she remembered that ‘the only time we [her husband and her] had anybody up, like nurses is if I’ve had an operation, and they’ve come to see...oh! ... they’ve come to see if, um, I’m alright or anything, but apart from that the doctor’s is just down the road’. Although being in need of an arthritis nurse, Fiona affirmed that her husband effectively looked after her (see also quote in the section 7.2.2). Furthermore, despite his subsequent stroke, he still cared for

her. In contrast, Fiona's daughter did not provide much help, according to Fiona, as she did not visit her mother *'very often'* and *'...is into her work and that's all she's really interested in'*. Likewise, her husband David's three daughters *'have all got...most of David's family's got their homes to look after'*. Fiona's comments about her family imply, or seem to imply, that she and her husband are responsible for each other's care provision, reinforcing my assumption that those participants who live with their spouses feel cared for by them, and, even more importantly, rely more on them than on formal care. This assumption was also supported by Jane, who lives with her daughter, and who conveyed the impression of feeling cared for, supported and treated well. Jane (see previous sub-section) had another daughter, who lived on her own in her same town, and a son, who lived in a village six miles away from her house. Jane explained that, when she had to go to her GP, she *'need(s) both of them [her two daughters], every time'* because the clinic is inconveniently located. Co-resident daughter Stephanie added that *'[...] that's right at the top of the slope'* as Jane explained: *'So, I have to push up the seat ... and besides, to go down to where the entrance is stayed down...'* Jane's co-resident daughter concluded by saying that *'I've got to drive and Kristina [non-co-resident daughter] has to push the wheelchair'*. This passage shows how Jane could rely on her two daughters when she had to visit her doctor. Jane could spend time alone when the resident daughter worked away from home, due to the presence of Telecare. However, when she had to go to her doctor Jane, who made use of a wheelchair, needed the help of both daughters. Otherwise, due to her mobility issues, she would not have been able to enter the clinic. Jane's account of the difficulties experienced visiting the clinic showed how reassuring family members could be for her. Similarly, Katherine felt supported by her non-co-resident daughter, who occasionally spent the night/s at Katherine's flat. Furthermore, Katherine's son visited her occasionally. Katherine did not provide details of her son's visit, but it seemed that his presence in her home was reassuring. In contrast with Jane, Katherine also had the support of an occasional network of care: two 'very good' neighbours and her caretaker (see also section 7.2.3).

Even older people who were cared for by relatives at a distance gave the impression of being more reassured, more safe than those who had to rely on a formal care network. In fact, they felt reassured by the presence of Telecare, which allowed them to live alone. Telecare also gave peace of mind to informal carers such as Fiona's husband who felt reassured in going out knowing that his wife wore the alarm pendant in his absence.

Jane and Katherine's adult children also felt safe, knowing that their mothers could count on care at a distance. In particular, Jane's co-resident daughter had a part-time job and felt confident that, should her mother experience a fall or another kind of health issue, she could easily trigger an alarm. As for Jane's non-resident daughter, she had peace of mind knowing that her mother could count on Telecare when her sister was at work. Katherine's family carers could also live independently, feeling reassured by the fact that their mother could just press a button and get in touch with the Telecare monitoring centre.

Non proximal informal caregivers such as Claire and Ingrid's nieces also benefitted from the presence of Telecare in their relatives' homes. Claire, despite living in East Sussex, relied on her niece, based in Scotland, for the provision of food while Ingrid depended on her niece to have her house cleaned once a week. Informal care provided by relatives, which, even though at a distance, suggested a more intimate care relationship than formal care, was meshed with another form of care at a distance, Telecare. Things appeared to be also more complex, as even care delivered by friends and neighbours proved to be meaningful. In this regard, Jack, who was surrounded by long-time friends with whom he went out for lunch or who called him to make sure that he was fine, felt 'very lucky'. Jack recalls:

'A very good, close friend of mine... She lives in London, and when she visited me she said I had to remove things...I had a cabinet with sharp ends... So, in case I fell down the stairs, so she made me get, remove a lot of dangerous furniture, and er... So, in case I fell down the stairs, so she made me get, remove a lot of dangerous furniture, and er... And, er, made me get the CareLink [Telecare provider]'.

Jack's friend, after having prevented possible falls, looked forward to further improving Jack's safety by advising him to get in touch with the local Telecare provider and register for Telecare. Jack's informal carer's advice suggests that carers can promote Telecare, thus supporting the *appropriation* of Telecare. The majority of participants, who were not cared for by first or second-degree relatives or friends, displayed a more critical attitude towards their (formal) caregivers. In this respect, Jennifer, a former nurse who received formal care from a home provider, expressed negative comments towards her 'breathing nurse':

'So, I am going to ring them [indistinct words], but this we did before Christmas. We complained about, eh, if I ring them, then see, and the breathing nurse [panting], one morning, I think it was about in November, and I said [panting]: 'I can't get my breath and... and I'm on the nebuliser as I've taken the nebuliser. 'Oh', she said, 'we are busy, and probably I'll look on you tomorrow'. This is the [indistinct] nurse. And...other times she feels all right, but she never came [Pausing]. No'.

Jennifer's recollection of what happened four months before¹⁷ seems to highlight how the answer she received from her care provider was inappropriate and unable to meet her health needs and how this developed a feeling of frustration, and maybe even anger, in Jennifer. Later on, Jennifer explained how the home carers who are supposed to attend to household chores, did not actually devote great care to these mundane although important tasks.

'There's the bed and everything. Well, they're supposed to, on the Thursday, the carer comes at 9 o'clock. She is then supposed to change the bed, and then to Hoover round here... and then there [panting] and wash the floor. She gets an hour for that, for the cleaning. Supposed to do the dusting, but they haven't got time for the dusting, so this is when I have to go to [indistinct name of her neighbour] ... and do the dusting, clean the bath and things like that. They don't do anything like that. No'.

It appeared that the management of every day's household chores played an important role in Jennifer's daily routines and that any disruption truly upset her. A possible reason for this apparently disproportionate reaction might be the need for Jennifer to live in a neat and comfortable environment. More in depth, it might also suggest that Jennifer felt frustrated because she realised her unfitness for household tasks due her health condition which were unlikely to improve in the future, thus showing her how dependent she was on other people (home carers, in her case). The diversity of the care network, meaning the difference in terms of who (unpaid or paid carers), which (help with basic activities such as preparing food or bathing or daily/weekly activities such as house cleaning) and when (on a regular base or occasionally) seemed to influence older

¹⁷ This quote relates to the first home visit, which took place in March 2015, approximately four months after the event recalled by Jennifer.

people's meanings and experiences of care. In the following passage, for example, Jennifer complains quite heavily about home carers and their 'timesheet':

[...] The one [home carer] I had last night, all she wanted to do was come and get away. And I told her. I said "You've got an hour". I said "I paid to have an hour's call". And she said, "No no, I'm, I'm only here for half-an-hour", another new one and er I said "But it's my bath night". I said "I can't have a bath because I feel too ill to be getting in the bath". I said "I would like a stick wash and a clean nightie on". I said "I've been sweating all day um with this pleurisy, so I could do, while you're here help me to get a stick wash". Well she did do that, and so I said to her, "You get the dinner ready" I said, "not that I want much". I said "if you could just open this tin" Oh, that's right and that, you fill a bottle for the bed and fill a bottle for here, for my back, and "oh, that's all the time I've got" she said. I said "No, it's not". I said "You...I'm paying an hour for you". So I said "I want you here for an hour". But no. "No, I can't" she said. "I've got to go to Brighton. I've got to go to Hove, er I've got to go to someone else". I said "that's not my priority". I said "[...] Down on the timesheet..."

Digging deeper, it was found that critical feelings towards care providers were not so clear-cut. John and Helen, both suffering from long-term illnesses, claimed that they were satisfied with the provision of formal care. John explained that his home care provider, Trust Care, allowed him not only to live on his own in spite of his serious illnesses but also to maintain his many social commitments, such as volunteering for the local church and the NHS. Helen, suffering from Multiple Sclerosis and living in a facility which provides on-site care around the clock, revealed that she was visited three times a day by Hollybean Care and that her experience was satisfactory. Emily also had positive memories of formal care delivered at home. She recalls what happened after one of her falls:

'No, I said, I phoned my GP after the fall, he helped me up the stairs, a marvellous young man, and luckily all working in a flat, splendid [with emphasis], I must say, young people are so kind, well, they have been very kind to me, and he helped me up the stairs, he said me: "Do you want to ring for an ambulance?", I said: "No" because, that means going to hospital but no one left lived out of the flat, so the GP came and she said, it was a lady GP, and she said: "I don't think [the shoulder] it's broken". Anyway

but during the night, I was black and blue, you know black and blue, like bruises, and during the night I got my arm so stiff luckily I couldn't get into bed, so I stayed in the chair all night, which was a good thing, because this bruising bled, and...soaked with blood, and splendid [with emphasis], all so marvellous [with emphasis] I can't thank the district nurses enough, better than the doctors, anyway this splendid nurse came in, she ... sort of, washed me down and , because this is what they [Community Rapid Response Service (Brighton & Hove)] do, I don't know if you heard it, if somebody has an accident and live on their own, they have somebody called, three people, three people, come for three days, I think they are from social services, something like that, and, anyway they came and one of them dropped me to the hospital, to get, ehm, set it'.

Emily, who rented a flat in a building with no lift, explained that after her fall she had to be transported up the stairs from her general practitioner and she felt reassured and well cared by her. Following her accident, her doctor alerted the Community Response Service, and later on she was taken to the hospital, probably to run tests and exams. Emily's experience of both 'primary care' providers, such as her general practitioner and Community Rapid Response Service appeared to be positive. Although Emily's care experience following her shoulder injury seemed to be positive, both with 'primary care' providers and with social services, which '*did quite a lot for me[her]*', things are not so straightforward as they look at first sight. As a matter of fact, in the course of the interview, Emily recalled that she '*[...] had another ... trouble with these people [Telecare provider staff] and my carer, she should have arrived by 8 o'clock, and she didn't come, and I waited, waited, and I was short of water, orange, I cut an orange, because I get so dry, I also get cramps, so I have, you have noticed, I have lots of crisps, I take crisps, and for the salt ... This, this particular day, the carer didn't come in. It was after 9!*'

This apparent ambivalence in Emily's narrative (positive care experiences with her general practitioner and emergency care and a negative one with her home carer) was atypical in the small group of older people interviewed. Maybe Emily's emotional state (pain, fear and overall distress) after her serious fall, which caused her shoulder to fracture, might have influenced her experience of care and what care meant for her. On the other hand, paid care providers who went into her home twice a day were evaluated in a more critical way, thus allowing Emily to display feelings of distress in the event of

a delay in the care provision.

Rebecca, seriously vision impaired, received special sunglasses and a magnifier from the NHS, the latter of which she found ‘ridiculous’ as it would not allow her to see more clearly. She recalls:

‘I mean, I can go out, I can go on a bus because I can see long distance. They [NHS] did give me [pausing] some glasses [pausing], and they are good for walking, they are made for the head, you can’t look down [laughing], you must... It’s the first time I have had anything from NHS for nothing [with emphasis] ... I get no, no assistance on NHS, no money assistance on NHS. My son is an accountant, and he thinks I ought to get, I ought to be able to get an allowance because I’ve been registered as partially sighted... I thought it was ‘sight impaired’, or something. And he thinks [with emphasis] I should get a cash allowance, but...’.

On the surface, Rebecca’s narrative shows dissatisfaction about the provision of care delivered by the National Health Service (NHS). It also showed frustration of not being able to see sufficiently, in spite of the assistive devices provided. Eventually Rebecca showed confidence in her son, who might have been able to obtain financial help for his mother. Later on, Rebecca expressed criticism towards her general practitioner’s clinic, which she found unclean, as she witnessed ‘a doctor seeing me [her] out of the door and calling the next patient and didn’t go and wash hands’. Rebecca’s experience of ‘care’ seems to suggest that she is much more confident in informal care (provided by her son) than in formal care (the provision of assistive devices and the physical aspect of the doctor’s clinic).

Older people’s interviews also revealed that their experiences and meanings of formal care differed according to the place in which care was delivered, confirming that ‘places matter’ (Oudshoorn, 2011). In this respect, ‘home’ was the elected place in which to receive care, either formal or informal. In fact, when the provision of care was delivered outside, such as in a hospital or at the local general practitioner surgery, participants had a more negative experience. In particular, Benjamin, on a waiting list for surgery after his colostomy, expressed anxiety and anger towards social services and the hospital after his first colostomy’s intervention: ‘And I... I am entitled to health carers, but I had

a bad treatment'. What he meant was that, after his first operation, he was provided care by formal caregivers but he did not have a positive experience.

On her part, Jane complained about the disabled-unfriendly location of her general practitioner, which would not allow her daughters to park the car right in front of the surgery, thus needing her family to transfer her from the car to the wheelchair and eventually to push the wheelchair from the carpark to the surgery. On the other hand, she claimed: *'I can't complain about anything. People say: "Uh, social services don't really work, care" ...I've got the toilet seat, they put one in the bathroom, we have so many of these from my husband, and we got some more grab rails in the... the alarm in the front, you know... the gate'* and added: *'Yeah, they [social services] put everything, they just came in and ...they were all the way round because it was getting...'*

It seems that meanings of care might be influenced by place and context in which the provision of care takes place (for example, the inaccessible location of the general practitioner's clinic vs the usefulness of grab rails inside home) or by feelings of satisfaction (such as those shown by Helen towards her care provider) versus those of frustration (displayed by Rebecca, who found useless the assistive devices provided by the NHS in order to improve her eyesight), or even those of fear and anger (shown by Benjamin, who was apparently abused by a formal carer, and instead opted for informal care). Interestingly, a few participants (Katherine, Jack and Karen) did not verbalise their experiences of care. A more in-depth analysis of their health conditions revealed that neither Jack nor Karen suffered from long-term illness and both were quite independent; neither was homebound, even though neither of them drove anymore. Jack relied on weekly help at home (from his house cleaner and gardener) and on friends who cared for him in an informal way. Karen seemed to be quite independent, as she claimed that she did not receive any help at home, except from her gardener.

Considering that she lived in a huge and sophisticatedly furnished and decorated property, it seemed improbable that she could take care of it by herself. Unlike Jack and Karen, Katherine, apparently homebound after having suffered two strokes and serious eye-impairment, admitted being provided informal care by her daughter on a regular basis. None of the three participants expressed, exception made for Jack – quite neutral in his comments about his general practitioner – any observation about the provision of

care, not even in a broad sense. On the whole, those participants seemed reluctant to discuss their care provision.

7.3 Conclusion

This third and last analysis chapter has addressed how Telecare changes the meanings and experience of care for older people. In order to do this, it has addressed older people's care arrangements and, despite my focus in the Introduction chapter on two different forms of care: formal and informal, my findings show the care network also comprises a third form of care: occasional help and care. While a minority of older people were provided care by home care providers, the majority of participants were cared for by informal carers such as family and friends. Interestingly, most older people also needed occasional help and this was provided by neighbours, caretakers, or even pharmacists. Those people who acted as occasional helpers (and caregivers) were part of a more extensive care network. Thus, when Telecare entered older people's home boundaries, it also became part of a pre-existing, often quite extensive, care network. Crucially, Telecare reassured family carers, such as older people's spouses and adult children, who could keep their jobs while caring for their relatives. It could also be speculated that even professional caregivers felt reassured knowing that Telecare was at work. They might therefore promote the use of Telecare, thus enabling its *appropriation*. Participants' accounts suggested that care 'in person' (formal, informal and occasional) is not opposed to care 'at a distance' (Telecare) but, rather, that the two can and must work together well. However, it can be argued that it might be difficult to disentangle the changes experienced in the care provision as a result of Telecare from those experienced because of significant changes that older people have made to their lives, such as using more informal and occasional forms of care, using assistive devices to overcome mobility issues and moving to safer and more inclusive houses. The following chapter will bring together the three analysis chapters and will discuss all significant findings of my study in the light of wider literature and debates.

Chapter Eight

Discussion

8.1 Introduction

The aim of this thesis was to explore how older people come to adopt Telecare into their homes, and whether and how this adoption of Telecare changed the meaning and experience of ‘home’ and ‘care’. Using a quasi-ethnographic approach, which involved undertaking semi-structured interviews, opportunistic conversations and observations, sixteen Telecare users were visited in their own homes once to three times over a period of six months. Before going any further, I will clarify that the Telecare system that I explored in my study worked only inside the home boundaries, thus providing security and peace of mind to older people only when they were inside their dwellings. In contrast, other forms of Telecare provide a mobile service, which allows the users to be tracked anywhere and can also send alerts to carers and connect them online. The implication is that these enhanced forms of Telecare allow safety, security and peace of mind to older people and their care network even when the older users are out and about. I will return to this topic and expand it in the conclusion chapter.

My research was focused on three questions:

- 1) How do older people come to adopt Telecare in their homes?
- 2) How does Telecare change the meanings and experiences of ‘home’ for older people?
- 3) How does Telecare change the meanings and experiences of ‘care’ for older people?

8.2. How do older people come to adopt Telecare in their homes?

The first research question: how do older people come to adopt Telecare in their homes? was answered by applying the domestication of technology theory. This combines

science and technology studies, in particular the Social Shaping of Technology approach which highlights the user as having an active role in defining the nature, scope and functions of technology, and media studies. 'Domestication' provides a potentially important conceptual framework for understanding technology use within everyday contexts such as the home. Rather than discuss the effects of technology, this theory explores what users do with technologies once in the home (for more details see Chapter 3, section 3.3). Thus, I used domestication for understanding how a small group of older people adopted and used Telecare in their own homes. This was relevant as Percival *et al.* (2009) suggest that there is a gap related to the views or experiences of Telecare users or potential users (see also Chapter Two, section 5). As explained in Chapter 3, section 2, Silverstone *et al.* (1992) consider households as part of a transactional system of economic and social relations with the more objective economy and society of the public sphere. According to this theory the household is understood as a 'moral economy' and is therefore grounded in the creation of the home. Different studies have adopted the domestication of technology framework and considered the home as having its 'moral economy'. However, the originality of my study lies in the suggestion that even the Telecare provider might have its own 'moral economy'. This 'moral economy' can be translated into the home. The provider, in fact, has its own routines, such as the monthly testing of the Telecare equipment. It also has its own values, such as ethical duties of confidentiality towards its customers' personal information, or the provision of continuous support at a distance, both physically and psychologically. I am intentionally using terms which might appear slightly contradictory to the understanding of Telecare as care 'at a distance'. In fact, I would like to highlight that the Telecare workers visited older peoples' (their customers') homes following a specific routine, such as the installation or removal of the Telecare equipment, or to solve technical issues. Furthermore, Telecare workers, during the monthly testing of Telecare, created a relation of trust with the older people. Thus, Telecare was a form of remote care which developed affective links with the (older) Telecare users (some of whom defined Telecare workers as 'the Telecare people'), thus suggesting how care 'at a distance' can create feelings of warmth. According to Silverstone *et al.* (1992), the domestication of technology theory is characterized by four stages: *appropriation*, *objectification*, *incorporation* and *conversion*. Silverstone compared the integration of technologies in a household to the taming of a pet, who will need to go through different non-discrete stages before becoming a member of the

household. These stages might not be completely reached. In the same way, technology might not be completely integrated. The initial phase in which technology makes its way into the household has or might have an impact on the first stage of the domestication process: ‘appropriation’.

8.2.1 Appropriation

Scholars such as Haddon (2011) and Ward (2006) studied the appropriation of ICTs. While for Haddon appropriation is characterised by a number of negotiations, Ward understands appropriation as the stage in which the technology has been purchased. For Ward (2006) the different stages of domestication are not straightforward. The *appropriation* of Telecare occurs at the point of ownership when it leaves the world of the commodity and enters the home. It is at this point that Telecare acquires meaning and significance, specific to the boundaries of the household. The *appropriation* is relevant for different reasons. Firstly, *appropriation* is the initial stage of the domestication of Telecare, when it begins the process of becoming part of older people’s everyday lives. Secondly, this first step is the beginning of a process which appeared to be open-ended and therefore not predictable.

In my study, despite being aware of Telecare or, more precisely, which Telecare devices would enter their homes, participants did not know what would happen to their homes and to their provision of care after the installation of the Telecare package. In other words, they were unclear how care ‘at a distance’ would shape their home and their provision of care. However, older people were not passive users. I have shown in Chapter Five, section 2, that those participants who suffered, respectively, from epilepsy and multiple sclerosis ‘appropriated’ their uncommon (among the group of older people that I studied) devices, in particular the ‘epilepsy bed sensor’ and the ‘sip-and-puff’ sensor differently from the basic device (the alarm pendant). In other words, they have shown that ‘domestication’ can be a creative process where older people ‘do’ something unexpected with this new kind of technology. Turning now to the reasons that led to registering for Telecare, participants shared the same motive (health issues) and relied on a network of keyholders (neighbours, friends and family) and more formal (care) networks. However, they differed in terms of the significance of specific Telecare

devices used. While the majority of older people had registered only for the alarm pendant and the smoke detector, 9 participants out of 16 also registered for the key safe. Interestingly, among those who had a key safe, 6 participants had two or more nominated key holders and therefore the key safe was not necessary. Their choice of having a secure metal box containing their house's keys can be interpreted as a need for additional security. Five participants also registered for the carbon monoxide detector, enabling them to feel safe when cooking. As previously mentioned, other Telecare devices such as the 'sip-and-puff' and the 'epilepsy bed sensor' were not common, as only two participants registered for these respectively. Older people's *appropriation* of Telecare was different from the *appropriation* of other technologies, such as television, mobile telephone and the internet, due to its features. In this study, Telecare was adopted by a specific group of people, older and frail, most of them affected by a number of health issues who lived in their own homes. Therefore, Telecare entered older people's homes in order to prevent risk (of gas or water leak, of fall) and to increase older people's safety and peace of mind. Crucially, Telecare provided peace of mind to carers, allowing those family carers who worked outside the home to maintain their jobs, knowing that their relatives were safe.

The domestication of technology theory has never, to my knowledge, been used to study a health technology such as Telecare. Thus, my findings can provide insight into why, when and how the *appropriation* stage proceeds. Firstly, my findings show that, beyond (older) Telecare users, this technology was 'appropriated' by older people's social network (family, friends, and neighbours), who influenced research participants in the adoption of Telecare and then (the majority) became key holders. Furthermore, I found that those older users who had registered for uncommon (in my study) Telecare devices, such as the bed epilepsy sensor and the 'sip-and-puff' device, were at ease with their equipment. In particular, one participant made jokes about her 'sip-and-puff' device and regarded it as a technological friend. This finding challenges concepts of the relationship between technology and 'care'. More clearly, what is often understood as care 'at a distance' (such as Telecare) involves 'in person' aspects – so the two are not opposed to one another but often work together.

8.2.2 Objectification

In the second phase of domestication, *objectification*, the artefact is physically arranged and displayed. Silverstone *et al.* state that ‘clearly it is possible to see how physical artefacts, in their arrangements and display, as well as in their construction and in the creation of the environment for their display, provide an objectification of the values, the aesthetic and the cognitive universe, of those who feel comfortable or identify with them’ (Silverstone *et al.*, 1992, p. 23). Thus, they understand that technologies are appropriated into an aesthetic environment. This research has shown that Telecare devices, in contrast to technologies such as laptops, smartphones and the like, which are purchased for their appearance and their compatibility with the aesthetic of the home as well as their functional significance, are objectified for their intrinsic ‘health’ value. Returning to theoretical approaches to the second stage of domestication, while Silverstone and colleagues (1992) understand *objectification* as the display of the technological items, Haddon (2011) claims that this second stage relates to how the technologies become part of people’s habits and therefore time structures. Ward (2006) understands objectification as an active process in which technologies merge with the physicality of the household. For her, objectification is not clear-cut and might overlap with the following process, *incorporation*.

In my study *objectification* was understood by older people either as *objectification* of Telecare devices or *objectification* of Telecare considered as the wider system in which Telecare devices occupy. All participants located their basic device (the alarm unit) close to the telephone line, as the unit needed to be plugged into the telephone line. However, some older people attempted to hide, or to keep the alarm unit discreetly away from the gaze of others. A few people did not wear the alarm pendant or hid it under their shirt. This option was not available in the case of fixed devices, such as the carbon monoxide detector or the smoke detector, which needed to be located in specific places (kitchen, corridor, living room, for example) and therefore could not be hidden. The majority of older people did not seem to pay particular attention to the aesthetics and appearance of Telecare devices. Possible interpretations were: coming to terms with apparently aesthetically disruptive objects in view of feeling safe and secure at home or the not particularly obtrusiveness of Telecare items (the smoke detector or the carbon monoxide detector could be easily integrated in the furniture). However, a small number

of participants showed their dissatisfaction toward the appearance of Telecare items (which cannot be customised) by attempting to hide their alarm unit either under the sofa, behind the curtains or even on the top shelf in the kitchen. The implication here is that those older people who hid their Telecare items might not have fully reached the second stage of domestication, *incorporation*. I have explained this in terms of older people's feelings of ambivalence, understood as uncertainty or hesitation in the use of Telecare. The cause of this ambivalence may be fear of being stigmatized or, at best, a reluctance to accepting growing frailty, which itself may be linked to the way older frail people are often treated in society (because of ageism).

8.2.3 Incorporation

While Silverstone & Hirsch (1992) define *incorporation* as the process of incorporating an object into their everyday practices, Haddon (2011) understands *incorporation* as a spatially located practice and Ward (2006) defines it as the process of ascribing meaning within the moral economy of the house. In my study, *incorporation* has been intended as both the process in which the object, in this case Telecare, is incorporated or used and the process of ascribing a meaning to the artefact. Observation and interviews showed that research participants wore the alarm pendant most of the time, even though a few older people did not wear it when their closest relatives (adult children or spouses) were at home. It might be that older people recognized Telecare as part of a wider care network that, in some contexts, was less useful/necessary than others, precisely because others part of the network (family, etc.) were present to care if something happened. This interpretation is reinforced by the fact that wearing the alarm pendant (or not) implies that older people have agency and can therefore decide, according to the circumstances, whether to wear the basic device or not. By deciding to wear the pendant older people showed that they considered Telecare useful as being part of a broader care network, which would be activated immediately after they had triggered their alarm to the Telecare monitoring centre. Interestingly, although showing concern about technical issues such as unwanted triggering of the alarm pendant, the over-sensitivity of the smoke detector, or low battery life, the majority of participants were not unduly perturbed by these things. A possible explanation here might be that these apparently negative aspects were overcome by positive aspects of those technical

failures – a call or visit from a Telecare team member. When older people contacted the Telecare monitoring centre, they found that the Telecare workers were friendly and helpful.

Roberts *et al.* argued that ‘working in the monitoring centre involves building relationships with people whom the operator cannot see or touch and whom they have rarely met face to face (although it should be noted that in both monitoring centres studied here, some operators may also work as Telecare installers, and so may have met some clients at home; some had a background in local care home or warden work)’ (Roberts *et al.*, 2012, pp. 495-496). In my study, Telecare workers’ job tasks also included, for some of them at least, both working at the monitoring centre and conducting home visits, with the purpose of installing or uninstalling Telecare or solving technical issues. The warm approach expressed by Telecare workers also implies that Telecare needs to be considered not only as a technological object but also a social one, as Telecare users and Telecare workers can experience a face-to-face contact in certain circumstances, such as during: 1) the instalment of Telecare equipment, 2) the replacement of low batteries, 3) the solution of technical issues, and 4) the removal of Telecare equipment. But face-to-face contact is not the only form of social experience; Telecare has been experienced as social by older people whenever they get in touch with Telecare workers by pressing their alarm button. Beyond the ascertainment that Telecare is not (only) a form of care ‘at a distance’, the relationship between older people and the Telecare provider proves that Telecare can create a significant relationship based on a mutual attachment between older people and the ‘Telecare people’, as a few participants defined the Telecare workers. Crucially, their use of language shows how meaningful the relationship between older users and Telecare has become. By using the word ‘people’, participants of the study suggest that they have developed trust towards Telecare, and that this technology has become part of their care network.

8.2.4 Conversion

The fourth and final phase of domestication is *conversion*. According to Silverstone and Hirsch (1992) *conversion* refers to the role of the device in the relationships between its

owner and people outside the owner's household. In their example, television is a subject of everyday conversations, and as such the content of the television programmes are part of everyday gossip, creating 'double articulation' in the way they facilitate conversation at the same time as being the objects of *conversion* (and conversation) (Silverstone *et al.*, 1992). On their part, Oudshoorn and Pinch see conversion as 'a process in which both technical objects and people may change' (Oudshoorn and Pinch, 2003, p.14). Haddon (2011; 2013) instead understands the final process of domestication as a way of presenting ourselves to other people, meaning that technologies are part of our own identities. For Ward (2006) the conversion gives meaning to technology outside the household, thus carrying outside symbolic values about the home.

Turning to the technology I have investigated, Telecare, I understood *conversion* as the object of discussion between older Telecare users and the wider outside world. In this respect, the relationship with the world outside the boundaries of home proved to be limited among participants. Possible interpretations might be the embarrassment related to the use of Telecare, or the stigma associated with it. Only a few older adults revealed feeling at ease when discussing Telecare with others such as friends and neighbours. A few participants would not discuss Telecare with other people. On the whole, these findings suggest an incomplete *conversion* to Telecare. However, although (most) participants had not fully 'domesticated' Telecare, it was sufficiently 'domesticated' to be useful. More clearly, older people knew how to wear the alarm pendant, how to trigger an alarm and how to test their Telecare equipment once a month. Thus, Telecare seemed to have fulfilled its purpose, which was to provide care 'at a distance'.

Furthermore, as discussed in Chapter Three, section 3.2, and earlier in this chapter, domestication is not a straightforward process nor a discrete or linear one. In her study about the domestic organisation of work and leisure, Ward (2006) highlighted how the stages of *incorporation* and *objectification* might be vague and confused, thus indicating that the process of domestication is not smooth and precise. Offering support to the findings of earlier studies (Haddon and Silverstone, 1996; Hynes and Rommes, 2006) which drew on issues of non-adoption of technology or of incomplete conversion to technology (as discussed in Chapter Three, section 3.2), my findings confirmed that the process of domestication of Telecare in a group of older people did not always run smoothly for different reasons. Before focusing on the reasons that led to the

(incomplete) domestication of Telecare, though, I would like to evaluate the domestication theory in light of my findings and show how it can be modified and extended. As explained in Chapters Three and Five, ‘domestication’ is an approach in media studies and is also a conceptual framework of user experience, developed from the Social Shaping of Technology (SST) theoretical approach. Media studies aimed at investigating ICTs while scholars informed by Science and Technology Studies (STS) and in particular those informed by the Social Shaping of Technology approach addressed their research interests on the understanding of the user and her active role in defining the nature, scope and functions of technology. However, ‘domestication’ was not used to study a healthcare technology, such as Telecare. This might explain why the final stage of the domestication of technology theory, *conversion*, seemed to present difficulties in the process of domestication of Telecare. In other words, while the *conversion* of ICTs such as the internet or mobile phones seemed to be the logical conclusion of a process that had started with the *appropriation* of these technological objects and continued with the *objectification* and the *incorporation* and finally the *conversion* (although not necessarily in a linear order), Telecare seemed to be characterised as a technology that, in order to be ‘domesticated’, does not necessarily need to reach the last stage, *conversion*. In light of this crucial aspect – Telecare can be used even though its users have not completely ‘converted’ it – I argue that, when studying the ‘domestication’ of Telecare, the domestication of technology theory should be amended to consist of only three stages: *appropriation*, *objectification* and *incorporation*. I will now turn to the reasons that led to a partial ‘domestication’ of Telecare.

8.3 The (incomplete) domestication of Telecare: why is that?

Chapter Three examined a body of literature which concerns issues of non-adoption of the technology (see section 3.2). Haddon and Silverstone (1996) focused on the different reasons behind the decision not to adopt ICTs, such as the past generational experiences of people who constituted the young elderly in 1990s Britain. In that case the reasons for non-adoption were financial constraints and other pressures experienced by poor single parents. Hynes and Rommes (2006) instead engaged with domestication

experiences of participants to introductory courses in computers and the internet in the Netherlands and Ireland. Their study found that domestication can be problematic and influenced by factors such as the availability of resources or the presence of a course. These scholars suggested that the different domestication phases are not necessarily all achieved, maybe due to the loss of interest in the technology. I briefly referred to previous studies of the non-adoption of technologies, as they suggested that the process of domestication does not always run smoothly. Although having investigated how older adults 'domesticate' Telecare, which is different from ICTs such as PCs and mobile telephones, I believe in the significance of investigating the full range of user experiences with Telecare and how a small group of older users adopt and integrate Telecare into their homes in different ways and to different degrees.

In common with ICT studies, my research focused on the household as unit of analysis. Drawing from Ward (2006), who in her study observes how working at home can disrupt the balance of household routine and value system, I explored if and how the introduction of remote care at a distance might change the meanings and experiences of 'care' and 'home'. I also investigated whether the appropriation of Telecare could alter older people's domesticities. This section allows me to claim that in none of my participants' experiences was this the case. In fact, the process of domestication of Telecare, although not always fluid and stable, and certainly not frictionless, did not significantly unsettle the everyday lives of older people. Telecare embodies meanings of 'homeboundness', due to the specificity of this technology, limited to use in the home and garden, which might have increased the risk of social isolation. However, the majority of older people did not seem to be isolated. A number of participants were engaged in the community: they volunteered, went to church, and participated in the activities of local associations. Returning to the domestication of Telecare, by letting Telecare devices and the broader Telecare system enter into their household participants actually 'domesticated' the technology, thus making it familiar and acceptable. However, this process was not linear and not (always) completed, due to the ambivalence in the use of this technology. In this respect, Telecare portrays both symbolic and material aspects. As explained in Chapter Four, section 4.3, Telecare is not simply a sum of technological devices (objects) which trigger an alarm in case of need, but is also part of a care network, which can reach more and different purposes from those ascribed by the Telecare provider. For these reasons, Telecare challenges

simplistic definitions or slogans coined by policies aiming at an acritical adoption of this particular care technology as a solution for the increasing levels of dependency amongst the older population within ageing societies. Telecare also challenges more critical definitions, such as Bentley *et al.*'s (2016) view of Telecare as a symbol of reduced independence, yet a way of maintaining independence and ultimately linked to stigma around Telecare (see also Chapter Two, section 5). The next section will consider two aspects which led to the uncomplete 'domestication' of Telecare in a small group of older people: feelings of ambivalence and the quest for independence. Thus, my first research question, concerning how older people come to adopt Telecare in their homes, can be answered by suggesting that the domestication process of Telecare was not always smooth and was certainly incomplete, at least for the majority of older people. I will now focus on the two reasons for the (in)complete domestication of Telecare: 1) feelings of ambivalence and 2) the quest for independence.

8.3.1 Feelings of ambivalence

Feeling of ambivalence towards technology have been investigated in a number of studies. In their qualitative study of the potential barriers to participation and adoption of telehealth and Telecare, Sanders *et al.* (2012) found that patients were ambivalent about the benefits and disadvantages of technology. On one hand, technology could improve autonomy, but on the other hand, it could impose restrictions interwoven with the nature of the particular disease or with the patient's life trajectory. Using a qualitative approach, Böstrom, Kjellström and Bjorklund (2013) ascertained that older people have feelings of ambivalence towards monitoring technology. Their study, based on interviews of five focus groups, highlighted that older persons generally have positive feelings and attitudes toward technology and aim at maintaining a sense of self as long as possible, by having control. They stated high value to privacy but valued being watched over if it ensured security.

In my study, ambivalence was understood as fluctuation, hesitation, and uncertainty, which was particularly visible in the *objectification*, *incorporation* and *conversion* stages. In fact, while in the *appropriation* stage, all participants were willing to let

Telecare enter the boundaries of their home. Things changed during the second stage, *objectification*, in which the devices had to take a place in older people's homes. For example, a few participants preferred to locate the alarm unit discretely, away from the gaze of others. Another participant, who used to go out with his pendant under his shirt, having *incorporated* Telecare, 'forgot' to push his alarm button after both of his falls, which left him injured and extremely scared. His 'forgetfulness' might be either forgetfulness or resistance to Telecare. Eventually, his behaviour suggested mixed feelings towards Telecare. Ambivalence was also displayed by those older individuals who left their alarm pendant on the bed or elsewhere, instead of wearing it. Their customised localisation of the alarm pendant might also show a certain level of ambivalence towards Telecare. It could also be speculated that those older people who opted for an unusual localisation of their pendant expressed in this way their agency, or capacity for making their own choices. As for the last stage, *conversion*, most participants revealed their ambivalence by admitting that they did not feel at ease talking about Telecare with unfamiliar or less familiar people. Older people's behaviour, therefore, was contradictory. On one hand, they wore the alarm pendant, they knew how to call for emergency and even knew how to test their Telecare equipment. On the other hand, they avoided discussing Telecare with the outsiders, that is all those people who were not already aware of their use of Telecare.

8.3.2 The quest for independence

In contrast to policymakers' slogans, which depict Telecare as a health technology, the use of which has improved older people's independence, it can be argued that Telecare might have achieved undesired goals, such as increasing older people's homeboundness as Telecare devices work only within range in the home and garden. It could also be claimed that Telecare might also increase older people's vulnerability, which in turn leads to the stigma associated with growing old. However, things are more complex; in order to understand more about this issue, it has been suggested that a more in-depth definition of 'independence' in older age might have been of help. Hillcoat-Nallétamby, who conducted a study about the meaning of independence for older people in different residential settings: the private dwelling-home, the extra

care, and the residential care settings, claimed that ‘independence has multiple meanings for older people, but certain meanings are common to all settings: accepting help at hand; doing things alone; having family, friends, and money as resources; and preserving physical and mental capacities’ (Hillcoat-Nallétamby, 2014, p. 419). Clearly, these meanings of independence differ significantly from those ones provided by the use of the Telecare system. With regard to this matter, ‘promoting the independence of older people forms a key part of the UK government’s health and social care agenda, and new care delivery models supported by information and communication technologies (ICTs) are being developed to assist in realizing this goal’ (Audit Commission, 2004, Barlow *et al.*, 2005b, cited in Hanson and Percival, 2006). Remote care technologies are intended to support independence and wellbeing of those whose physical, if not mental, capacities, have declined, either physiologically or pathologically. Telecare can be seen as a technology that can be used to help aged people live safely and independently in their own homes. In other words, knowing that the Telecare system needs to be installed in a dwelling, and thus displaying its efficacy inside that particular dwelling, independence appears to be strictly linked to living at home.

In my study, the majority of participants lived on their own, and they felt relatively independent. The older people studied aimed at maintaining a level of autonomy in daily tasks, such as getting up from bed, preparing meals, and taking care of their house and garden. However, most participants were also aware of their dependence on formal or informal carers, who did the shopping, helped them with basic assisted daily living tasks such as bathing and dressing and accompanied them to the hospital or to a range of activities such as volunteering or swimming. Thus, notions of dependence coexisted with notions of independence. Care was also considered in the context of the interdependence of human beings and it was acknowledged that every human being will depend on another human being at a given time (see also Chapter Two, section 6). Informed by this understanding of interdependencies, I unravelled how older people were cared for by formal and informal carers. A few participants insisted on claiming their independence, whilst acknowledging that they had to rely on informal caregivers in order to visit health professionals and to have the house cleaned, the garden looked after. My findings highlighted how older people relied on care networks comprised of their families, friends, neighbours and all those involved in their care. Telecare was part

of the care network as, in order to make it work, it needed at least two keyholders who were usually family members, friends and neighbours. I also found that those older people who lived with their spouses cared for each other. This reciprocity of the provision of care revealed the meaningfulness of relationalities.

While not very visible in either the *appropriation* or *objectification* stage of the domestication of Telecare, the need for independence emerged in the *incorporation* stage, when participants who lived with their family (spouses or adult children) chose not to use Telecare in presence of their family or chose not to press the alarm button in the case of a fall. Some of my findings identified how older people were cared for by close family members. These results are supported by literature findings (Barnes, 2012; Milligan, 2009; Pickard *et al.*, 2000), which highlight how a substantial provision of care is provided within families. In my study, those participants who were married were cared for by their spouses. Interestingly, older people could act simultaneously as caregivers and care receivers, according to their reciprocal needs. Thus, notions of reciprocity, or interdependencies (Barnes, 2012; Ward, Barnes and Gahagan, 2012; Fine and Glendinning, 2005), were predominant in informal care provision, such as occasional care and help supplied by friends, neighbours and other people, such as caretakers, gardeners and house cleaners. These results supported the claim that care networks are complex and, in order to disentangle them, it needs to be acknowledged that ‘care’ is inextricably interwoven with notions of dependency/independency (and interdependencies). In this respect, the need to be independent expressed by older people has influenced the four stages of domestication to some degree, thus preventing a complete ‘domestication’ of Telecare. This claim can also suggest that older people are neither dependent or independent, but, according to their personal circumstances, they lie along the dependence-independence spectrum. When circumstances change, for example in the event of the need to be hospitalised, a shift can happen and older people can find themselves more dependent on caregivers than when they live in their own homes. The complexity of defining dependence vs independence is increased by considering that care does not necessarily have to be a ‘physically proximal care’ (Milligan, 2009). This is the case for care provided at a distance by remote care technologies, such as Telecare, and by family members, friends. This consideration leads to the apparent paradox of care ‘in person’ that is provided ‘at a distance’, meaning from a geographically distant location, while forms of remote care, such as

Telecare, are provided 'in person', at least sometimes (when Telecare staff members visit older people's homes in order to install the Telecare system, or to replace malfunctioning items, for example). Thus, it seems noteworthy to highlight that the dichotomisation between care 'in person' and care 'at a distance' is quite simplistic. To begin, care 'in person' can be provided by proximal or non-proximal caregivers, the latter being carers who live a significant distance away from the care recipients and therefore cannot provide care 'in person'. This apparent contradiction – care 'in person' which is not actually 'in person' – is actually feasible. To further complicate this matter, physical proximity does not seem to be representative of care 'in person'. In fact, proximal carers such as adult children living a few miles away from their older parents did not necessarily visit them. On the other hand, care 'at a distance' can be delivered 'in person', when Telecare workers visit or telephone older users in circumstances already identified in Chapter Five, such as the installation, maintenance, replacement and removal of the Telecare equipment from older people's homes. Moreover, the terminology 'in person' is not exhaustive of the type of care provided by Telecare workers who, by answering the calls triggered by the alarm pendants or other devices, were perceived as friendly and helpful by older users.

8.4 How does Telecare change the meanings and experiences of 'home' for older people?

As mentioned in Chapter Two, section 5, my study filled a gap related to evidence on the ways in which older people who live in ordinary and not sheltered houses experience Telecare. This gap needed further investigation as the experience of growing old appears to be crucial in understanding the advantages and disadvantages of ageing at home with the support of new care technologies. As noted in the literature review, Milligan *et al.* (2010) investigate how new care technologies are being experienced by older people and how they could reshape both the nature of care and the places within which that care is performed. This study suggests that while some care technologies are relatively invisible, the installation of technologies designed for surveillance and monitoring can modify older people's sense and experience of home. In particular, Chapter Six analysed older people's meanings and experiences of 'home'. 'Home' was

charged with a number of different meanings. It was the theatre in which different forms of care were performed and experienced, making difficult to identify clear boundaries between 'home' and 'care'. Most participants were significantly attached to their dwelling. Attachment was displayed in different ways, analysed separately but characterised by blurred boundaries. For example, attachment was understood as attachment to the environment in which 'home' was located, or as emotional attachment to 'home' and/or to (significant) objects inside the home. Technology shaped older people's homes in different ways.

A body of literature (Lawton, 1985; Oswald, 1996; Rubinstein & Parmelee, 1992) highlights an age-related tendency for environmental centralization even inside the house, especially around the most favoured places at home, typically organised to be comfortable and close to many necessary and preferred items used in daily life. In this way, such places become 'control centers' or 'living centers' within the home. Although Telecare seems to have modified the boundaries between public and private space, participants did not perceive Telecare as intrusive. Devices such as the alarm unit did not have the purpose to surveil Telecare users but instead acted as a hub to connect the alarm pendant and other sensors. The alarm unit, the main Telecare device, needs a telephone plug in order to work therefore it needs an assigned space in the home (generally the living room or the bedroom). Other devices, such as the alarm pendant, have to be worn. Although being mobile and moving around the home with the wearer, pendants ('buttons' - to use participants' terminology) occupy a space, too. Interestingly, alarm pendants or fall detectors were not always worn. Sometimes they were temporarily left on the bed, on small tables in the living room, hanging on a wall rack in the corridor, or on a chair close to the bathroom shower. This constant movement of pendants allowed them to occupy an ever-changing space. Bentley *et al.* (2016) highlight how a number of barriers, among which issues such as stigma and design, negatively influenced participants' opinions regarding Telecare use. In contrast with these scholars' findings, I found that the main issue here is the feeling of ambivalence, which may be fear of stigmatization because of age discrimination. Turning to the meanings of devices for older people, my study confirmed that a few participants felt ambivalent towards Telecare devices, as their design represented a product used by ageing adults. However, the socio-materiality of devices also encouraged understandings of safety and peace of mind, both for participants and for carers. A

number of participants suggested that the use of the pendant made them feel safe at home, and family carers attested that they were able to maintain their jobs knowing that their relatives could trigger the alarm in case of emergency and promptly be assisted by the Telecare provider.

Meanings and experiences of 'home' were also shaped by other technological items which populated older people's homes: assistive devices. Objects such as mobility aids, grab rails, wheelchairs, shower chairs, hearing aids, riser recliner chairs and sofas appeared widespread having entered the boundaries of the home much earlier than Telecare devices. Despite their sometimes cumbersome materiality, and their invasion of private spaces (most of them were located in the bedroom), older people seemed to find them useful and revealed that assistive devices such as grab rails or wheeled rotators allowed them to move around their home. This showed that older people negotiated the use of technological objects. However, mobility aids, home adaptations and the use of Telecare might be experienced as old age signifiers as, according to Hamblin (2014), they might have threatened older people's self-esteem. These sources of stigma have damaged a past identity as an active and independent person. Hamblin's (2014) findings showed that some participants also regarded Telecare devices worn on the body as unsightly and left pendant alarms within reach, for example on walking frames or tables, or wore the alarms but concealed them under clothing. Similarly, one of my participants tried to hide the alarm pendant under his shirt or left the alarm pendant on the table or bed. Such behaviour could also be interpreted as showing ambivalence. In this respect, my study showed that older people displayed ambivalence in the domestication of Telecare. Nevertheless, this uncertainty in the use of Telecare devices did not prevent conducting the monthly maintenance (see Chapter Five). This routine task was extremely important for three reasons: 1) it allowed the Telecare provider (and the older people) to make sure that the Telecare equipment worked, 2) it allowed older people to interact with Telecare workers and develop a relation of trust, and 3) it had a significant role in the *incorporation* of Telecare, as the monthly maintenance followed a routine. Regular Telecare testing was so significant for older people that a number of them took a note of the exact day in which they had to contact the Telecare provider in order to test their devices.

Meanings and experiences of 'home' were also shaped by the provision of 'care'. As previously explained, older people's homes were 'inhabited' by a number of assistive devices. The widespread presence of these health-related items supported my understanding of older people's homes being a site of medical and service intervention before the adoption of Telecare. Reinforcing this understanding, during fieldwork participants mentioned that they received visits from nurses, occupational therapists, and home carers. Older people were also provided informal care by their families and friends. In light of this, it would be reasonable to investigate how different 'care at a distance' is from 'care in person' provision. While not directly exploring this aspect, my observations and interviews showed that Telecare coexisted with previous and more traditional forms of care. I will return to this in the next section. Finally, although significantly, I would like to discuss the potential risk of increased social isolation in older people living on their own and using Telecare. With regard to this risk, older people, despite their frailty, proved to be engaged in the community in a number of ways. Some older people participated in physical activities, while others were engaged in volunteering or other social activities. In fact, only a minority of participants were homebound. Furthermore, the Telecare provider organised job tasks in such a way that sometimes the same Telecare workers who worked at the monitoring centre visited older people's homes in order to solve technical issues. At least two participants revealed that they had met Telecare engineers in person. It could be speculated that Telecare workers might have contributed to making older people feel less isolated.

In light of these understandings of 'home', I argue that Telecare does indeed change the meanings and experiences of 'home' for older people. It is widely claimed that Telecare allows frail and vulnerable people to live on their own and grow older in their home. However, this apparently simplistic statement obscures some of the adjustments that are needed before Telecare is successfully embedded into the home. In particular, the statement obscures the changes to which home – understood as haven and a place of 'ontological security' and a place in which significant objects and memories seem to allow older people to maintain their identity through the course of life – undergoes in order to have Telecare installed and used successfully. In particular, home boundaries become fuzzier and private and public spaces tend to confound, as Telecare devices can be installed in private spaces, such as bedrooms, kitchens and even bathrooms, or in more public spaces such as corridors or living rooms. In time, Telecare finds its place at

home, and comes to coexist with other technological items and assistive devices, which are meaningful objects for older people as they allow them to move around their home and carry out their daily activities. Telecare also comes to coexist with the more traditional forms of care, provided by formal and informal caregivers in the home, which pre-existed the introduction of Telecare. Previous arrangements with caregivers, formal or informal, proximal or non-proximal, come to coexist without significant tension with Telecare, which sits in this complex and constantly changing network as a healthcare among other pre-existing forms of care, with which it interacts and intertwines. In the next section, it will be shown how Telecare and traditional care in person interact and change the meanings and experiences of 'care' for older people.

8.5 How does Telecare change the meanings and experiences of 'care' for older people?

The previous section explained how older people's homes are a complex site possessing a number of different and significant meanings. It was also suggested that 'home' is a site for care. Inside its boundaries, a complex network of formal, informal and occasional carers shapes the delivery of care. This network is complicated by the presence of Telecare, which in turn interacts with previous forms of care. Milligan *et al.* (2011) and Milligan (2015) clearly highlight how ageing people's homes are enmeshed with practices of care, both face-to-face and at a distance, as underlined in Chapter Two. In my study, the care framework of older people was quite diverse, being characterised by the provision of formal care, combined (or not) with informal care, formal care provided by informal carers, and occasional help and care. Drawing from Roberts *et al.* (2012), who have brought attention to the existence of social networks and the availability for successful Telecare, I showed that Telecare did not reduce social contact for older people. In fact, Telecare being a care network characterised by the interaction of a number of people, such as older people's families, friends and neighbours, Telecare staff, general practitioners and social services might actually increase social connection. My study provided an answer to the question of 'in which ways Telecare [can] be constructed as care' (Roberts *et al.*, 2012, p. 493). Telecare proved to be an additional form of care, which did not replace care in person, but added

something else to it. In fact, as mentioned in the previous section and in Chapter Five, whenever older people experienced technical issues, they could rely on home visits from Telecare staff. Furthermore, a few participants emphasised the friendliness and helpfulness of the monitoring centre – their personalised way of dealing with issues (technical or otherwise) by calling customers (the older users) by name and their promptness in responding to the alarm. The amicable nature of Telecare workers and, importantly, the particular way in which their job schedule was organised – some of them worked both at the monitoring centre and visited older people to install, configure, replace faulty equipment and sometimes uninstall Telecare – made it possible to build friendly relationships with older people, who knew their names and referred to them as the ‘Telecare people’. This finding was original not in focusing on the relations between Telecare workers and Telecare users, but in the way the relationship was built. In contrast, scholars such as Mort *et al.* investigated the relations in the monitoring centre and found out that ‘working in the monitoring centre involves building relationships with people whom the operator cannot see or touch and whom they have rarely met face to face’ (Mort *et al.*, 2012, pp. 495-496). In contrast with this study, in my thesis the Telecare workers (most of them) who worked for CareLink Plus personally knew the older Telecare users: in both monitoring centres studied, some operators also worked as Telecare installers, and so may have met some clients at home.

Furthermore, my findings shed light on different aspects: first, how care ‘at a distance’ might be a form of care ‘in person’ under certain circumstances, and second, how ‘good’ care does not need to be delivered ‘in person’. My argument here is that care is a complex (and complicated) network whose boundaries are open-ended and continuously re-examined and redefined. My findings support the work of Roberts *et al.*, who did not consider care technologies as necessarily cold, hard and unfeeling forms of care (see Roberts *et al.*, 2012, p. 493) and Pols and Moser (2009) who took issue with the simple distinction between ‘cold’ technological care and ‘warm’ in-person care: ‘the opposition between cold technology and warm care does not hold, but there are different relations between people and technologies with different use practices, allowing different affective and social relations, and that this blurs taken-for-granted categories such as medical versus social problems, warm versus cold care, play and seriousness, and affective versus rational technologies’ (Pols and Moser, 2009, p. 159).

I will try to unpack this dense and meaningful semantic representation of care and apply it to the findings of my study. First of all, cold technology and warm (human) care are not opposite concepts. In fact, technology was understood as a tool to provide care, and specifically as a transformative tool. In particular, it was investigated how Telecare came to be adopted in older people's houses. My first research question aimed at investigating Telecare in all but simplistic ways. Thus, there was no space for clear-cut and negatively charged connotative adjectives such as 'cold'. The same approach was used when Telecare was considered as part of a complex network, in which different kinds of care (or different 'use practices', to use Pols and Moser's vocabulary) found their place in older people's homes, the chosen place in which to grow old. The affective and social relations developed by older people with Telecare and more traditional forms of care, such as care 'in person' was revealed to be complex and complicated. Telecare, in fact, was not understood (only) as a (remote) care technology but also as an 'affective' health care, as it allowed older people to feel less lonely, in certain circumstances. A participant described the monitoring centre as '*voice on the other end of that [alarm unit], the minute I'm in trouble...*'. This shows that Telecare is far from a 'cold' care technology. And, most importantly, it highlights its social function and how it changes the meanings of 'care' for older people. Furthermore, in my study, as explained in Chapter Five, the Telecare provider assigned job tasks quite flexibly as those workers who answer the emergency might be the same who had installed the Telecare equipment in older people's homes. It has to be acknowledged that other Telecare providers might assign job tasks differently, for example assigning the task of installing Telecare, providing the monthly maintenance, and eventually removal of Telecare to nominated workers who would not sit at the monitoring centre and also answer older people's calls.

Turning back again to my claim that 'good' care does not need to be delivered in person, I would like to draw attention to the fact that the majority of older people did not express complaints towards the Telecare provider. On the contrary, older people emphasised how satisfied they were that, in order to solve technical issues such as depleted batteries, unwanted triggered alarms or malfunctions in general, Telecare staff entered their homes interacting with them in a friendly way. This shows that 'good' care was understood as the delivery of considerate and thoughtful care. I also argued that care 'in person' is not necessarily 'good' care, as a few participants expressed

dissatisfaction with their formal caregivers. This was confirmed by two participants, who complained, respectively, about the short and careless visits of nurses or other professional carers, and about their never-ending waiting list for surgery. This last participant also revealed how he had been attacked in his own home by a professional carer. These experiences provide evidence of how care 'in person' might not be the best possible kind of care. Or, better, that there is no such thing as the best form of care. While Telecare might not be experienced as 'cold' care, it does change the nature of care interactions. Older people were provided formal, informal, and occasional care. Even those older people who were delivered care by home providers or by family members might need occasional help from others and this was provided by neighbours, pharmacists, and building caretakers. All these people were therefore part of an extended care network, of which Telecare became part. As suggested by Milligan (2009), new care technologies, due to their ability to monitor the older person, can reduce stress and anxiety among informal carers. Confirming Milligan's (2009) claim, informal carers in my study said they felt reassured by the presence of Telecare. Two informal carers (adult child and spouse) were able to continue working while caring for their mother and husband respectively. In this way, older people could feel more independent as their family members could maintain their employment while also caring for them. It could also be speculated that even professional carers felt reassured knowing that Telecare was operating. However, it can be argued that it might be difficult to disentangle the changes experienced in the care provision as a result of Telecare from those experienced because of significant changes that older people had made to their lives, such as using more informal and occasional forms of care, using assistive devices to overcome mobility issues, and moving to safer and more inclusive houses.

8.6 Conclusion

The discussion aimed to bring together the three analysis chapters (Chapter Five, Six and Seven) and address the three research questions. I will now answer each question in turn, beginning with the first:

- 1) How do older people come to adopt Telecare in their homes?

This question was disentangled by means of the domestication of technology theory, a conceptual framework which understands ‘domestication’ as a process characterised by four stages: *appropriation*, *objectification*, *incorporation* and *conversion* of technology, in this case Telecare. The domestication theory showed that the process of ‘domestication’ of Telecare does not (always) run smoothly and without tensions. Moreover, Telecare is not in fact fully ‘domesticated’ by older people. More clearly, (older) Telecare users, while ‘appropriating’ Telecare without significant tensions, do not seem to fully ‘convert’ Telecare. I carefully explored the reasons that might prevent older people from domesticating Telecare, and I found that this health-related technology was not fully domesticated for two main reasons: 1) feelings of ambivalence and 2) the quest for independence.

Interestingly, although the majority of older people did not reach the last stage of domestication, *conversion*, this did not prevent them from wearing the alarm pendant, pressing the alarm button in case of emergency, and routinely testing their Telecare equipment. However, I claim that older people’s domestication of Telecare did not (always) follow technology’s scripts. This could also mean that Telecare has the potential to increase agency in older people. For example, a few older people triggered the alarm in case of emergency not for themselves but for other people (their spouse or neighbour). Or, in the case of at least one participant, accomplished the monthly testing of Telecare using the telephone instead of the alarm pendant. On the whole, the domestication of technology theory proved to be appropriate to study the domestication of Telecare. Domestication is a suitable framework to study people in an everyday context and this was precisely my aim. However, Telecare being a technology used (at least in this study) by older and frail people, applying the four stages of the domestication proved challenging.

- 2) How does Telecare change the meanings and experiences of ‘home’ for older people?

Literature findings suggested that while some care technologies are relatively invisible, the installation of technologies designed for surveillance and monitoring can modify older people’s sense and experience of home. However, my study suggested that, although older people were significantly attached to their dwelling; to significant

objects which were part of their homes; and to the environment in which their home was located; they did not express any concern about feeling monitored by Telecare sensors. Nevertheless, technology shaped older peoples' homes in different ways. To begin, the technological devices which entered 'home' had a materiality: Telecare devices occupied a space inside 'home', thus entering private spaces such as living rooms and bedrooms. Although Telecare seems to have modified the boundaries between public and private space, most participants did not perceive Telecare as intrusive. A few participants did attempt to hide Telecare devices such as the alarm unit, maybe because of the clash with the aesthetics of their house.

3) How does Telecare change the meanings and experiences of 'care' for older people?

Most older people were cared for at home by their family and formal carers. Furthermore, the majority of participants already used assistive devices such as mobility and bathroom aids. Therefore, when Telecare entered older people's homes, various forms of care – involving people and devices – were already present. These previous arrangements came to coexist with Telecare without major disruption. Telecare became part of an already existing wider care network, whose boundaries were not fixed but could change according to the circumstances. Telecare did not seem to reduce social contact for older people. In fact, Telecare being a care network – characterised by the interaction older people's families, friends and neighbours, Telecare staff, general practitioners and social services – did in some cases increase social connection. Crucially, whenever older people experienced technical issues, they could rely on home visits from Telecare staff. In this respect participants emphasised the friendliness of the monitoring centre, their personalised way of dealing with issues (technical or otherwise) by calling customers (the older users) by name, and their promptness in responding to the alarm. In other words, older people developed affective relations with the Telecare workers. Thus, my study showed that care 'at a distance' might be a form of care 'in person' under certain circumstances and that 'good' care does not need to be delivered 'in person'. My argument here is that care should be considered as a complex and complicated network whose boundaries are open-ended and continuously re-examined and redefined. As such, dichotomising definitions which split the provision of care into two distinct forms of care: 'in person' and 'at a distance' do not hold. Furthermore, this

study revealed that other forms of care ‘at a distance’ were present before the installation of the Telecare equipment. I am referring here to a plethora of assistive devices. Those technological objects, even if not connected to a hub like Telecare, might be considered as one among other forms of non-human care.

Chapter Nine

Conclusion

9.1 Summary of findings and final arguments

With an ageing population and concerns about the availability of resources to meet older people's care needs, more attention is being given to finding ways to deliver care remotely and with the help of technology. Telecare has become a key component of the Ageing in Place strategy adopted by care providers with the explicit aim of supporting people to live longer and more independently in their own homes. Following in the tradition of an ever-growing body of critical literature on Telecare, the aim of my study was to understand the process by which older people come to acquire and use Telecare and if and how their experience of using Telecare has changed their experience of, and meanings associated with, 'home' and 'care'. Domestication theory was considered appropriate because I wanted to understand technology use with everyday contexts, in particular how older people adopted Telecare in their own homes. My study identified two intertwined factors which prevented the full domestication of Telecare by older people: 1) feelings of ambivalence and 2) the quest for independence.

Feelings of ambivalence, understood as uncertainty or hesitation in the use of Telecare were observed both in the *objectification* and the *incorporation* stages. In the *objectification* stage, Telecare items, being non-customisable, were sometimes perceived by a few older people as clashing with their aesthetic values. In fact, they were located by a few participants in unusual and/or hidden places in their homes. In the *incorporation* stage, ambivalence prevented some older people from triggering the alarm in case of emergency, or from the wearing the pendant. Importantly though, non-use of the alarm pendant seems linked to the presence of alternative forms of care. As mentioned in Chapter Eight, being at home with another person (partner or adult child) increases the feeling of safety.

Ambivalence in the display and use of Telecare (*objectification* and *incorporation* stages) might also have been due to the fear of being stigmatised or, at best, a reluctance

to accepting growing frailty, which itself may be linked to the way older frail people are often treated in society (ageism). However, my findings did not provide enough evidence of stigma.

The quest for independence can be understood as a paradox: on one hand, Telecare should allow older people ‘to be and feel active, independent and embedded in valued places and community’ (Hamblin *et al.*, 2017, p. 7), on the other hand, the use of Telecare can signify a loss of independence. Milligan (2009) suggests that Telecare can increase the sense of safety and security for older people living on their own but can lead to a new and different form of dependence because of the constant checking and monitoring of people’s lives involved in the use of these new technologies. In the same line of thought, Percival and Hanson (2006) claim that Telecare could reduce individual choice and independence, as people could be feel pressured to use it. While my participants did not suggest any concern about possible fears of being ‘watched’ by Telecare, one of them showed, particularly in the *appropriation* stage, that he wanted to choose how and when to use care ‘at a distance’. In fact, in the event of (repeated) falls, he decided not to press his alarm button as it had not occurred to him (he wanted to see if he could get up and stand on his feet). His ambivalence in the use of Telecare (wearing it although neglecting its use in case of emergency) was interpreted as a quest for independence, reinforcing my claim that Telecare could paradoxically be perceived by older users as a potentially disempowering care technology.

The presence of Telecare in older people’s homes changed meanings and experience of both ‘home’ and ‘care’. Scholars such as Milligan *et al.* (2010) suggested that new care technologies could reshape both the nature of care and the places within which that care was performed. An older person’s home was charged with significant meanings and was also the theatre in which different forms of care were performed and experienced, making it difficult to identify clear boundaries between ‘home’ and ‘care’. Although Telecare blurred the boundaries between public and private space, participants did not perceive Telecare as overly intrusive. Devices such as the alarm unit did not in fact have the purpose to surveil Telecare users but instead acted as a hub and connected all other devices. Telecare is a technology imbued with socio-material aspects: on one hand, Telecare is part of a care network that, in order to work, needs social interactions with a number of people, thus suggesting its social aspect; on the other hand, Telecare items

are permeated with material aspects, such as their design, which in turn might either evoke stereotypes related to growing older, or ascribe meanings of safety and peace of mind both in older people and in their carers. Furthermore, Telecare shaped older people's homes as it entered living spaces, such as living rooms and bedrooms, and sometimes altered, for those who cohabited, each 'personal' home space. Yet, technology was not perceived as significantly intrusive. It seems relevant to bring attention to how Telecare, also defined as care 'at a distance', and as such, a potential source of decreasing the need for social interaction, did not in fact reduce it. Most participants were not homebound and were engaged in social activities in their community. However, this could be a specific characteristic of my participants and therefore I cannot generalise this finding.

Telecare changed not only the nature of 'home' but also the nature of care interactions. In this regard, care 'at a distance' seemed to reduce stress and anxiety among informal carers, confirming Milligan's (2009) findings. In my study, Telecare indeed provided peace of mind for formal and informal caregivers. Care 'at a distance' also seemed to coexist with more traditional forms of care in person without significant tensions. Furthermore, Telecare was not perceived as 'cold' or distant, possibly due to the amicable attitude of Telecare workers, who had a personalised approach towards older people. Thus, it seems noteworthy to highlight that the dichotomisation between care 'in person' and care 'at a distance' is quite simplistic. To begin with, care 'in person' can be provided from proximal or non-proximal carers. The latter were understood as those caregivers who lived a significant distance from the care recipients and therefore could not provide care 'in person'. This apparent contradiction – care 'in person' which is not 'in person' at all – is actually feasible. To further complicate this matter, physical proximity does not guarantee care – the study found that adult children living sometimes only a few miles away from their older parents did not necessarily care for them.

Informed by Pols and Moser, I argue that 'in order to create affective ties, the technology needs to *bring something of value* to the user' (Pols and Moser, 2009, p. 166). In my study, Telecare workers brought values such as friendship to older people in a number of circumstances: when Telecare users triggered an emergency alarm, when

they accomplished tasks such as the monthly maintenance of Telecare system, or when Telecare workers visited older people in order to install, replace, or uninstall devices.

9.2 Limitations of the study

In terms of the limitations of this thesis, the qualitative nature of the study means that I did not aim at a representative sample of older Telecare users. I included only a small group of individuals aged over sixty, living in Brighton & Hove, using one or more Telecare devices provided by Brighton & Hove Telecare provider, and not being affected by severe cognitive impairment or too ill or distressed to participate in the study. Thus, I sacrificed generalizability for specificity. As previously mentioned, the majority of participants were not housebound and were engaged in social activities in their community. However, this could be a specific characteristic of the group of older people that I studied, therefore this finding cannot be generalised. Another possible weakness of my study is related to the specific Telecare system that I explored. In contrast with other (mobile) Telecare systems, the technology that I studied and that was provided by CareLink Plus (Brighton & Hove Telecare provider) had a limited range in that it only worked inside home boundaries. Other Telecare systems are mobile and therefore my findings might have been different for these. Finally, I worked on my PhD project under a variety of constraints. In itself, the PhD project is limited in duration. Furthermore, the time schedule was subject to both organisational and time constraints. The former related to the local authority, in this case the Brighton & Hove Telecare provider, CareLink Plus. In this respect, after approval of the ethics forms, I had to comply with the CareLink Plus manager's time schedule constraints in order to be able to begin the recruiting process.

9.3 Strengths and contributions of the study

This study has demonstrated the potential of domestication theory for understanding Telecare use within everyday contexts in the home. The lack of prior research studies on Telecare using the domestication theory made this study original. This thesis has taken

up and re-contextualised domestication theory to help explain older people's experiences of acquiring and using Telecare at home. It has shown that the final stage of the domestication of technology theory, *conversion*, seems to fit with difficulties in the process of domestication of Telecare, which is a technology adopted for health reasons, in contrast with other forms of technology, such as ICTs. In other words, Telecare could be 'domesticated' without necessarily reach the last stage, *conversion* as the *incorporation* stage, although characterised by technical issues, had allowed older people to integrate Telecare in their daily routines and therefore to use and benefit from it. Crucially, the monthly testing of Telecare was a significant and positive event for older people as it provided an opportunity of getting in touch with the Telecare workers, as explained in-depth in Chapter Five. In contrast, older users did not feel that Telecare was something to display to peers or reference groups. It cannot be excluded that older people might have internalised ageist prejudices, and thus would not feel at ease in displaying this care technology to their peers. However, in my study I did not find enough evidence of stigma associated with the visibility and therefore use of Telecare devices.

This study has also contributed to a growing body of qualitative studies about older people's experiences of using Telecare. I analysed Ageing in Place from a micro perspective, provided by older individuals who were actually experiencing using Telecare whilst living at home in old age. This was useful in challenging the often acritical and simplistic assumptions about Telecare and how it can allow older people to age independently in their own homes. I have contributed to the debate about (older) users and technology showing that older people can use Telecare for purposes other than those highlighted by policymakers (safety, independence, peace of mind for both users and their caregivers). In fact, I revealed that Telecare can accomplish older people's social needs, such as chatting with the Telecare provider monitoring centre, which in turn might enable the fulfilment of emotional needs. Telecare can also allow older people to help significant others in need (relatives or neighbours, in this study), thus increasing their capacity for decision making and independent action. In this respect, experiences of older people appear to be crucial in understanding the potential positive outcomes and pitfalls of ageing at home with the support of new care technologies.

My quasi ethnographic approach, including several visits over a period of time, allowed me to keep track of any changes (having surgery, for example) that might change their experiences of Telecare. This proved important because it allowed me to explore which factors shaped the *appropriation* of Telecare. More clearly, I investigated whether the process of adoption of Telecare was triggered by a single event, such a bad fall, or as a result of a process – most frequently, a gradual deterioration of health, often associated with a life-long health condition.

Overall, this detailed qualitative approach to the study of older people's experiences of Telecare enabled me to see the complexities of Telecare and how it fits into a wider network of care, exposing the relational aspects of caring and allowing me to develop critiques of several ubiquitous binaries in this field. For example, I have showed how Telecare is not best understood as 'care at a distance' as it relies on proximal forms and care which is often given 'in person' and, related to this, how Telecare can be experienced as 'warm', rather than 'cold' care. I have also shown how older people use Telecare to care for others, thus confounding the care-giver/care-receiver dichotomy. The study also clearly challenges the dependence/independence binary, showing instead how older people live in relations of interdependence with others – people and technologies – that are more or less engaged in care at different times and in different contexts.

9.4 Recommendations for future research

It would be interesting to further investigate how the relationship between the Telecare provider staff members and older Telecare users develops and evolves over time. In my study, Telecare was understood both as a technology and as a complex and relational care network, in which affective relationships between older people and Telecare workers progress over time and might affect the experiences of using Telecare. Future research could consider conducting focus groups with current and potential Telecare users and Telecare provider staff members respectively. The outcomes of focus groups would help in the understanding of which kind of Telecare devices older people would be willing to adopt. In particular, questions should be targeted towards the development

of tailored technological objects, reflecting not just personal care needs but aesthetic preferences too. Furthermore, I would recommend research that involved Telecare staff, including management. This would offer the opportunity to explore how these groups experienced Telecare and how they might work more closely with the wider network of carers to ensure that Telecare can coexist with more traditional forms of care.

9.5 Recommendations for practitioners and policymakers

Many different health and social care professionals are involved in delivering aspects of Telecare. Among them are general practitioners, nurses and social care workers. These professionals can benefit from understanding Telecare as a complex, relational care network with service users (Telecare users) at the centre. My study shows the importance of understanding older people's care networks, including their formal and informal carers, their existing technologies and assistive devices and their specific living arrangements, before Telecare is installed and during its on-going use.

Policymakers could also benefit from rethinking how Telecare is best understood. Telecare does not automatically enable older people to age 'in place' and to be more independent. This only works if a whole relational care network is also mobilized. Furthermore, it is important that the symbolic aspects of Telecare are understood. Precisely because Telecare sometimes comes to symbolize increasing frailty and dependence, Telecare may be resisted by the intended users and the network may fail.

Older people, both already using Telecare and potentially using it in the near future, should be routinely consulted about its potential and challenges. In this respect, focus groups with both members of older people and local authorities should be organized and consulted before local councils include Telecare in older people's care packages. I would like to conclude that Telecare is not a 'one size fits all' product but is a complex form of care which sits in an even more complex (and complicated) care network. As such, Telecare should be tailored to potential older users' specific needs and circumstances.

9.6 Final reflections

At the end of this thesis, it seems appropriate to define and distinguish the Telecare system that I considered in relation to other systems of Telecare. The basic Telecare devices of CareLink Plus, the Telecare provider I got in touch with, were an alarm button and home unit. The local provider could also offer a GPS tracker for those suffering from dementia. As my sample did not include any older adult suffering from this illness, I did not consider the enhanced CareLink package for use outside the home, that provides a GPS tracker. The implications of the Telecare system I considered are that the risk is managed only inside the home boundaries. Therefore, safety, security and peace of mind for older people and their care network is only provided while they remain at home. However, in contrast with this basic Telecare systems, other Telecare providers, such as Oysta Technology (Oysta Technology, 2016), provide a mobile service which includes emergency alarms with One Touch SOS support button. These alarms, all of which able to detect falls, have a GPS so that the users can be tracked anywhere. The implication here is that this system works outside of home thus allowing older people to feel safe even when outside, while at the same time providing their formal and informal care network peace of mind even when older people leave their house and go out and about, for example to attend medical consultations or go shopping. Furthermore, the Oysta provider service includes care reminders (to caregivers) and automatic reminders that prompt the older user, for example 'take medication' or 'carer visit'. This more sophisticated Telecare system allows carers to get in touch with family members when they are connected to the system, thus allowing the care network to be updated about any issues that might happen to their relatives. Possible implications are the enhanced security that this Telecare system provides to older people and their formal and informal carers, but also that the feeling of being monitored all the time could eventually undermine privacy.

Bibliography

Aceros, J.C. Pols, J. and Domènech, M., 2015. Where is grandma? Home Telecare, good ageing and the domestication of later life. *Technological Forecasting & Social Change*, 93, pp. 102-111.

Akrich, M., 1992. The de-scription of technical objects. In: W. W. Bijker and J. Law, ed. 1992. *Shaping technology/Building society. Studies in sociotechnical change*. Cambridge: MIT Press. pp. 205-224.

Altman, I. and Chemers, M.M., 1980. *Culture and environment*. New York: Cambridge University Press.

Anderson, L., 2006. Analytic Autoethnography. *Journal of Contemporary Ethnography*, 35(4), p. 373-395.

Angus, J., Kontos, P., Dyck, I., McKeever, P., and Poland, B., 2005. The personal significance of home: habitus and the experience of receiving long-term home care. *Sociology of Health & Illness*, 27(2), pp. 161–187.

Appadurai, A., 1996. *Modernity at Large: Cultural Dimensions of Globalization*. Minneapolis: University of Minnesota Press.

Atkinson, P., 1992. *Understanding ethnographic texts*. Newbury Park, Calif.: SAGE.

Barnes, M., 2012. *Care in Everyday Life: an ethics of care in practice*. Bristol: Policy Press.

Belk, R. W., 1988. Possessions and the Extended Self. *Journal of Consumer Research*, 15, pp. 139-168.

Bell, J., 1993. *Doing Your Research Project*. 2nd edition. Buckingham: Open University

Press.

Bentley, C. L., Powell, L. A., Orrell, A. and Mountain, G. A., 2016. Making Telecare desirable rather than a last resort. *Ageing & Society*. Cambridge University Press, pp. 1-28. Available at: <
https://www.cambridge.org/core/services/aop-cambridge-core/content/view/2AC5B17B7FF2D37DD56A354D91B7553A/S0144686X16001355a.pdf/making_Telecare_desirable_rather_than_a_last_resort.pdf> [Accessed 9 November 2017].

Benton, T. and Craib, I., 2011. *The Philosophy of Social Science: The Philosophical Foundations of Social Thought*. 2nd edition. Basingstoke: Palgrave Macmillan.

Berker, T., Hartmann, M., Punie, Y. and Ward, K., 2006. Introduction. In: T. Berker, M. Hartmann, Y. Punie and K. Ward eds. *Domestication of media and technology*. Maidenhead: McGraw-Hill Companies. pp. 1-17.

Bijker, W.E. and Law, J. eds., 1992. *Shaping technology/building society: studies in sociotechnical change*. Cambridge, MA: MIT Press.

Blumer, H., 1969. *Symbolic Interactionism: Perspective and Method*. Englewood Cliffs: Prentice Hall.

Böstrom, M., Kjellström, S. and Björklund, A., 2013. Older persons have ambivalent feelings about the use of monitoring technologies. *Technology and Disability*, 25(2), pp. 117-125.

Bowlby, J., 1958. The nature of the child's tie to his mother. *International Journal of Psycho-Analysis*, 39, pp. 350-373.

Boyatzis, R.E., 1998. *Transforming Qualitative Information. Thematic Analysis and Code Development*. Thousand Oaks: SAGE.

Braun, V. and Clarke, V., 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), pp. 77-101.

Brighton & Hove City Council. *Social care: Eligibility for Adult Social Care Services*. [online] Available at: <<https://www.brighton-hove.gov.uk/content/social-care/your-care-and-support>> [Accessed 9 November 2017].

Bryman, A., 2016. *Social research methods*. 5th ed. Oxford: Oxford University Press.

Buse, C.E., 2009. When you retire, does everything become leisure? Information and communication technology use and the work/leisure boundary in retirement. *New Media & Society*, 11(7), pp. 1143-1161.

Buse, C.E., 2010. E-scaping the ageing body? Computer technologies and embodiment in later life. *Ageing & Society*, 30, pp. 987-1009.

Care Act 2014. (c.23) London: *TSO (The Stationery Office)*. [online] Available at: <http://www.legislation.gov.uk/ukpga/2014/23/pdfs/ukpga_20140023_en.pdf> [Accessed 15 December 2017]

CareLink Plus Leaflet, 2016. Brighton & Hove City Council's Telecare Alarm Service. Available at: <https://www.brighton-hove.gov.uk/sites/brighton-hove.gov.uk/files/CareLink%20Plus%20Leaflet%202016%20%28pdf%20381KB%29_0.pdf> [Accessed 15 November 2017].

Cawston, T., Haldenby, A., Nolan, P., Parsons, L. and Trewitt, K., 2011. Old and broke: The long term outlook for the UK's public finances. *Reform*, June 2011. Available at: <http://www.reform.uk/wp-content/uploads/2014/10/Old_and_broke_final.pdf> [Accessed 15 November 2017].

Chapman, J., 2005. *Emotionally Durable Design: objects, Experiences and Empathy*.

London: Routledge.

Charon, J.M., 2010. *Symbolic Interactionism: An Introduction, An Interpretation, An Integration*. 10th edition. Boston: Prentice Hall.

Collins English Dictionary [online] Available at:

<<https://www.collinsdictionary.com/dictionary/english/mint> [Accessed 3 December 2017].

Commission on Funding of Care and Support, 2011. *Fairer Care Funding: The Report of the Commission on Funding of Care and Support*. July 2011.

Available at:

<<http://webarchive.nationalarchives.gov.uk/20130221130239/http://dilnotcommission.dh.gov.uk/files/2011/07/Fairer-Care-Funding-Report.pdf>> [Accessed 15 November 2017].

Crotty, M., 1998. *The Foundations of Social Research*. London: SAGE.

Csikszentmihalyi, M. and Rochberg-Halton, E., 1981. *The Meaning of Things: Domestic Symbols and the Self*. Cambridge: Cambridge University Press.

Day, R. and Hitchings, R., 2011. 'Only old ladies would do that': Age stigma and older people's strategies for dealing with winter cold. *Health & Place*, 17, pp. 885–894.

de Certeau, M., 1988. *The Practice of Everyday Life*. Berkeley, Calif.: University of California Press.

Department of Health, 2011. *Whole system demonstrator programme: Headline findings – December 2011*. Available at:

<<https://www.gov.uk/government/news/whole-system-demonstrator-programme-headline-findings-december-2011>> [Accessed 15 November 2017].

Department of Health, 2016. *Guidance. Care Act 2014 Part 1: Factsheets. Updated 19 April 2016*. Available at:

<<https://www.gov.uk/government/publications/care-act-2014-part-1-factsheets/care-act-factsheets#factsheet-2-who-is-entitled-to-public-care-and-support>>

[Accessed 15 November 2017].

Department for Communities and Local Government, 2015. Tenants safer under new government measures. Available at:

<<https://www.gov.uk/government/news/tenants-safer-under-new-government-measures>>

[Accessed 21 December 2017].

Doyal, L. and Gough, I., 1991. *A theory of human need*. Basingstoke: Macmillan Press.

Dupuis, A. and Thorns, D., 1998. Home, home ownership and the search for ontological security. *The Sociological Review*, pp. 25-47.

EFORTT: Ethical Frameworks for Telecare technologies for older people at home Project 217787

Deliverable 7: Final Research Report. Available at:

<<http://www.lancaster.ac.uk/efortt/documents/Deliverable%207%20Final%20Research%20report.pdf>> [Accessed 15 November 2017].

Erikson, E.H. and Erikson, J.M., 1997. *The life cycle completed*. New York; London: W.W. Norton.

Felstead, A. Walters, S. and Jewson, N., 2005. *Changing place of work*. Basingstoke: Palgrave Macmillan.

Fine, M. and Glendinning, C., 2005. Dependence, independence or inter-dependence? Revisiting the concepts of 'care' and 'dependency'. *Ageing & Society*, 25, pp. 601–621.

Fischer, C.S., 1992. *America Calling: A Social History of the Telephone to 1940*. Berkeley: University of California Press.

- Flick, U., 2009. *An Introduction to Qualitative Research*. 4th ed. London: SAGE.
- Fox, L., 2007. *Conceptualising Home: Theories, Laws and Policies*. London: Hart Publishing.
- Giddens, A., 1991. *Modernity and Self-Identity: Self and Society in the Late Modern Age*. Stanford, CA: Stanford University Press.
- Goffman, E., 1963. *Stigma: notes on the management of spoiled identity*. Englewood Cliffs, NJ: Prentice-Hall.
- Government Office for Science, 2016. Future of an ageing population. Foresight Projects and Future of Ageing. London. Available at:
<https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/535187/gs-16-10-future-of-an-ageing-population.pdf> [Accessed 15 November 2017].
- Grbich, C., 2007. *An introduction: qualitative data analysis*. London: SAGE.
- Grundy, E., 2006. Ageing and vulnerable elderly people: European perspectives. *Ageing and society*, 26. pp. 105-134
- Haak, M., Fänge, A., Iwarsson, S. and Ivanoff, S. D., 2007. Home as a signification of independence and autonomy: experiences among very old Swedish people. *Scandinavian Journal of Occupational Therapy*, 14(1), pp. 16-24.
- Habib, L. and Cornford, T., 2002. Computers in the home: domestication and gender. *Information Technology & People*, 15(2), pp. 159-174.
- Haddon, L., 2007. The Contribution of Domestication Research to In-Home Computing and Media Consumption. *The Information Society*, 22(4), pp. 195–203.
- Haddon, L., 2011. Domestication Analysis, Objects of Study, and the Centrality of Technologies in Everyday Life. *Canadian Journal of Communication*, 36, pp. 311-323.

Haddon, L., 2013. Mobile media and children. *Mobile Media & Communication*, 1(1), pp. 89–95.

Haddon, L. and Silverstone, R., 1996. *Information and communication technologies and the young elderly*. SPRU/CICT Report Series no. 13. Falmer, Sussex, UK: University of Sussex.

Hamblin, K., 2013. Telecare and independent ageing, Kate Hamblin on the ‘Telehealthcare Times’. 3 May 2013. Available at: <<http://www.ageing.ox.ac.uk/news/Telecare-and-independent-ageing-kate-hamblin-telehealthcare-times>> [Accessed 16 November 2017].

Hamblin, K., 2014. *Lifestyles in Later Life: identity, choice and stigma*. In: AKTIVE Working Paper 5. The Role of Telecare in Older People’s Daily Lives: experiences, practices and attitudes. Available at: <http://www.aktive.org.uk/downloads/AKTIVE_Paper-5.pdf> [Accessed 21 December 2017].

Hamblin, K., Darowski, A. and McShane, R., 2013. *Demographic ageing, falls and dementia*. Chapter 1. In: AKTIVE Consortium. The Role of Telecare in meeting the Care Needs of Older People: themes, debates and perspectives in the literature on ageing and technology. AKTIVE Research Report Vol. 1. Available at: <http://www.aktive.org.uk/downloads/AKTIVE_Report_Vol_1_16.05.pdf> [Accessed 16 November 2017].

Hamblin, K., Yeandle, S. and Fry, G., 2017. Researching Telecare: the importance of context. *Journal of Enabling Technologies*, 11(3), pp.75-84, <https://doi.org/10.1108/JET-04-2017-0016>. Available at: <<http://www.emeraldinsight.com/doi/pdfplus/10.1108/JET-04-2017-0016>> [Accessed 16 November 2017].

Hammersley, M., 1990. *Reading Ethnographic Research: A Critical Guide*. London: Longman.

Hammersley, M and Atkinson, P., 1995. *Ethnography. Principals in practice*. 2nd ed. London: Routledge.

Hanson, J. and Percival, J., ed. 2006. Differing perspectives on Telecare: An attitudinal survey of older people, professional care workers and informal carers. In: P. Langdon, J. Clarkson, and P. Robinson. *Designing Accessible Technology*. London: Springer. pp. 215–225.

Hendy, J., Chrisyanthaki, T., Barlow, J., Knapp, M., Rogers, A., Sansers, C., Bower, P., Bowens, R., Fitzpatrick, R., Bardsley, M. and Newman, S., 2012. *An organisational analysis of the implementation of Telecare and telehealth: the whole systems demonstrator*. *BMC Health Services Research*, 12:403. Available at: <<https://bmchealthservres.biomedcentral.com/track/pdf/10.1186/1472-6963-12-403?site=bmchealthservres.biomedcentral.com>> [Accessed 16 November 2017].

Hillcoat-Nallétamby, S., 2014. The meaning of “independence” for older people in different residential settings. *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, 69(3), pp. 419–430.

Holloway, I. and Wheeler, S., 2010. *Qualitative Research in Nursing and Healthcare*. 3rd ed. Chichester: Wiley-Blackwell.

Howitt, D., 2013. *Introduction to qualitative methods in psychology*. 2nd ed. Harlow: Pearson Education.

Howitt, D. and Cramer, D., 2011. *Introduction to research methods in psychology*. 3rd ed. Harlow: Prentice Hall.

Hughes, P.J., 1986. The Seamless Web: Technology, Science, Etcetera, Etcetera. *Social Studies of Science*, 16, pp. 281-292.

Hynes, D., 2007. Applying Domestication: How the Internet Found Its Place in the Home. In M. Khosrow-Pour, ed. *Managing Worldwide Operations and Communications with Information Technology*. Vancouver, British Columbia: IRMA. Available at:

<<http://www.irma-international.org/viewtitle/33188/>> [Accessed 18 December 2017].

Hynes, D. and Rommes, E., 2006. 'Fitting the internet into our lives': IT courses for disadvantaged users. In: T. Berker, M. Hartmann, Y. Punie and K.J. Ward, eds. *Domestication of Media and Technology*. Maidenhead: Open University Press: pp. 125-144.

Jamshed, S., 2014. Editorial Qualitative research method-interviewing and observation. *Journal of Basic and Clinical Pharmacy*, 5(4), pp. 87-88.

Johnson, L.C., 1990. Gendering Domestic Space: A Feminist Perspective on Housing. *New Zealand Journal of Geography*, 90(1), pp. 20-24.

Joyce, K. and Loe, M., 2010. A sociological approach to ageing, technology and health. *Sociology of Health & Illness*, 32(2), pp. 171–180

Keller, H., 1998. Exploratory behavior, place attachment, genius loci, and childhood concepts: Elements of understanding children's interactions with their environment. In: D. Görlitz, H.J. Harloff, G. Mey and J. Valsiner, eds. *Children, Cities and Psychological Theories: Developing Relativeness*. pp. 455-468.

Kittay, E.F., 1999. *Love's Labor. Essays on women, equality and dependency*. New York and London: Routledge.

Kleine, S.S. and Baker, S.M., 2004. An Integrative Review of Material Possession Attachment.; Vancouver, US: Academy of Marketing Science Review.

Kline, R. and Pinch, T., 1996. Users as Agents of Technological Change: The Social Construction of the Automobile. *Technology and Culture*, 37(4), pp. pp. 763-795.

Langan, J., Means, R. and Rolfe, S., 1996. Factors that influence retirees' propensity to move at retirement. *Journal of Housing for the Elderly*, 1(1), pp. 85-105.

Latour, B., 1999. On recalling ANT. *The Sociological Review*, 47(S1), pp. 15-25.

Law Commission, 2011. *Adult Social Care*. HC941 London: The Stationery Office.

Lawton, M.P., 1985. The elderly in context: Perspectives from environmental psychology and gerontology. *Environment & Behavior*, 17(4), pp. 501-519.

Lee, Y.S., Smith-Jackson, T.L. and Kwon, G.H., 2009. Domestication of Technology Theory: Conceptual Framework of User Experience. *CHI 2009*, April 4 – April 9, 2009, Boston, MA, USA. ACM 978-1-60558-247-4/08/04.

Lehoux, P., Saint-Arnaud and Richard, L., 2004. The use of technology at home: what patient manuals say and sell vs. what patients face and fear. *Sociology of Health & Illness*, 26(5), pp. 617–644.

Lehtonen, T.-K., 2003. The Domestication of New Technologies as a Set of Trials. *Journal of Consumer Culture*, 3(3), pp. 363–385.

Leung, L., 2015. Validity, reliability, and generalizability in qualitative research. *Journal of Family Medicine and Primary Care*, 4(3), pp. 324-327.

Lie, M., 1996. Gender in the Image of Technology. In: M. Lie and K.H. Sørensen, eds. *Making Technology Our Own? Domesticating Technology into Everyday Life*. Oslo: Scandinavian University Press. pp. 201-223.

Lim, S.S., 2006. From cultural to information revolution. ICT domestication by middle-class Chinese families. In: T. Berker, M. Hartmann, Y. Punje, and K.J. Ward, eds. *Domestication of Media and Technology*. Maidenhead: Open University Press. pp. 185-204.

Livingstone, S., 1992. The meaning of domestic technologies: a personal construct analysis of familial gender relations. In: E. Hirsch, R. Silverstone, Roger, eds. *Consuming technologies: media and information in domestic spaces*. London: Routledge. pp.113-130.

Llyod, L., 2012. *Health and care in ageing societies: a new international approach*. [e-book] Bristol: Policy Press.

Long, T. And Johnson, M., 2007. *Research Ethics in the Real World. Issues and solutions for health and social care*. Edinburgh: Churchill Livingstone Elsevier.

López, D. and Domènech, M., 2009. Embodying autonomy in a Home Telecare Service. *The Sociological Review*, 56(2), pp. 181-195.

Lowenstein, A., 2009. Elder Abuse and Neglect - "Old Phenomenon": New Directions for Research, Legislation, and Service Developments. *Journal of Elder Abuse & Neglect*, 21(3), pp. 278-287.

MacKay, H., Crane, C., Beynon-Davies, P. and Tudhope, D., 2000. Reconfiguring the user: using rapid application development. *Social Studies of Science*, 30(5), pp. 737-759.

Mackay, H. and Gillespie, G., 1992. Extending the Social Shaping of Technology Approach: Ideology and Appropriation. *Social Studies of Science*, 22(4), pp. 685-716.

Mackenzie, D. and Wajcman, J., 1985. *The Social Shaping of Technology*, Milton Keynes: Open University Press.

MacKenzie, D. and Wajcman, J. eds., 1999. *The social shaping of technology*. 2nd ed. Buckingham: Open University Press.

Marcus, C.C., 1995. *House as a mirror of self. Exploring the deeper meaning of home*. Berkeley, CA: Conari Press.

Mattelart, A., 1995. *The Information Society: An Introduction*. London: SAGE.

Matthews, B. and Ross, L., 2010. *Research methods: A practical guide for the social sciences*. New York: Pearson Longman.

Miles, M.B. and Huberman, A.M., 1994. *Qualitative Data Analysis*. 2nd ed. Thousand Oaks, CA: SAGE.

Milligan, C., 2009. *There's no Place Like Home: Place and Care in an Ageing Society*. Farnham: Ashgate.

Milligan, C., 2015. Place and informal care in an ageing society: reviewing the state of the art in geographical gerontology. *Progress in Geography*, 34(12), pp. 1558-1576.

Milligan, C., Roberts, C. and Mort, M., 2011. Telecare and older people: Who cares where? *Social Science & Medicine*, 72(3), pp. 347-354.

Milligan, C., Mort, M. and Roberts, C., 2010. Cracks in the door? technology and the shifting topology of care. In: M. Schillmeier & M Domenech, eds. *New technologies and emerging spaces of care dwelling: bodies, technologies and home*. Aldershot: Ashgate Publishing. pp. 19-38.

Milligan, C. and Wiles, J., 2010. Landscapes of care. *Progress in Human Geography*, 34(6), pp. 736-754.

Mol, A., Moser, I. and Pols, J., 2010 eds. *Care in Practice On Tinkering in Clinics, Homes and Farm* [from] [transcript] Available at:

<http://www.beck-shop.de/fachbuch/leseprobe/9783837614473_Excerpt_001.PDF>

[Accessed 17 December 2017].

Morley D. 2006. What's 'home' got to do with it? Contradictory dynamics in the domestication of technology and the dislocation of domesticity. In: T. Berker, M. Hartmann, Y. Punie and K.J. Ward, eds. *Domestication of Media and Technology*. Maidenhead: Open University Press. pp. 21-39.

Mort, M., Roberts, C. and Callén, B., 2013. Ageing with Telecare: care or coercion in austerity?, *Sociology of Health & Illness*, 35(6).

Mowl, G., Pain, R. and Talbot, C., 2000. The ageing body and the homespace. *Area*, 32(2), pp. 189-197.

Murtagh, L., 2007. Implementing a Critically Quasi-Ethnographic Approach. *The Qualitative Report* 12(2), pp. 193-215.

NHS Choices. (n.d.a.) *Loneliness in older people*

Available at:

<<https://www.nhs.uk/Livewell/women60-plus/Pages/Loneliness-in-older-people.aspx>>

[Accessed 30 November 2017].

NHS Choices. (n.d.b.) *Telecare and alarms*

Available at:

<<https://www.nhs.uk/conditions/social-care-and-support/Telecare-alarms/#Telecare-systems>> [Accessed 26 April 2018]

Oliver, M., 1998. Theories of disability in health practice and research. *BMJ*, 317, pp. 1446–1449.

O'Reilly, K., 2009. *Key concepts in ethnography*. London: Sage.

Oswald, F., 1996. *Hier bin ich zu Hause. Zur Bedeutung des Wohnens: Eine empirische Studie mit gesunden und gehbeeinträchtigten Älteren*. [On the meaning of home: An empirical study with healthy and mobility impaired elders]. Regensburg: Roderer.

Oswald, F., & Wahl, H.-W., 2005. Dimensions of the meaning of home. In: G.D. Rowles & H. Chaudhury, eds. *Home and Identity in Late Life: International Perspectives*. New York: Springer. pp. 21-45.

Oswald, F., Wahl, H.-W., Schilling, O., Nygren, C., Fänge, A., Sixsmith, J., Széman, Z., Tomson, S., and Iwarsson, S., 2007. Relationships Between Housing and Health Ageing in Very Old Age. *The Gerontologist*, 47(1), pp. 96-107.

Oudshoorn, N., 2011. *Telecare Technologies and the Transformation of Healthcare*. Basingstoke: Palgrave Macmillan.

Oudshoorn, N., 2012. How places matter: Telecare technologies and the changing spatial dimensions of healthcare. *Social Studies of Science*, 42(1), pp. 121-142.

Oudshoorn, N. and Pinch, T. eds., 2003. *How Users Matter. The Co-Construction of Users and Technology*. London: The MIT Press.

Oxford Reference., 2018. *Non-participant observation* [online] Available at: <<http://www.oxfordreference.com/view/10.1093/oi/authority.20110803100237748>> [Accessed 26 April 2018]

Oysta Technologies (n.d.) [online] *Mobile Telecare* Available at: <https://oystatechnology.co.uk/telecare-2/> [Accessed 29 May 2018]

Peace, S.M., Holland, C. and Kellaher, L., 2006. *Environment and identity in later life*. Maidenhead: Open University Press.

Pennartz, P.J.J., 1999. Home: The Experience of Atmosphere. In: I. Cieraad, ed. *At Home: An Anthropology of Domestic Space*. Syracuse, N.Y: Syracuse University Press. pp. 95-106.

Percival, J., 2002. Domestic spaces: uses and meanings in the daily lives of older people. *Ageing & Society*, 22(6), pp. 729-749.

Percival, J. and Hanson, J., 2006. Big brother or brave new world? Telecare and its implications for older people's independence and social inclusion. *Critical Social Policy*, 26(4), pp. 888-909.

Percival, J., Hanson, J. and Osipovič, D., 2009. Perspectives on Telecare, Implications for autonomy, support and social inclusion. In: B.D. Loader, M. Hardey, L. Keeble, L., eds. *Digital Welfare for the Third Age*. Abingdon: Routledge.

Pickard, L., Wittenberg, R., Comas-Herrera, A, Davies, B., and Darton, R., 2000. Relying on informal care in the new century? Informal care for elderly people in England to 2031. *Ageing & Society*, 20(6), pp. 745-772.

Ploeg, J., 1999. Identifying the best research design to fit the question. Part 2: qualitative designs. *Evidence-Based Nursing*, 2(2), pp. 36-37.

Pols, J., 2012. *Care at a distance. On the Closeness of Technology*, Amsterdam: Amsterdam University Press.

Pols, J. and Moser, I., 2009. Cold technologies versus warm care? On affective and social relations with and through care technologies. Froideur de la technologie versus chaleur du soin? Relations affectives et sociales avec et au travers des technologies de soin. *Alter – European Journal of Disability research*, 3(2), pp. 159-178.

Pritchard, G.W. and Brittain, K., 2015. Alarm pendants and the technological shaping of older people's care. Between (intentional) help and (irrational) nuisance. *Technological Forecasting & Social Change*, 93, pp. 124–1320.

Prus, R., 1996. *Symbolic Interactionism and Ethnographic Research: Intersubjectivity and the Study of Human Lived Experience*. Albany: State University of New York Press.

Qian-Li, X., 2011 The Frailty Syndrome: Definition and Natural History. *Clinics in Geriatric Medicine*, 27(1), pp. 1-15.

Roberts, C. and Mort, M., 2009. Reshaping what counts as care: Older people, work and new technologies. *ALTER, European Journal of Disability Research*, 3(2), pp. 138-158.

Roberts, C., Mort, M. and Milligan, C., 2012. Calling for Care: ‘Disembodied’ Work, Teleoperators and Older People Living at Home, *Sociology*, 46(3), pp. 490-506.

Robson, C. and Robson, P., 2002. Real world research: A resource for social scientists and practitioner-researchers. 2nd edition. Oxford: Blackwell Publishing.

- Rogers, E.M., 1983. *Diffusion of Innovations*. 3rd ed. New York and London: The Free Press.
- Rowles, G.D., 1983. Geographical dimensions of social support in rural Appalachia. In: G.D. Rowles and R.J. Ohta, eds. *Aging and milieu: Environmental perspectives on growing old*. New York: Academic Press. pp. 111-130.
- Rowles, G.D., 1993. Evolving Images of Place in Aging and 'Aging in Place'. *Generations*, 17(2), pp. 65-70.
- Rubinstein, R.L., 1987. The Significance of Personal Objects to Older People. *Journal of Aging Studies*, 1(3), pp. 225-238.
- Rubinstein, R.L., 1989. The Home Environments of Older People: a Description of the Psychosocial Processes Linking Person to Place. *The Journal of Gerontology*, 44(2), pp. 45-53.
- Rubinstein, R.L. and Parmelee, P.A., 1992. Attachment to Place and The Representation of the Life Course by the Elderly. In: I. Altman and S.M. Low, S. M., eds. *Place Attachment. Human Behavior and Environment (Advances in Theory and Research)*. New York: Plenum Press. pp. 139-163.
- Russell, C., 1999. Interviewing Vulnerable Old People: Ethical and Methodological Implications of Imagining Our Subjects. *Journal of Aging Studies*, 13(4), pp. 403-417.
- Sanders, C., Rogers, A., Bowen, P., Shashivadan, H., Cartwright, M., Fitzpatrick, R., Knapp, M., Barlow, J., Hendy, J., Chrysanthaki, T., Bardsley, M., Newman, S.P., 2012. Exploring barriers to participation and adoption of telehealth and Telecare within the Whole System Demonstrator trial: a qualitative study. *BMC Health Services Research* 2012 [e-journal] 12:220 <http://www.biomedcentral.com/1472-6963/12/220>
Available at:
<<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3413558/pdf/1472-6963-12-220.pdf>>
[Accessed 17 November 2017].

Sevenhuijsen, S., 1998. *Citizenship and the ethics of care: Feminist considerations of justice, morality and politics*. London: Routledge.

Shakespeare, T., 2000a. *Help*. Birmingham: Venture Press.

Shakespeare, T., 2000b. The Social Relations of Care. In: G. Lewes, S. Gewirtz and J. Clarke. *Rethinking Social Policy*. London: The Open University. pp. 52-66.

Shakespeare, T., 2006. *Disability rights and wrongs*. Abingdon: Routledge.

Sherman, E. and Dacher, J., 2005. Cherished Objects and the Home: Their Meanings and Roles in Late Life. In: G.D.Rowles, H. Chaudhry, H., eds. *Home and Identity in Late Life: International Perspectives*. New York: Springer Publishing Company. pp. 63-80.

Sieber, J.E., 1992. Planning ethically responsible research: A guide for students and internal review boards. 2nd ed. (Applied Social Research Methods Series). Newbury Park: SAGE.

Silverstone, R., 1989. Let us then Return to the Murmuring of Everyday Practices: A Note on Michel de Certeau, Television and Everyday Life. *Theory, Culture & Society*, 6(1), pp 77-94.

Silverstone, R., 1994. *Television and everyday life*. New York: Taylor and Francis.

Silverstone, R., 2006. Domesticating domestication. Reflections on the life of a concept. In: T. Berker, M. Hartmann, Y. Punte, and K.J. Ward, eds. *Domestication of Media and Technology*. Maidenhead: Open University Press. pp. 229-248.

Silverstone, R. and Haddon, L., 1996. Design and the Domestication of ICTs: Technical Change and Everyday Life. In: R. Silverstone and R. Mansell, eds. *Communication by Design. The Politics of Information and Communication Technologies*, Oxford: Oxford

University Press. pp. 44-74. Available at:

http://eprints.lse.ac.uk/64821/1/Haddon_Design%20and%20domestication_2016.pdf

[Accessed 17 December 2017].

Silverstone, R. and Hirsch, E., 1992. Introduction. In: R. Silverstone and E. Hirsch, eds. *Consuming technologies: Media and information in domestic spaces*. London: Routledge. pp. 1-11.

Silverstone, R., Hirsch, E. and Morley, D., 1992. Information and communication technologies and the moral economy of the household. In: R. Silverstone and E. Hirsch, eds. *Consuming Technologies: Media and information in domestic spaces*. London: Routledge. pp. 15-31.

Sixsmith, A. and Sixsmith, J., 1990. Place in Transition: The Impact of Life Events on the Experience of Home. In: T. Putnam and C. Newton, eds. *Household Choices*. London: Future Publications.

Sixsmith, A. and Sixsmith, J., 2008. Ageing in place in the United Kingdom. *Ageing International*, 32(3), pp. 219-235.

Sixsmith, J., Sixsmith, A., Malmgren Fänge, A., Naumann, D., Kucsera, C., Tomsone, S., Haak, M., Dahlin-Ivanoff, S., and Woolrych, R., 2014. Healthy ageing and home: The perspectives of very old people in five European countries. *Social Science & Medicine*, 106, pp. 1-9.

Spradley, J.P., 1979. *The ethnographic interview*. New York: Holt, Rinehan and Winston.

Spradley, J.P., 1980. *Participant observation*. Fort Worth: Harcourt Brace Jovanovich.

Steventon, A. and Bardsley, M., 2012. *A summary of the first findings from the Whole System Demonstrator trial. The impact of telehealth on use of hospital care and mortality*. Research Summary, June 2012. Nuffieldtrust. Available at:

<https://www.nuffieldtrust.org.uk/files/2017-01/impact-telehealth-on-hospital-care-mortality-web-final.pdf> >

[Accessed 18 December 2017].

Steventon, A., Bardsley, M., Billings, J., Dixon, J., Doll, H., Beynon, M., Hirani, S., Cartwright, M., Dixon, L., Knapp, M., Henderson, C., Rogers, A., Hendy, J., Fitzpatrick, R., Newman, S., 2013. Effect of Telecare on use of health and social care services: findings from the Whole System Demonstrator cluster randomized trial. *Age and Ageing*, 42(4), pp. 501-508. doi: 10.1093/ageing/aft008. Available at:

<<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3684109/pdf/aft008.pdf>>

[Accessed on 17 December 2017].

Taylor, K., Bachuwa, G., Evans, J., and Jackson-Johnson, V., 2006. Assessing Barriers to the Identification of Elder Abuse and Neglect: A Communitywide Survey of Primary Care Physicians. *Journal of the National Medical Association*, 98(3), pp. 403-404.

The Research Ethics Guidebook: a resource for social scientists. Available at:

<<http://www.ethicsguidebook.ac.uk/>> [Accessed 18 December 2017].

Thomas, C., 1993. De-constructing Concepts of Care. *Sociology*, 27(4), pp. 649-669.

Thomas, C., 2007. *Sociologies of Disability and Illness: Contested Ideas in Disability Studies and Medical Sociology*. Hampshire: Palgrave Macmillan.

Thompson, E.P., 1971. The Moral Economy of the English Crowd in the Eighteenth Century. *Past & Present*, 50(1), pp. 76-136.

Townsend, P., n.d. *Gendered Space? An exploration of the gendered meaning and experience of 'home' in contemporary British society* [online] Available at: <

<http://research.ncl.ac.uk/forum/v3i1/gendered%20space.pdf>> [Accessed 16 December 2017].

Tronto, J., 1993. *Moral boundaries. A political argument for an ethic of care*. London: Routledge.

Tronto, J., 2010. Creating Caring Institutions: Politics, Plurality, and Purpose. *Ethics and*

Social Welfare,4(2), pp.158-171.

Twigg, J. and Atkin, K., 1994. *Carers Perceived: Policy and Practice in Informal Care*. Maidenhead: Open University Press.

van Hout, A., Pols, J. and Willems, D., 2015. Shining trinkets and unkempt gardens: on the materiality of care. *Sociology of Health & Illness*,37(8), pp. 1206–1217.

Vuojärvi, H., Isomäki, H. and Hynes, D., 2010. Domestication of a laptop on a wireless campus: A case study. *Australasian Journal of Educational Technology*, 26(2), pp. 250-267.

Wajcman, J., 2000, Reflections on Gender and Technology Studies: In What State is the Art? *Social Studies of Science*, 30(3), pp. 447-464.

Walker, A., 2012. The New Ageism. *The Political Quarterly*, 83(4), pp. 812-819.

Wan, H., Goodkind, D., and Kowal, P., 2016. *An Aging World: 2015*. Washington DC: U.S. Government Publishing Office.

Ward, K., 2006. The bald guy just ate an orange. Domestication, work and home. In: T. Berker, T., M. Hartmann, Y. Punie, and K.J. Ward, eds. *Domestication of Media and Technology*. Maidenhead: Open University Press. pp. 145-164.

Ward, L., Barnes, M. and Gahagan, B., 2012. Well-being in Old Age: Findings from Participatory Research. Brighton: University of Brighton and Age UK Brighton and Hove.

Weicht, B., 2015. *The Meaning of Care: The Social Construction of Care for Elderly People*. Handmills, Basingstoke: Palgrave Macmillan.

Welbeing, n.d. What is Telecare? Available at: <<http://www.welbeing.org.uk/products-services/what-is-Telecare/>> [Accessed 22 November 2017].

WHO, Global Observatory for eHealth. Survey 2009 figures: Telemedicine (n.d.) [Online] Available at: <http://www.who.int/goe/survey/2009/figures/en/index1.html> [Accessed on 26 April 2018]

Wiles, J.L., Leibing, A., Gubermann, N., Reeve, J., and Allen, R.E.S., 2011. The Meaning of “Ageing in Place” to Older People. *The Gerontologist*, 52(3), pp. 357-366.

Williams, R. and Edge, E., 1996. The social shaping of technology. *Research Policy*, 25, pp. 865-899.

Wolcott, H.F., 1994. *Transforming qualitative data: Description, analysis, and interpretation*. 4th ed. Thousand Oaks: SAGE.

Woolgar, S., 1991. Configuring the user: The case of usability trials. In: J. Law, ed. *A Sociology of Monsters: Essays on Power, Technology and Domination*. London: Routledge. pp. 57-99.

Yeandle, S., Buckle, P., Fry, G., Hamblin, K., Koivunen, E.-R. and McGinley, C., 2014. The AKTIVE project’s social, design and prospective hazard research: research methods, AKTIVE Research Report Vol.3. Available at: http://www.aktive.org.uk/downloads/AKTIVE_RR3.pdf [Accessed 18 December 2017].

Yeandle, S., Kröger, T. and Cass, B., 2012. Voice and Choice for Users and Carers? developments in patterns of care for older people in Australia, England and Finland’. *Journal of European Social Policy*, 22(4), pp. 432-445.

Appendices Tables

Table A: Real observation

Sheet 1				
Date	Time of observation	Activity undertaken	Location	Name of participant (pseudonym)
Friday 13/3/15	5pm-5.30pm	Pharmacy owner enters in order to deliver medicines	Living room	Jennifer
Friday 20/3/15	6.30pm-8pm	Tea with the researcher	Living room	Benjamin
Friday 15/5/15	11.15am-12am	Talking to her husband	Living room	Fiona
Saturday 16/5/15	11am-12.00am	The institutional carer is cleaning the kitchen	Kitchen	Jennifer
Sunday 17/5/15	2.30pm-5.20pm	Gardening in the greenhouse	Greenhouse in the back garden	Carl
Sunday 17/5/15	2.30pm-5.20pm	The participant's wife is constantly reading a book on her Kindle and does not participate in the conversation	Living room	Carl
Monday 18/5/15	10.30am-11.40am	The participant is listening to her friend recalling her recent holidays in a sea resort	Open-plan kitchen and living room	Hannah
Monday 18/5/15	10.30am-11.40am	The participant is showing me how her 'Sip-and-Puff' device works	Bedroom	Hannah
Monday 25/5/15	11.30am-12.10am	The participant verbally interacts with her daughter	Living room	Jane
Wednesday 3/6/15	5.10pm-6.15pm	The caretaker rings the bell and enters the participant's flat in order to give her some books to read	Living room	Katherine

Table B: Research participants's demographics and home visits arrangements

N.	Name of participant (pseudonym)	Age	Sex	Town of residence	Date of informed consent signature	Date(s) of visits	Total number of visits	Researcher's notes
1	Katherine	81	W	Brighton	16/2/2015	1) Sat. 7/3/15, 10am 2) Wed. 3/6/15, 5pm 3) Fri. 4/9/15, 1pm	3	1st round ✓ Reconfirmed visit on 1/9/15 at 1.39. Katherine invited me for lunch! I accepted and told her I will take some pasta
2	John	61	M	Brighton	16/2/2015	1) Thur.12/3/15, 10am 2) Fri. 29/5/15, 12am 3) Thur.10/9/15, 4pm	3	1st round
3	Jennifer	83	W	Brighton	22/2/2015	1) Fri. 13/3/15, 5pm 2) Sat. 16/5/15, 11am 3) Sat. 29/8/15, 12am	3	1st round ✓ Surgery to her finger scheduled on 7/4/15; call her a week later to fix another visit; ✓ Ok, reconfirmed 3rd visit but Jennifer postponed it
4	Benjamin	65	M	Hove	16/2/2015	1) Fri.20/3/15, 6.30pm 2) Thur. 28/5, 11am 3) Wed. 9/9/15, 11am	3	1st round ✓ Hand in a copy of the participant info sheet + info consent + his old newspaper ✓ Left a message in his answerphone to rearrange third meeting ✓ Ok, reconfirmed 3rd visit
5	Jane	88	W	Brighton	22/2/2015	1) Mon.25/5/15,11am 2) Sat.18/7/15, 10.15am 3) Mon. 28/9/15, 10am	3	1st round

N.	Name of participant (pseudonym)	Age	Sex	Town of residence	Date of signature of the informed consent	Date(s) of visits	Total number of visits	Researcher's notes
6	Carl	72	M	Brighton	29/3/2015	1) Sun. 8/5/15, 2.30pm 2) Mon.20/7/15, 5.30pm 3) Sat.3/10/15, 11.30am	3	2nd round <ul style="list-style-type: none"> ✓ 2nd interview on 26/9/15 at 3pm cancelled from the participant's wife due to health reasons (seizures in the same morning). Left a message in the answerphone. I will call next week to rearrange the interview ✓ Rescheduled 3rd int. Part. called
7	Fiona	67	W	Portslade	7/4/2015	1)Fri. 15/5/15, 11.30am 2)Fri. 28/8/15, 11.00am 3)Mon. 12/10/15, 11am	3	2nd round Moved 2nd int to 28/8 following Fiona's request
8	Helen	70	W	Brighton	10/4/2015	1)Mon. 18/5/15, 10am 2)Tue. 1/9/15, 10am 3)Tue. 20/10/15, 2pm. The 3rd int. was cancelled due to serious health issues. DROPPED OUT AFTER 2 INTERVIEWS	2	2nd round <ul style="list-style-type: none"> ✓ called on 26th to confirm appointment ✓ appointment moved from 31/8 (Bank holiday) to 1/9 on her request ✓ called her on 20/10 in order to inform her about short delay and her carer explained me that she could not be visited today or any other day

N.	Name of participant (pseudonym)	Age	Sex	Town of residence	Date of signature of the informed consent	Date(s) of visits	Total number of visits	Researcher's notes
9	Craig	84	M	Hove	13/4/2015	1)Wed.20/5/15, 5.30pm 2)Wed.19/8/15, 5.30pm 3)Wed.21/10/15, 5.30pm	3	2nd round <ul style="list-style-type: none"> ✓ Skipped interview on 15/5/15, 4pm. Rearranged on 16/5/15 ✓ 3rd int. rescheduled by part on 21/10/15
10	Claire	93	W	Brighton	26/5/2015	1)Fri. 12/6/15, 11am 2)Fri.25/9/15, 6pm 3)Wed.21/10/15, 11am	3	3rd round <ul style="list-style-type: none"> ✓ Written to her ✓ Reply from Claire ✓ Written again on 16th Sep ✓ 2nd int. due on Thu. 27/8/16 at 12pm was rescheduled ✓ Reconfirmed last interview
11	Jack	82	M	Brighton	27/5/2015	1)Sat.20/6/15, 12.30pm 2)Sun. 23/8/15, 1pm 3)Thu.15/10/15, 1pm	3	3rd round <ul style="list-style-type: none"> ✓ Answerphone ✓ Part called to move the appoint from 13/6 to 20/6
12	Rebecca	94	W	Hove	30/5/2015	1)Sat.13/6/15, 3pm 2)Sun.30/8/15, 5pm. The second interview was cancelled by Rebecca, who decided to drop from the research on 27th August, due to health issues (very bad sight) DROPPED OUT AFTER 1ST INTERVIEW	1	3rd round <ul style="list-style-type: none"> ✓ Answerphone ✓ Call her a week before (20/21 August) to confirm. I believe the date is wrong! ✓ On 26-27 Aug left a message in the answerphone to confirm 30/8

N.	Name of participant (pseudonym)	Age	Sex	Town of residence	Date of signature of the informed consent	Date(s) of visits	Total number of visits	Researcher's notes
14	Hannah	95+ (turned 96 on 22/10/15)	W	Portslade	28/5/2015	1) Fri. 19/6/15, 12am 2) Fri. 25/9/15, 3pm 3) Sat. 24/10/15, 11am	3	3rd round Ask if she is the house owner ✓ Written to her ✓ Reply from Hannah ✓ Written to her on 16th Sep. ✓ 2nd int. due on Wed. 2/9/15 at 6.30pm was rescheduled ✓ Left a message on her answerphone to reconfirm interview on 20th Oct.
15	Karen	86	W	Hove	30/5/2015	1) Tue. 23/6/15, 11am 2) Thu. 3/9/15, 5pm. The second interview was cancelled, following a phone call. I called her 3 times to reconfirm the 2nd appointment. The first 2 times I left messages in her answerphone. The 3rd time, she answered, and while I was still trying to reconfirm the second visit, she hung up on me. I called her back, and she did not answer. DROPPED OUT AFTER 1ST INTERVIEW	1	3rd round Ask postal code ✓ Called her twice no answer Ask her if her friend is still living at her place ✓ Left a message in her answerphone on 1/9/15 at 1.36pm ✓ Hung up on me

N.	Name of participant (pseudonym)	Age	Sex	Town of residence	Date of signature of the informed consent	Date(s) of visits	Total number of visits	Researcher's notes
16	Emily	91	W	Brighton	14/6/2015	1)Wed.24/6/15, 12am 2)Fri.28/8/15, 2pm. I had to cancel the appointment because it was impossible to reconfirm it by telephone. Sent her a letter on 1/9/15, in order to find out if participant is still willing to partake my research DROPPED OUT AFTER 1ST INTERVIEW	1	3rd round Ask if she is the house owner Please note that she is extremely hard hearing ✓ called on 27/8 no answer ✓ called on 28/8 no answer ✓ written to her ✓ reply from her dropping out research

Table C: Assistive devices

Name	Age	Mobility aids	Bathroom aids	Bedroom aids	Hearing aids	Visual aids	Respiratory aids	Other devices
Katherine	81	Cane						
John	61	Walking aid, rise & recliner sofa chair, rise & recliner sofa (in the living room)	Walk-in shower and shower chair, anti-slip mat, grab rails, toilet seat raiser, padded seat, padded shower chair	Adapted be (tilted with block blocks underneath)				Training devices, neck collar, extra plugs in the living room, stairlift from ground floor to 1st floor
Jennifer	83	Cane, walking frame, foldable wheelchair in the bedroom	Toilet seat raiser, height-adjustable shower chair				Nebuliser	
Benjamin	65	Walking frame on wheels to go out, walking frame (next to his hospital bed)	Grab rails, toilet seat raiser, walk-in shower, anti-slip mat	Grab rails, hospital bed, pullcord			Nebuliser	
Jane	88	Cane, wheel walking frame (trolley steel frame non-marking wheels)	Grab rails, transfer beach		Telephone with loud speakers			Stairlift to first floor

Name	Age	Mobility aids	Bathroom aids	Bedroom aids	Hearing aids	Visual aids	Respiratory aids	Other devices
Carl	72		Grab rails in the bathtub			Eyeglasses		
Fiona	67	3 wheels walking frame (for short distances), folding electric wheelchair and hoist (last two devices go into the car)	Grab rails, wet room, anti-slip mat					
Helen	70	Electronic power based component-based mounting wheelchair, automatic swing door opener	Grab rails, toilet seat raiser, walk-in shower with shower chair (which can be used also a toilet), anti-slip mat	Pullcord (from the Telecare provider), adapted bed (bed can go up & and turn)				Miniature joystick, sip-and-puff control (from the Telecare provider). Multiple plugs access point, wider doors, design-for-all kitchen
Craig	84	Can	Bath board and seat, raised toilet, assisted rails		✓	Big button telephone, eye glasses		

Name	Age	Mobility aids	Bathroom aids	Bedroom aids	Hearing aids	Visual aids	Respiratory aids	Other devices
Claire	93							
Jack	82		Shower chair					
Rebecca	94	Walking frame with a table (at home (4 wheels rollator walker with basket (when she goes out)				NHS special sunglasses and a magnifier		
Ingrid	79	Cane, rise & recliner sofa chair	Raised-battery operated bath-seat, anti-slip mat	Her bed can be lifted up		Eye glasses		
Hannah	95	Walking frame, rollator walker with table, foldable wheelchair	Walk-in shower, grab rails, raised toilet seat, anti-slip floor	Rod with handles each side of the bed	✓			
Karen	86							
Emily	91	Rollator walker		Bed with side rails	✓			

Appendices Figures

Figure A: In-depth semi-structured interview. Sample questions

How long have you been living in your house?

Have you always been living on your own?

Do you have any relatives? How often are they visiting you?

Do you have any caregivers coming to your place during the week? Are they family caregivers of professional ones or both?

Do you find the support given by your caregivers useful? Do you think that their support allows you to live on your own with peace of mind?

Why did you first get Telecare service? How did this come about? Can I look at your experience with Telecare? Tell me more about how it works

Where has Telecare been installed?

Who suggested you to have Telecare installed?

Where do you keep the pendant? Where do you have the smoke alarm? Where do you have the carbon monoxide detector?

Do you have a key safe? And where is it located?

Do you think that the alarm unit has well integrated in your furniture? Did you have to adapt your home in order to have the alarm unit, the pendant and other devices installed?

How do you find your home after the introduction of Telecare devices? What has changed? Why? Can you tell me more about it?

Did you ever talk about the pendant and/or other Telecare devices with your family/friends/acquaintances?

Should you talk to other people about your Telecare system, would you explain them how it works?

Suppose that you experience technical problems with the pendant or other devices. Would you share your problems with your family/friends/acquaintances?

Figure B: In-depth semi-structured interview. Adaptation of sample questions

Introduction:

1. May I record this interview?
2. I will take some notes. Does this bother you?
3. What's your full name?
4. How old are you?
5. Do you live on your own?

Home

6. How long have you been living in this flat/house?
7. Do you remember the reason to move to this flat/house from your previous accommodation?
8. How do you like living here?
9. How would you feel if you had to leave your flat/house for a long period of time? Suppose that you had to spend a long time in the hospital, for example. How would you feel about it?
10. Have you considered moving to another flat/house for practical reasons, such as the need to avoid stairs? How would you feel?
11. Do you keep many memories of your life (family pictures, for example) in your home? How would you feel if you had to move and not being to take them with you?

Care

12. Do you have any carers coming at home?
13. Do you receive formal care from nurses or other caregivers? How many times a week/a day do you receive formal care?
14. What is your experience of care?
15. Do you go to your GP or other MD on your own or with family members/friends?

Telecare

16. Can you show me your Telecare (devices)?
17. How many Telecare (devices) do you have?
18. Who suggested (to install) Telecare?
19. Can you remember when Telecare was first installed?

20. Do you think that the pendant is easy to use?
21. Have you ever experienced technical problems with the pendant? And what happened?
22. Have you ever used the pendant to get in touch with CareLinkPlus? And what happened?
23. Tell me about your experience with CareLink Plus. Did it ever come to your place in order to solve technical problems or to help you?

Assistive devices

24. Do you use assistive devices such as grab rails, stairlifts, or walking aids such as canes?
25. When were grab rails, etc. installed?

Figure C: The ageing population in the UK

Chapter 1

Introduction

1.1. The ageing population

In mid-2014, the median age of the UK population exceeded 40 for the first time, up from 33.9 years in 1974^{2,B}. The gradual increases in life expectancy and average age seen during the 20th century are projected to continue. Over 70% of UK population growth between 2014 and 2039 will be in the over 60 age group, an increase from 14.9 to 21.9 million people (see Figure 1.1).

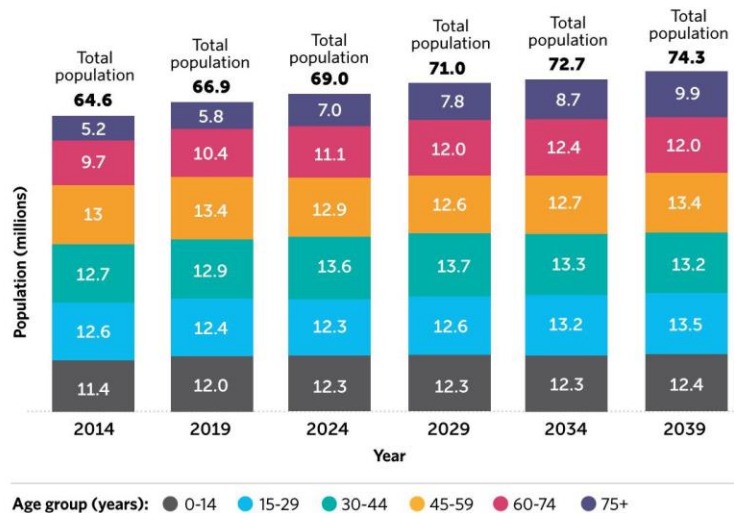


Figure 1.1: Population estimates and projections, based on ONS principal population projections, 2014³.

B The median age is that at which half the population is younger and half the population is older

P18

Source: ONS 2014, cited in Government Office for Science, 2016, p. 18

Figure D: Fieldnotes, 3rd September 2015

I.

from her notes

keyholes

- found

5pm ~~the~~ ^{86 yrs} September 3rd Thursday 1911

Ms ~~the~~ lives on her own. However, she is temporarily living with a friend of her, who got a divorce.

She has been living in a beautiful and very expensive semi-detached house in a residential area in Hove (New Churchhill Rd), from 1987 (28 yrs).

She is 86 yrs and has is very independent.

She does some gardening and shops by herself. However, she does not drive anymore.

The house is very well kept (ask her if she has a vacuum cleaner next time.)

There is copper in the living room and a rug (white) on the carpet. The oil boiler in the conservatory. She has also a beautiful pendant,

with the pendants which is covered by 104 and looks like a small house in the garden.

In the whole, her house is very sophisticated, with a lot of attention to detail.

In the beginning (I arrived very late as I lost myself) she appears to be defensive and puts down.

She is very polite though and offers me a cup of coffee in the beautiful tea set.

She answers my questions shortly and I find it difficult to watch the discussion with the previous.

Telcove: she has got:

- 4 phone unit + pendant (back wall)

- small detector (kitchen? ask her next time)

She claims having used Telcove for about 75 years (not certain, but a long time)

She has a key safe. The key safe is not from Core Lock. Did she buy it? She did not answer clearly. Conclude: knows the combination, but her no.

Householder - she has got 1 copy of keys
her friend has another copy of her keys

Other people?

Other next time ask:

- ① ask to see her devices
- ② ask if she pays for telecare

Care

- ① ask if she has any institutionalized care (probably not)
- ② ask if she has a house cleaner and how many times per week (the house is pretty big)

Family

- ① ask if she has any relatives (brothers, sisters)
- ② ask if she has any son/daughter (probably she has a daughter but I am not sure about it)

Home
↓
she is the owner

- ① ask her if her house has been modified with telecare devices (probably not)
- ② ask her
 - where she lived before
 - where was she born
 - why she moved to the present dwelling

Possibly, ask her to visit kitchen & bathroom to check for any devices

CARE
2

Today (23/6) she mentioned she fell 3 times and Carehome provided promptly. The service was efficient, according to her.

Ask:

- ① what is your experience of care, such as GP, Hospital, specialists?
- ② do you get any pension, any allowance

BE CAREFUL: she did not mention any health issue therefore she might not be willing to discuss thoroughly this issue.

III

Experience with Telecom:

She is fond of it. She does not mention any technical issue -
I suggest her that batteries have to be replaced on a regular basis but she does not comment.
I believe that her pension was replaced at least once in 15 yrs.
Ask her more about it.

Proposition : I have to try to be on time at least the 1st visit

II.

Sister lives in Canada

instead

Dolly Road - 10th floor
moved to ground floor flat
renting

Before lived in More
ground floor flat

- originally from Surrey
- lived in London

She has 3 adult children

- daughter - moved to USA when she was 21 yrs old
- divorced
- moved another man
- housekeeper
- domestic worker
- roll single in USA

2010 died husband
married 58 years

Community bus

Horsham
no free
charge

offer card
of
recording

Small bus

BeH change

return

at 7
next week go to Harrogate
take her to Salisbury
£ 3.50

help with the shopping

- she has a laptop

- tea party

Hampton (community centre)

once a month

they play puzzles

- suffers from eye problem (can't see very well)

- 2/9 - 6.30 pm

III.

Ms H (widow) is very kind and open to discuss telecare with me from the very beginning.

She is thankful and expresses a ~~lot~~ positive feelings towards Telecare, and in particular towards Caroline Plus. She mentions spontaneously that Caroline members are nice, friendly when they answer her calls even if the alarm is given accidentally.

She refers of having experienced 3 falls in the living room and 3 in the bath room. Every time that paramedics checked her reported that she had positive ~~diagnoses~~ -

NB: She says that she lives on her own but she's not lonely. She has no carers. Once a week a house cleaner comes to her place to clean.

She uses skype to talk to her daughter in the US. She looks at case with her laptop.

She's got also a mobile phone.

It is cognitively fine, or at least when appears to be. She

answers immediately to my questions, but sometimes I need to ask ~~ask~~ her question \Rightarrow she suffers from hearing problems. Her hearing aids are not excellent, or she takes off one of them from her left ear while ensuring to me for better hearing -
I feel very in case with her, looking forward to meet her again -

Reflection: it's so difficult to go beyond the usual impression of an aged body, obviously affected by one of the effects of ageing: atrophy. However, once you get to talk to the person, and use the body, you actually forget about it -

Home: ~~She~~ lives in a flat on the ground floor in residential park. The bus service is very efficient (buses 1/10 min or 2 are very frequent) and she has 2 bus stops just opposite her home.


House appearance: full of memories in the living room - pictures of her family, a collection of ~~gifts~~ ^{gifts}, one or 2 teddy bears, one patterned cat, 3 trinkets (I will sitly opposite to her) Not big living room - carpeted with high carpet (colour: beige)

IV.

Kitchen : I just have a look. Next time I would like to see more of her house.

Living room : Assistive devices:

- foldable wheelchair on the floor
- supports for opposition & conference table

Pendant →  transparent protection
 it is not the last generation pendant

~~She~~ mentions a tech. problem without complaining: the pendant is very sensitive to TSPs on storm coils, maybe now she's got the transparent protection. She suffers from arthritis in her hands. As a consequence she cannot really feel the intensity when she'll pass it.

Bathroom: cannot show that when she goes to the bathroom, she takes the pendant with her. Ask her where she puts the pendant. The bathroom has anti-slippery pavement - she informs me.

Reflections: I feel overwhelmed by all these informations.

LV: Life home unit ("the box") on a small table close to the big button telephone.

I haven't seen her mobile -

Ask her if she has a controller in the building

I can see another disabled lady entering another door with her dog. There are 2 entrances, security is the flat numbers



In the back, there are sets of small courts where it is possible to send

I got stuck in the back and court so I have to knock on the front door in order to enter the building and eventually get out of it.

Figure F: Invitation letter

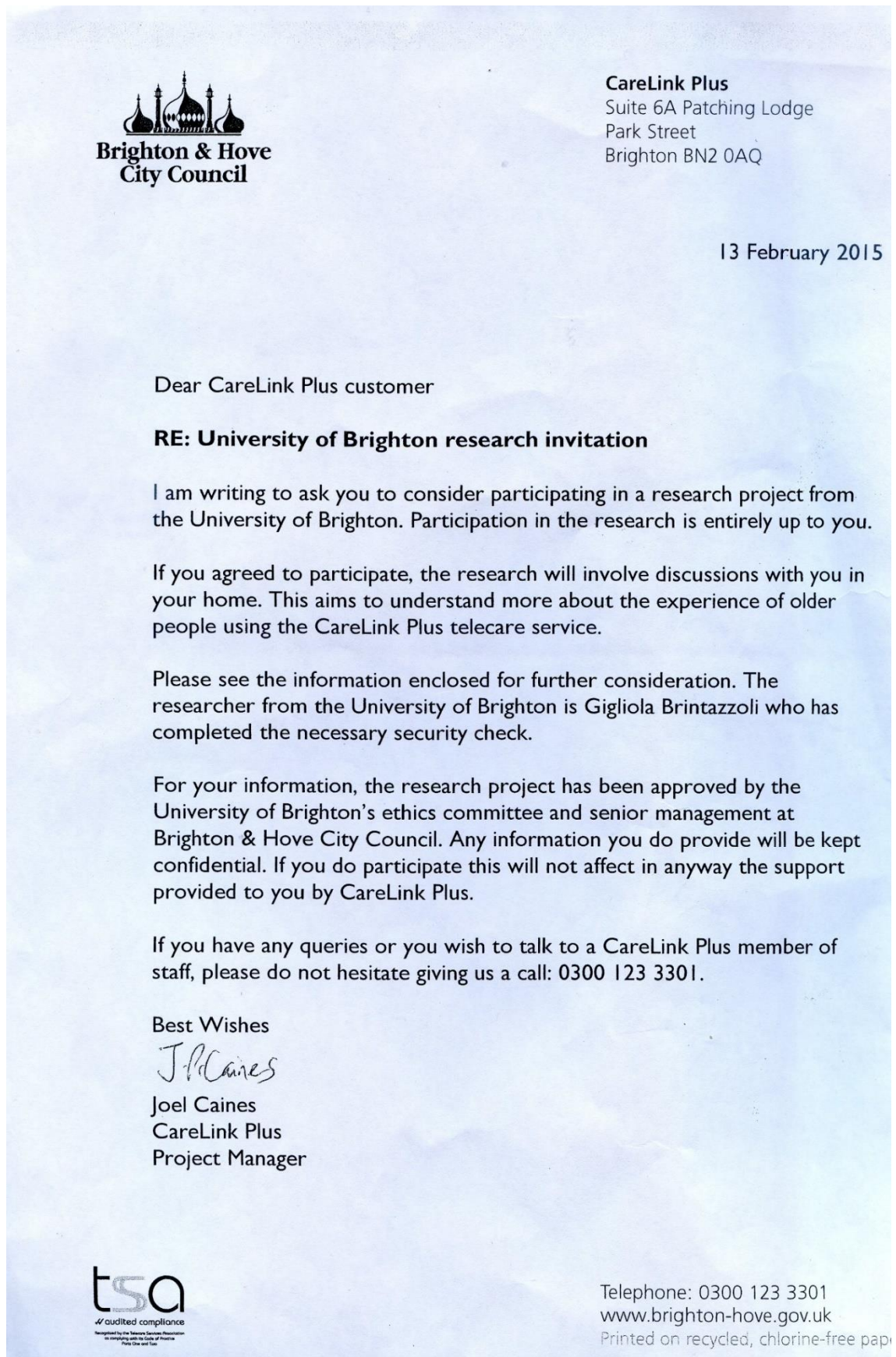


Figure G: Reflexive notes: At Home, 26th August 2015

such as those run at the Royal
Hospital London and Royal Sussex Hosp.
Bytown -

now

NOTES

26th Aug I am very upset, or angry,
to be honest. Two participants hopped
out the telephone while I was
trying to explain my next visit
(tomorrow in the late morning and
Sunday)

After ~~the~~ ^{she is a} ~~interview~~ ^{former nurse!} interview?
During the visit ~~the~~ ^{former} ~~nurse~~ ^{nurse}, a qualified
nurse, mentioned with emphasis the fact
that nowadays nurse uniforms are not
'real' uniforms. In the past when she
was a nurse, they used to be ironed
from the employer, ready to wear and
they were flawless (in my terms)
Nowadays they are not as good looking
as they used to be -

Figure H-1: NVivo Analysis: Codebook

Telecare

Nodes

Name	Description
Care	
Care in person	
Formal care	
Informal care	
Both formal and informal care	
Care at a distance	Telecare
Care in person and at a distance	Care in person and Telecare
Domestication	The domestication of Telecare is the process by which a new technology is 'tamed' or appropriated by its users
Appropriation	Telecare leaves the world of commodity and is taken possession by an individual or a household
Technological literacy	Individual disposition towards technology as a whole
General wellbeing	
Physical condition	
Psychological condition	
Specific Telecare devices	Different Telecare devices used by older people
Alarm unit + alarm pendant	The basic Telecare package

Name	Description
Family-friends-neighbours influence	How family, friends and neighbours influence the acquisition of Telecare
Triggering event	The event which triggered the appropriation of Telecare
Knowledge of how Telecare works	
Objectification	The arrangement and display of Telecare
Usage	
Aesthetics	
Fixed devices	Alarm unit, smoke detector, carbon monoxide detector, etc.
Portable devices	Alarm pendant
Incorporation	The incorporation of the technological object into the house
Functionality	
Technical issues	Any technical situation that might influences the adoption of Telecare (short battery life, unwanted alarms, etc.)
Usefulness	
Agency	
User-friendliness	
Maintenance	
Conversion	The relationship between the households and the outside world. Also, how users talk about and display Telecare
Relationships with the Telecare provider	Relationship between the Telecare provider and older users
Relationships with the outside world	Relationship between the outside world and older users
Home	
Space	
Identity	
Personality	

Name	Description
Memories	
Isolation	
Frailty	
Psychological and Physical issues	
Loneliness	
Belonging to a community	

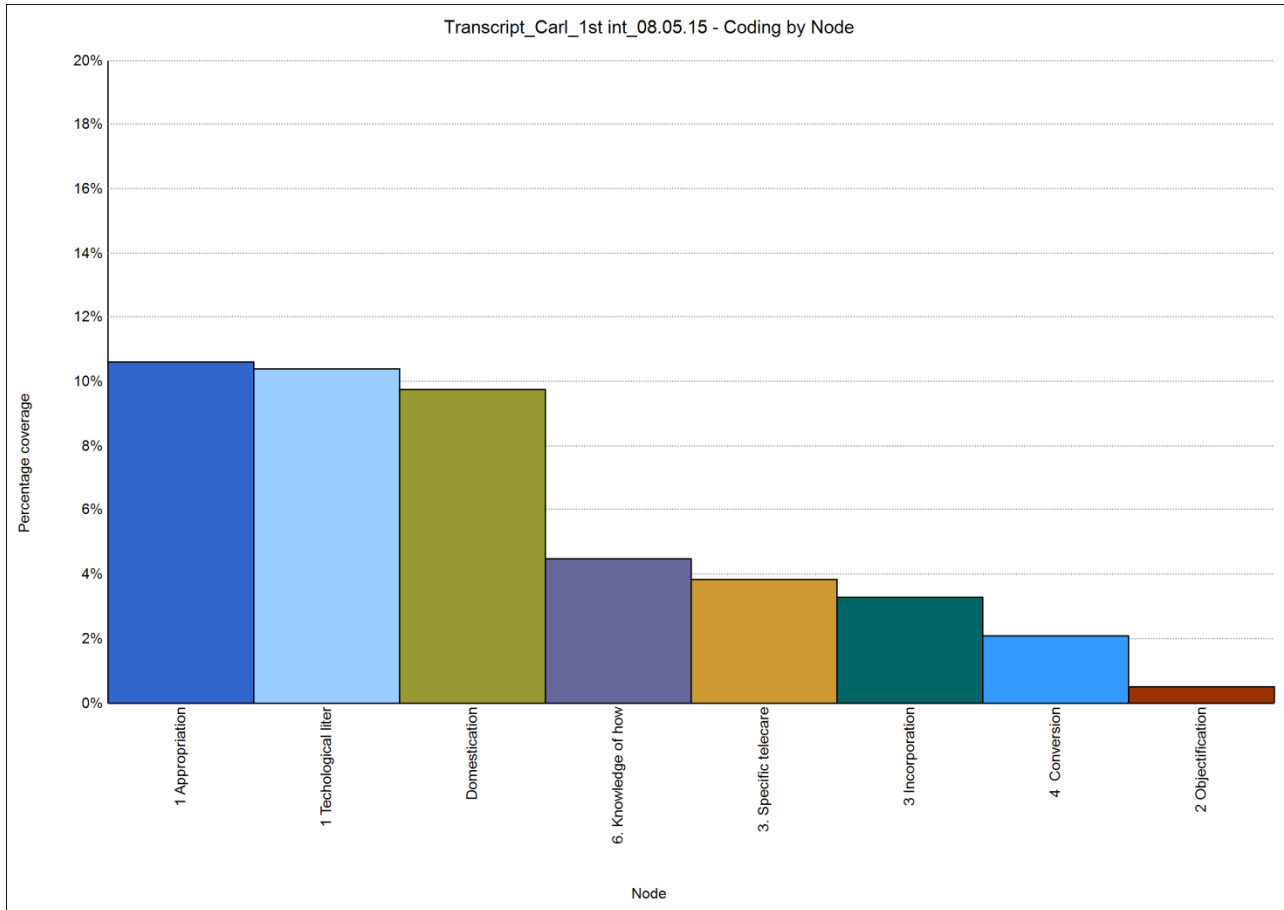
Nodes\\Telecare

This codebook represents a report of my project (Telecare). In particular, it will show the nodes and their descriptions. First of all, a node is a collection of references about a specific theme, place, person or other area of interest. I gathered the references by ‘coding’ my sources (interviews, observation, opportunistic chats and field notes).

My project analysed the domestication of Telecare, and meanings and experiences of ‘home’ and ‘care’. As the codebook was created in the first weeks of analysis, the initial themes were modified later.

The codebook shows a hierarchy of nodes. In particular, the nodes highlighted in green are the parent nodes (the largest and broadest container), while the nodes highlighted in red are the first level child nodes (sub nodes of a parent node). The nodes highlighted in blue are the second level child nodes. The ‘node aggregation’ can be turned on or off.

Figure H-2: NVivo analysis: Coding by Node (percentage coverage)



This figure shows the percentage coverage of coding by node, with reference to Carl’s first interview. In particular, the figure displays the four different stages (headings) of ‘domestication’ (*appropriation, objectification, incorporation and conversion*).

Data analysis was in its first steps and I had analysed only a few interviews, field notes and observation before Carl’s 1st interview. In this example, I started by analysing the first stage (*appropriation*) and identified the following themes: ‘technological literacy’, ‘knowledge of how Telecare works’ and ‘specific Telecare devices’. These other themes identified in the first stage are visible in the Codebook. Here they are not visible as those themes were not identified in Carl’s first interviews but in other participants’ interviews, observations and field notes. As explained in Figure H-1, the initial themes were modified later.

The other stages of the ‘domestication’ (*objectification, incorporation and conversion*) had been analysed quite broadly therefore no themes had emerged yet.

Figure H-3: NVivo analysis: Coding by Node. Percentage of coverage coding by nodes (detailed)

Node	Percentage coverage
Nodes\\Domestication	010%
Nodes\\Domestication\1 Appropriation	011%
Nodes\\Domestication\1 Appropriation\1 Technological literacy	011%
Nodes\\Domestication\1 Appropriation\3. Specific Telecare devices	004%
Nodes\\Domestication\1 Appropriation\6. Knowledge of how Telecare works	005%
Nodes\\Domestication\2 Objectification	001%
Nodes\\Domestication\3 Incorporation	003%
Nodes\\Domestication\4 Conversion	002%

This table shows more in detail the percentage of coverage coding by nodes, with reference to Carl's first interview.

Appendices

Appendix A: Visit to the CareLink Plus Demo House, Brighton

On 6th June 2014 I visited the CareLinkPlus, Brighton & Hove City Council's community alarm service demo house, Montague House, located in Montague Place, Brighton. The Telecare Project Manager (Adult Social Care Brighton & Hove City Council) and a representative of CareLinkPlus (Brighton & Hove City Council) organized a visit to the demo house with my supervisors and I, explaining the functions of many Telecare devices (lifeline unit, pendant, bed sensor, chair sensor, fall detector epilepsy sensor, smoke alarm, key safe and so on) as well as the functions of the call centre linked to CareLink Plus.

CareLink Plus is Brighton & Hove City Council's community alarm service, which gives emergency assistance or just peace of mind to older people and their families. CareLink Plus is a service that provides help in emergencies such as falls, sudden illness, the worsening of a long-term condition, fire or suspected fire, and concerns about personal safety. This service can install Telecare alarm service equipment, such as the alarm unit and pendant, in order to help keep older people safe whilst remaining independent in their own home. Standard CareLink Plus provides an emergency button which can be worn on a neck cord or wrist strap. It can also help with medication reminding, problems with memory loss such as leaving taps or hobs on, unconscious/conscious falls, falls at night, and epilepsy. CareLinkPlus also enables continued care at home, personal safety at home, and alerts carers to safety issues.

In order to have CareLink Plus installed it is necessary to have a landline telephone, an electric socket and a minimum of two people to hold home keys. These two people can be contacted in an emergency. Alternatively, a key safe can be installed.

In practice, CareLink Plus works as follows: when the user (the old person) activates an alarm (for example, by using the pendant), a call is automatically made to the CareLink Plus control centre. There is no need to use the telephone. The control centre receives the call and will try to talk to the person in need through the unit. The details about the call will be seen on screen so that the person will be identified. In the event that help is needed, the centre will contact a family member, a nominated emergency contact, or the old person's carer. If necessary, CareLink Plus will arrange for one of their staff, an ambulance crew or a doctor to attend.

During the second half of the month of August 2014 I spent some time with the CareLink Plus control centre team in Brighton. This opportunity would allow me to increase my awareness of how the recruitment of potentially frail older people is a very sensitive area, with strong ethical considerations.

Appendix B: A day with a CareLink Plus team officer

21 August 2014, 9.15am-5.30pm

Yesterday I spent my day with Jennie, an experienced CareLink Plus team officer at Brighton & Hove City Council. Jennie and I left Patching Lodge, the CareLink Plus headquarters, at 9.15am and we headed towards different customers, living in Brighton and Hove.

Jennie had a couple of visits to customers whose equipment had to be collected as they had stopped using Telecare for reasons such as hospitalization. She also had two visits to customers and their families to demonstrate the equipment and eventually link the equipment.

The first visits were very short, as Jennie just collected the Telecare devices. During one of these visits, she informed the customer that one piece of equipment was missing.

On the third visit Jennie demonstrated the equipment and eventually linked it up for a customer who had asked for information about Telecare alarm services and was willing to pay the necessary monthly fees. The customer, a man in his eighties with no mobility problems who used a hearing aid, was sitting in his living room with his daughter, who was interested in the Telecare option and helped her father in understanding all explanations from Jennie, the Care Link Plus officer. Jennie also installed, at the customer's request and at no extra cost, a waterproof pendant in his bathroom, in addition to the regular pendant, which has to be worn in the neck or on the wrist. The customer was informed about the Telecare monthly fees (£14.50) and he agreed to try the Telecare equipment for a free period of three months. After that period, he was free to set a direct debit/check to CareLink Plus Telecare alarm services or ask for the Telecare equipment removal. After a confirmation of interest, the customer received a Telecare leaflet, with all the necessary instructions, and had to sign the contract, which was collected by Jennie.

During a short break, Jennie explained to me that not all customers had to pay for Telecare equipment. In fact, those people who live on benefits do not have to pay for it. However, most of the customers have to pay the monthly fee. The fees can be paid either by direct debit or by cheque to CareLink Plus Telecare alarm services.

On the fourth visit the team officer had to deal with a customer who used Telecare equipment after having being subject to domestic violence. The case had been reported in her agenda, and Jennie knew that the protocol requested her to go to this particular customer's house together with another team member. CareLink team officers have a list of visits but some of them, for security reasons such as in the case of domestic violence, required two team members. Jennie had to verify the equipment and we went into the house with the CareLink Plus technician, one of Jennie's colleagues. The visit was quite short but Jennie had the time to exchange a few words with the customer.

In the following visit, Jennie suggested that two aged Telecare users, who lived on their own and had already the Telecare alarm installed, apply for the medication reminder, an oral reminder that allows customers to take medication pills at the proper times. Jennie was able to install the medication reminder. However, she conveyed to customers her doubts about the

effectiveness of the oral reminder, as one of the two Telecare users was supposed to get up from the sofa and move towards the alarm unit, whose audible tone would prompt when to take a medication. At that point, by pushing a button, the alarm unit would have reminded to take the pill. As one of the two customers could not walk and the other one could not hear at all, Jennie doubted the effectiveness of this reminder. However, a family cousin, who participated in the visit, insisted the medication reminder be installed.

One of the last visits of the day consisted in setting to alert the bed sensor for a customer who already had Telecare. The customer, an older lady, lived on her own in a small house, and as she could not walk by herself, was not able to open the door when Jennie rang the bell. Thus, the team officer dialled her telephone number and the lady, whose telephone was close to the sofa on which she was sitting, answered explaining that she could not open the door. However, she allowed the team officer to open the door using the key safe to the right of the front door. Jennie called the CareLink centre, which gave her the code number of the key safe and we could get in the house. Before installing the bed sensor, the team officer had a look at the bed (which was a hospital bed) in order to verify that the bed sensor could be linked. Once verified, she called the two key holders (the lady's daughter, and a neighbour) in order to verify whether they were available for emergencies. As neither of them was available at a certain time of the day, the bed sensor could not be installed.

The final visit consisted in demonstrating the equipment and eventually linking it to a customer recently discharged from the hospital and her family. The lady interested in the Telecare equipment had allowed her daughter to listen to the demonstration, and that proved to be useful as Jennie was able to introduce the Telecare equipment and eventually install it. Jennie explained to me that people discharged from the hospital are allowed to use Telecare equipment for a period of one month with no fees. Beyond this period, as previously mentioned, customers can have the Telecare equipment removed or sign a free three-month contract with Telecare. After the three months, the Telecare equipment costs £14.50 per month.

All visits were very interesting as all of them differed from each other in some aspects. Basically, Jennie had to take care of different issues:

- Removal of Telecare devices
- Installation of Telecare devices to people:
 - wishing to maintain their independent living in their own homes
 - affected by disabilities or any kind of health needs
 - being discharged from hospital
- Verification of Telecare devices to people subject to domestic violence.

Importantly, even when the Telecare alarms were already installed Jennie carefully checked the batteries in order to make sure that they worked properly.

Appendix C: A few hours at the CareLink Plus monitoring centre

Yesterday I spent four hours (11am-3pm) at the CareLink Plus Call centre, located in Patching Lodge, Brighton.

Michelle assigned me to an experienced CareLink Plus team officer, Jim, and I sat with him in front of his PC, listening to the incoming and outgoing calls on my headphones.

The incoming calls could be calls from:

- Customers, such as old people, who had Telecare installed at home and had to test it (each month customers are required to test Telecare);
- Customers who called to inform CareLink Plus that they were going on holidays and therefore would not be at home for a few days/weeks;
- Customers who had technical problems with any device, and therefore asked for help;
- Customers who had had an accident and were, therefore, requiring help;
- CareLink Plus team officers testing the equipment from customers' homes;
- CareLink Plus team officers installing new devices such as the medical reminder (for example the pills reminder) and then testing it;
- Scheme managers (public and privately sheltered house caretakers) that informed CareLink Plus every time they were leaving/coming back from the sheltered house/s of which they were responsible;
- Scheme managers asking to open a specific door using an electronic code;
- Lone workers, testing their equipment or calling because of technical issues.

The outgoing calls were made by Jim, the team officer, in order to:

- Get in touch with emergency services after having received a call from a customer who had fallen on the floor and needed help;
- Get in touch with customers as a follow-up test;
- Get in touch with lone workers;
- Other issues.

Jim also had to take care of his incoming email. To this end he used two different monitors: one was constantly monitoring Telecare, and the other was used to monitor email.

Jim also had to deal with paperwork such as updating customers' contacts (for example, replacing GP's telephone numbers, as requested by customers, or replacing key holders contacts numbers). Whenever there was an update, Jim had to print out a sheet of paper, and add it to the appropriate customer's file.

In fact, each Telecare customer is registered in two different databases and has two files: one paper file, which has to be constantly updated and acts as a backup of the online file, on which each team officer can easily and quickly see all the main features of each customer. More clearly, anytime Jim received a call from a customer, the monitor quickly showed the customer's contact, his/her main physical problems (if any), and all other relevant data.

I found the experience with Jim very important, as it informed me how Telecare devices and related issues are managed.

Also, I found out how complex and relationship-rich the CareLink Plus team officer's job was. They have to be constantly ready to answer to calls and readily take the right decision (calling an ambulance or sending a technician to the customer's house for example).

In addition, I was able to see that CareLink Plus deals with lots of sheltered houses (23 publicly funded and 12 privately funded). Most of them had caretakers who used Telecare devices, but some of them had no caretakers and just Telecare devices.

Furthermore, in the call centre there were a couple of team officers just answering calls from people asking for information about Telecare. I did not have the chance to spend time with them because I had to focus on the most significant Telecare issues, such as helping customers in need or testing the Telecare devices.

Appendix D: Before fieldwork: two memos

Email from CareLink Plus Telecare manager after the meeting on 4th February 2015 from 10am to 12pm

Dear Gigliola / Flis

Nice to meet today. Enclosed is a summary of actions. Please say if I have missed anything:

- 1) Michelle to establish a list of 60 customers suitable for mailout. Criteria 2 or more Telecare devices. Aim End of Feb but may need to be by Mid-March due to current pressures.
- 2) Gigliola to amend informed consent form and resend by email.
- 3) Joel to draft a cover letter. The mailout will consist of 3 items a) CareLink intro cover letter b) info sheet c) informed consent and return form (and self-addressed envelope to UoB)
- 4) We will aim to distribute by mid-March.
- 5) Gigliola to bring into CareLink her DBS check for us to take a copy. Also, bring in self-addressed envelopes.
- 6) Safety/ Safeguarding:

See action re DBS check

ID to be presented on visits

Any safeguarding or neglect concerns to be reported to CareLink without delay. If in doubt ask.

Personal and sensitive Data to be held on password protected UoB computer system.

Any data used outside UoB should be anonymised

Paper records once inputted should be securely shredded

Any required paper records must be kept securely

Observation of UoB ethics procedure and data protection act

My notes/actions after the above meeting (see email from JC):

- Bring into CareLink Plus my DBS check (**done** on 6th February 15 – J.C. made a copy of it)
- Modify **Invitation Letter** and **Informed Consent Form**
- Resend by email (to J.C.) **Invitation Letter** and **Informed Consent Form** to J.C.
- E-mail H.B. about my drawer at Falmer (right now it is not secure) (**done** on 5th February 15 – I received no feedback about the drawer's issues as HB is considering replacing drawers with lockers)
- E-mail H.B. about envelopes + second class stamps needed (**done** on 5th February 15, negative feedback)
- E-mail H.B. about loaning digital equipment from the University (**done** on 6th February 15, negative feedback)
- Buy 60 envelopes + 60-second class stamps (**done** on 6th February 15)
- Ask Flis/David about loaning digital equipment, specifically digital recorder equipped with microSD-slot and/or xxxGB on-board storage – built-in USB (**done** on 7th February 15)

Appendix E: Electronic analytic notes

FEBRUARY 2015

- 13th February, 11.30 am approximate. Meeting with J.C. – he showed me the 40 empty envelopes with the potential participants selected. I inserted in the C5 envelope a regular, stamped, self-addressed, the informed consent form and the CareLink Plus invitation letter. Then the letters were sent from CareLink Plus the same day
- 21st February – afternoon – I bought a black blank page no brand soft cover notebook with a bookmark, elastic closure and expandable inside pocket dedicated to my field notes. The notebook was called 1. Research on the Field
- 24th February 14.30-15.30 meeting with my supervisors. Further details about the first interview, which will be audio recorded. After that interview, I will meet my supervisors for a briefing
- 24th February – afternoon – I received 6 letters, of which 2 were not considered. I now have 4 participants willing to be interviewed
- 25th February – afternoon – I ordered a voice recorder, which will arrive soon
- 28th February – afternoon- I collected my voice recorder

RESEARCH EXPENSES NOT TO BE CLAIMED:

1. Stamps
2. Envelopes
3. Voice recorder
4. Softcover notebook

MARCH 2015

- 30th March, 10.30am. Meeting with J.C. – he showed me a selected list of 63 CareLink customers (my potential participants). Those people were sent 63 C5 envelopes containing a regular, stamped, self-addressed envelopes, the informed consent form and the CareLink Plus invitation letter. Then the letters were sent from CareLink Plus the same day
- Participants' visits

APRIL 2015

- Participants' visits

MAY 2015

- Participants' visits
- 15th May. Modification of my research design to enable me to include people not living alone. My lead supervisor thinks it raises interesting new issues. We will need to look at how best to approach this. We will discuss at next meeting

- 21st May, 9.30am. Meeting with J.C. at CareLink Plus in order to search other participants.
- 27th May, 12.42pm. I received an email from J.C. (cc M.M.; TSO CareLink). Feedback from JC about 3 customers, who called CareLink Plus in order to 1) inform that she did not want to partake in the Brighton University Research Project; 2) was annoyed as the letter was dated February and was concerned it was out of date information; 3) feedback that the letter upset her as it indicated that she lived alone when she lived with her husband
- 29th May, 3.16pm. I e-mailed J.C. (cc M.M., TSO CL) with feedback

JUNE 2015

- 1st June, 3.05pm. I received an email from J.C. (cc M.M., TSO CL) with feedback
- 1st June, 3.12pm. I emailed J.C. etc. Feedback
- 1st June 3.17pm. I received an email from J.C. etc. Feedback
- 5th June, 11.19am. I received an email from TSO Carelink (J.W., Team Support CareLink Plus). She informed me that she had just received a call from Mrs S.R.'s daughter declining my invitation to take part in my research
- 6th June, 9.18pm. I emailed TSO CareLink (J.W.). Feedback
- Participants' visits

JULY 2015

- Participants' visits

AUGUST 2015

- 26th August, called Carl to ask him about next interview (forgot date), called Claire (she dropped the conversation after saying that 'if it's important, write to me', called Pauline, called John, called Rebecca, who had left a message, in order to modify the date and time of the home visit, originally scheduled on 26th August
- 27th August, called back Carl (who had previously left a message in my answerphone) and confirmed next interview, called back Claire (she dropped the conversation like yesterday), called Helen (who had left a message) and agreed with her to postpone the interview from 31st August (Bank Holiday) to 1st September, called Jennifer to reconfirm and we agreed to postpone interview by an hour, called Benjamin (who had left me a message) and we modified the date and time of interview, due to simultaneous interviews (bad timing on my part), called Rebecca, who decided to drop the research due to health problems. Called also Emily in order to reconfirm tomorrow's interview. There was no answer
- 28th August. After an email exchange with my supervisor D. Harley (cc F. Henwood, on annual leave) on 27th August, following which I prepared a letter to be sent to all participants who are uncertain about my research (only to those that express doubts after my tel call to reconfirm second/third visit) I sent a letter to Claire in order to explain to her why I need to visit her a second and third time
- 29th August called Emily again

- Participants' visits
- Fieldwork
- Bought 5 envelopes and 5-second class stamps to write confirmation letters to participants
- 20th August: start email exchange with another PhD student. Subject of email exchange: his current PhD research summary
- 21st August: email exchange with the PhD student R
- 27th August: prepared letter to Claire to remind her second interview and arrange a suitable date

SEPTEMBER 2015

- 2nd September. Following different telephone calls without any answer, I sent letters to Emily and Hannah in order for her to reconfirm their interest in partaking my research
- 2nd September. Following a telephone call, at the end of which Karen hung up the phone while I was explaining the reason for calling, I dropped her from the research. However, I will keep hold of her data
- Participants' visits
- Please note that John, last visit on 10th September, explicitly asked to address his suggestions about the improvement of Telecare (the alarm unit should become 'smarter', meaning equipped with more functions.). Briefly, John suggests that Telecare become more 'telehealth-oriented'. His suggestions should be clearly addressed to CareLink Plus. Otherwise, he said, my research would be 'useless' or similar word
- 13th September. Emailed both J.C. and M.M. to inform them about my interviews' timeline. It is likely that my last visit will be on 20th October
- 14th September. J.C. and M. M. replied to e-mails
- 16th September. Emily dropped out. She replied to my letter by another letter in which she expressed her wish to end up with my research
- 17th September. Sent letters to Claire and Hannah, who replied to my previous letters. In my last letters, I suggested new dates for the second visit
- 22nd September. Rescheduled interviews (2nd interview) with Hannah and Claire. Both interviews are due on Friday, 25th September
- 24th September. Emailed the PhD student in order to ask suggestions about transcriptions and qualitative analysis software
- 24th September. Emailed B&H buses in order to find out which kind of wheelchairs, scooters and other assistive devices can/cannot go on the bus
- 25th September. M.K. replied to me, giving me useful advice and I replied his email.
- 26th September. Carl's wife left a message on my answerphone saying that, due to seizures in the morning, her husband could not be visited today afternoon. Therefore, the last visit will be rearranged.
- Fieldwork
- 1st September: sent letter to Emily to remind her second interview and arrange a suitable date
- 2nd September: sent letter to Hannah to remind her second interview and arrange a suitable date
- 16th September: replied to Claire's letter and confirming date of the second interview
- 16th September: replied to Hannah's letter and confirmed the date of the second interview

OCTOBER 2015

- Participants' visits
- 24th October: last visit
- 25th October: start analysing data

DROP OUTS

1. **27th August: Rebecca**, living in Hove, whom I interviewed and visited only once, on Sat. 13/6/15, at 3pm. I called her on 26th and 27th August, as to reconfirm my second visit, due on 30th August. During our telephone conversation, dated 27th August, she decided to drop the research study, due to health issues (very bad sight). I will, therefore, consider only one interview
2. **2nd September: Karen**, living in Hove, whom I interviewed and visited only once, on Tue. 23/6/15, at 11am. I called her different times between 1st and 2nd September, in order to reconfirm the second appointment. On 2nd September, she hung up the telephone while I was still talking to her.
3. **16th September: Emily**, living in Brighton, dropped out. She replied to my letter, in which I asked her to confirm her interest in partaking into my research. She wrote that she is very aged and that a further visit would be tiring for her.

NOVEMBER 2015

DECEMBER 2015

2016

OCTOBER 2016

- Preparing report for CareLink Plus manager

NOVEMBER 2016

- 21st November: sent a report to CareLink Plus manager. Title of the report: *Older People's Experience of Telecare*

Appendix F: Informed Consent Form

University of Brighton
School of Applied Social Science
Mayfield House, Falmer



University of Brighton

Informed Consent Form

Research Project Title: Technology, care and a sense of home

- ◆ I agree to take part in this research which is designed to learn more about older people's experience of using Telecare at home.
- ◆ I understand that in case of doubt about any aspect of this research I can contact the researcher in order to receive all necessary clarifications. To this regard, I understand that I should keep the participant information sheet in case of any questions.
- ◆ I agree that the interview can be audio recorded.
- ◆ I understand that any confidential information will be seen only by the researcher and her supervisors and will not be revealed to anyone else.
- ◆ I understand that I am free to withdraw from the research at any time, without this affecting the help I get from CareLink Plus Telecare Alarm Services.

Name (please print)-----

Signed -----

Address -----

Telephone no.-----

Date-----

Thanks for signing this informed consent form and providing your contact details. Please now return to me this form in the stamped and addressed envelope provided.

Gigliola

Appendix G: Participant Information Sheet

University of Brighton
School of Applied Social Science
Mayfield House, Falmer



University of Brighton

Participant Information Sheet

Research Project Title: **Technology, care and a sense of home**

1. Invitation paragraph

I would like you to consider being part of a research project that I am doing regarding people's experiences of Telecare. I am available to explain, at any stage of the research, what is going to happen and what I will do with the information you provide me.

2. What is the purpose of the study?

The purpose of the study is to understand more about the experience of older people with Telecare at home. In particular, I am interested in how you acquired the Telecare devices, how they work, how you use them and how they fit into your home and the way you live and are cared for at home.

3. Why have I been invited?

You are being invited to take part in this study because you are aged 60+, living on your own in Brighton & Hove and you are currently using Telecare.

4. Do I have to take part?

It is completely up to you to decide whether to take part or not. If you agree, you will be asked to sign the attached consent form to show you have agreed to take part.

5. What will happen to me if I take part?

If you do decide to take part in this research, I would like to visit you, in your home, three times over a sixth-month period. At these visits, I would like spend time getting to know you and to talk to you about home and what it means to you, and being cared for with Telecare.

I would like you to take part in one formal interview (about 45 minutes long) but the rest of the time will be spent in a more relaxed and informal way, chatting as you go about your everyday activities.

6. What are the possible benefits of taking part?

Telecare is a different way of being cared for and has its pros and cons. You may well find it interesting to have time to talk about how you experience using Telecare- the devices themselves and your relationships with the call centre and carers who support this system of care. Your experiences, together with the experience of others, will be gathered together and put into a report that may be useful to those who supply Telecare services and wish to make improvements.

7. What are the possible disadvantages and risks of taking part?

It is not my intention to cause you any disadvantage or risk. However, should you be affected by tiredness or anxiousness during the period of time I will spend with you, we will stop the research and take a break.

8. What if there is a problem?

If at any point you feel uncomfortable about me spending time with you in your home or talking about certain topics, I kindly ask that you tell me – we can try to find together a way to solve the situation. Also, you can contact my supervisors at any time. For contact details see the bottom of the information sheet.

9. Will my taking part in the study be kept confidential?

Anything you tell me will be kept confidential and only be shared with my supervisors. Your participation will not affect individual care provided by CareLink Plus. I will provide secure storage of information. No participants will be identified in any consequent report.

10. What will happen if I don't want to carry on with the study?

Nothing, I can only thank you for being available until the stage you feel you would like to withdraw from this study. I will ask you whether information collected up to the point of withdrawal may be used in the study. Really, it is up to you to decide about this. If you decide that I cannot use the information collected, I will destroy the information that was collected.

11. What will happen to the results of the research study?

The results of this study will be used for my PhD study at the School of Applied Social Science, University of Brighton. I will also produce articles and conference presentations based on this research. In addition, I will make a short summary of results which will be offered to all participants.

12. Who has reviewed the study?

This study has been reviewed by the University of Brighton's Health and Social Science, Science and Engineering Research Ethics and Governance Committee and the Brighton & Hove City Council Local Authority.

13. What do I do if I want to take part?

If you DO wish to take part in this study, please read and sign the attached informed consent form and return to me in the stamped and addressed envelope provided.

14. Contacts for further information

Researcher:

Gigliola Brintazzoli
MPhil/PhD student
School of Applied Social Science
University of Brighton
Mayfield House, Falmer
G.Brintazzoli@brighton.ac.uk
Tel.: 079 044 94924

Lead supervisor

Prof. Flis Henwood
Professor of Social Informatics
School of Applied Social Science
Mayfield House, Falmer
University of Brighton
F.Henwood@brighton.ac.uk
Tel.: 01273 643925

Co-supervisor

Dr. David Harley
Lecturer
School of Applied Social Science
Mayfield House, Falmer
University of Brighton
D.A.Harley@brighton.ac.uk
Tel.: 01273 643472

Thank you!

Gigliola

11th February

Appendix H: Participant Information Sheet: personalised reminder

University of Brighton
School of Applied Social Science
Mayfield House, Falmer



University of Brighton

27th August 2015

Participant Information Sheet

Research Project Title: **Technology, care and a sense of home**

Dear Claire,

Thank you for allowing me to visit you in your home a few months ago, last 12th June 2015.

I would like to ask you if I can visit you again shortly, during the first week of September. We can then agree another date for my last visit during the first half of October.

During my first visit last June, I explained you that you are part of a research project that I am doing regarding people's experiences of Telecare, such as the pendant. The purpose of the study is to understand more about the experience of older people with Telecare at home. In particular, I am interested in how you acquired the pendant and other Telecare devices, how they work, how you use them and how they fit into your home and the way you live and are cared for at home.

The results of this study will be used for my post graduate study at the School of Applied Social Science, University of Brighton. I will also produce

articles and conference presentations based on this research. In addition, I will make a short summary of results which will be offered to you.

The duration of my visits will be quite flexible. According to your needs I might spend more or less time with you in your home.

Please keep always with you this letter. When I will visit you, I will show you a copy of it as well as my university visit card, so that you can easily verify my identity.

Should you not wishing to be visited again, feel free to withdraw from this study. I will use only the information already collected during my first visit at your home.

Could you please confirm me your availability by signing the very end of this letter and returning to me in the stamped and addressed envelope provided?

Should you have any questions about this letter, please feel free to call me any time at the following telephone number: 079 044 94924. I will be happy to answer to all your questions.

I thank you very much and am looking forward to meet you again.

Kind regards

Gigliola

*Gigliola Brintazzoli
MPhil/PhD student, School of Applied Social Science
University of Brighton
Mayfield House, Falmer
G.Brintazzoli@brighton.ac.uk
Tel. 079 044 94924*

Please sign here:

Signature.....

Thank you again!

Appendix I: Participant Information Sheet: personalised confirmation

University of Brighton
School of Applied Social Science
Mayfield House, Falmer



University of Brighton

16th September 2015

Participant Information Sheet

Research Project Title: Technology, care and a sense of home

Dear Claire,

Thank you for answering my last letter, dated 27th August 2015.

If you agree, it would be nice to meet you again on one of the following dates:

Friday 25th September at 3pm

or

Saturday 26th September at 11am

We can then agree another date for my last visit during the first half of October.

During my first visit last June, I explained to you that you are part of a research project that I am doing regarding people's experiences of Telecare devices, such as the pendant. The purpose of the study is to understand more about the experience of older people with Telecare at home. In particular, I am interested in how you acquired the pendant and other Telecare devices, how they work, how you use them and how they fit into your home and the way you live and are cared for at home.

The results of this study will be used for my post graduate study at the School of Applied Social Science, University of Brighton. I will also produce articles and conference presentations based on this research. In addition, I will make a short summary of results which will be offered to you.

The duration of my visits will be quite flexible. According to your needs I might spend more or less time with you in your home.

Please keep hold of this letter. When I visit you, I will show you a copy of it as well as my university visit card, so that you can easily verify my identity.

Should you have any questions about this letter, please feel free to call me any time at the following telephone number: 079 044 94924. I will be happy to answer to all your questions.

I thank you very much and am looking forward to meet you again.

Kind regards

Gigliola

*Gigliola Brintazzoli
MPhil/PhD student, School of Applied Social Science
University of Brighton
Mayfield House, Falmer
G.Brintazzoli@brighton.ac.uk
Tel. 079 044 94924*

Appendix J: Thank-you letter

University of Brighton
School of Applied Social Science
Mayfield House, Falmer
Add full address



University of Brighton

27th November 2015

THANK YOU for helping me with my research!

Dear Katherine,

I am writing to thank you for your participation in my research about Telecare. Without it, my study would not have been possible. The study set out to understand more about older people's experiences of Telecare at home. In particular, I was interested in finding out how you acquired your Telecare devices, how they worked for you, how you used them and how they fitted into your home and the way that you live your life. Over a period of six months I have had the opportunity to meet with you and many others in similar situations across Brighton and Hove. I really enjoyed meeting you and talking to you.

I now have to spend some time back at the university thinking about all the things you and others have kindly shared with me and writing my report. In about 6 months I will be able to send you a short summary of results which I hope you will find very interesting.

Once again, thank you for your help with my research!

Gigliola

Gigliola Brintazzoli
MPhil/PhD student
School of Applied Social Science
University of Brighton
G.Brintazzoli@brighton.ac.uk
Tel.: 079 044 94924

Appendix K: Debriefing and Summary of the main findings

University of Brighton
School of Applied Social Science
Mayfield House, Falmer



University of Brighton

13th January 2017

Debriefing and Summary of the main findings

Research Project Title: Technology, care and a sense of home

Dear Gwen,

First of all, I would like to thank you for your participation. Without it, my study would not have been possible.

The study set out to understand more about older people's experiences of Telecare at home. In particular, I was interested in finding out how you acquired your Telecare devices, how they worked for you, how you used them and how they fitted into your home and the way that you live your life.

Findings revealed that participants were significantly attached to their own homes and that Telecare had allowed them to feel safe at home and less alone. Overall the Telecare service provided by CareLink Plus gave them reassurance and peace of mind. Participants showed also to feel reassured by the use of the alarm pendant. CareLink's presence in the participants' homes was perceived as a telephone-based source of social contact, both of

which were appreciated by participants. Interviews also highlighted the significance of ‘technical issues’ in establishing and maintaining a rapport between clients and the CareLink staff.

The home environment was sometimes affected by the introduction of Telecare; sometimes Telecare devices were seen as disruptive of the aesthetics of the home and were perceived as stigmatising. Some participants felt that they did not always want to be seen as someone who was frail and in need of help, at times hiding their devices when others were present.

Telecare also appeared to have an impact on the provision of care, affecting interactions with carers, both formal or informal. Participants were keen for CareLink Plus to take on more responsibility in this regard arguing that they should have more direct influence over care agencies and medical services.

In a future research, it might be interesting to find out, from the older people’s perspective, how the design of Telecare devices might be improved. In this way, Telecare devices might be rendered aesthetically more appealing and less stigmatising. It would also be interesting to study the (limited) technical knowledge of Telecare, meaning the functions of specific Telecare devices, shown by participants.

This study is limited in terms of how far its findings can be generalised to other places or other older people. However, having conducted home visits approximately over a period of six months, has given a deeper sense of how older people’s experiences perceive their relation with Telecare and their ongoing attachments to home.

May I take the opportunity to stress that the data from my field notes, observations, recorded interviews and any other inherent document in my possession will be used to write my doctoral thesis. In addition, information provided by you will be presented in academic seminars, conferences and symposiums. My research findings will be potentially disseminated in journal articles, research reports, and, of course, my doctoral thesis. You can request any of the materials produced from this study.

All the information provided by you as participants were held anonymously so that it is impossible to trace this information back to you individually. Information will be held in a secure place.

Thank you for your time!

Gigliola

Gigliola Brintazzoli
PhD student
School of Applied Social Science
University of Brighton
Mayfield House, Falmer
G.Brintazzoli@brighton.ac.uk
Tel. 079 044 94924

Appendix L: Older People's Experience of Telecare

1

University of Brighton
School of Applied Social Science
Mayfield House, Falmer



Older People's Experience of Telecare

REPORT

November 2016

Contents

Summary	3
Background	3
Purpose of the Study.....	4
Method	4
Recruitment	4
Analysis	5
Findings	5
General experience of the CareLink Plus service	5
Telecare’s impact on the home	6
Telecare’s impact on the provision of care.....	9
Discussion.....	10
Conclusions	12
Appendix A - Research participants’ recruitment tranches.....	13
Table 1. Tranche one of the recruitment (13th February 2015).....	13
Table 2. Tranche two of the recruitment (30th March 2015).....	13
Table 3. Altogether recruitment after tranche two	14
Table 4. Tranche three of the recruitment (21st May 2015).....	14
Table 5. Altogether recruitment tranche five	14
Appendix B - Research participants’ demographics, home visits and general information	15
Table 6. Potential gendered research participants.....	15
Table 7. Gendered research participants.....	15
Table 8. Research participants visited, number of visits total number of visits conducted	15
Table 9. Research participants’. A short summary	16
References	17

Summary

This report is based on a University of Brighton doctoral research project which investigated how older people experience Telecare and how this changed the meaning and experience of home and care for them. This study has been reviewed by the University of Brighton's Health and Social Science, Science and Engineering Research Ethics and Governance Committee and the Brighton & Hove City Council Local Authority. The research took a qualitative approach exploring the Telecare experiences of 16 older individuals aged 61-95 (11 women, 5 men), living in the areas of Brighton & Hove and Portslade through home visits and interviews.

Background

In nearly every country of the world the percentage of people over the age of 65 will increase dramatically over the next 50 years, and this has implications for care provision. Over ten years ago, Lundell and Morris (2005) were arguing that 'the model of care that has frail elders being sent to live in nursing homes will cause the collapse of healthcare due to the sheer number of people it will need to support in this manner' (Lundell and Morris, 2005, p. 166).

In the UK, statistics suggest over the next 25 years the percentage of over-85s will increase by 161% (Leeson et al., 2016). According to Mortimer and Green, '1 in 10 of people age 65 and over are 'frail', rising to one in four of those aged 85 and over. Most long-term conditions are more prevalent among older age groups; for example, the prevalence of diabetes rises steadily among men and women until their early eighties. The rate of falls also increases with age; women are more likely to fall than men and in 2014, among those aged 85 to 89 nearly a quarter of men and a third of women had a fall in the last five years. Many falls are preventable and were osteoporosis to be identified and treated better it is estimated that a quarter of all hip fractures could be avoided.' (Mortimer and Green, 2015, p. 4)

At the same time, the number of people who might act as potential caregivers, such as family members, is reducing, due to significant demographic changes, in particular, the decline of fertility, the patterns of marriage and parenting, the greater geographical dispersal and women's increased participation in paid employment. All of these factors have implications for care provisions within the family (Hamblin et al., 2013) and it is within this context that ageing in place and Telecare solutions are being proposed.

Purpose of the Study

The project is expected to make a significant contribution to the understanding of how care and a sense of home may be modified by remote technologies, in particular, Telecare systems like the ones provided by CareLink Plus. Through analysis of interviews and meetings with Telecare users, this study attempts to show how Telecare users adapt their home, their daily routines and their attitudes towards technology to make Telecare work within their home. Personal and social issues related to the use of Telecare devices were studied in-depth in order to make a contribution towards a sensitive approach to new forms of care technology.

The results of this study will be used for the principal investigator's PhD study at the School of Applied Social Science, University of Brighton. The researcher will also produce articles and conference presentations based on this research. In addition, she will prepare a short summary of results which will be offered to all participants.

Method

This research was conducted using a qualitative approach, which relies on human accounts and experiences to explain the why and how of various phenomena. In particular, it was informed by an ethnographic approach, which makes observations in natural settings with a view to understanding how research issues are perceived and interpreted by the participants themselves.

Research participants were visited in their homes three times over a six-month period. At these visits, the researcher spent time getting to know them and talking to them about their experience of Telecare. This included talking about how they acquired the Telecare devices, how they work, how they use them and how they fit into their home and the way they live and are cared for at home. The researcher interviewed them formally only once but the rest of the time was spent in a more relaxed and informal way, chatting as they went about their everyday activities with a view to understanding how Telecare fitted into their normal routines.

Recruitment

Recruitment was conducted through the Telecare Manager, Adult Social Care, Brighton & Hove, UK and CareLink Plus. A recruitment pool was first identified from those who had

adopted Telecare through CareLink Plus. Then potential research participants were chosen who were not currently affected by a severe cognitive impairment or too ill to take part in the study. All participants had to be using one or more Telecare devices at the time of the study.

Individual research participants were then identified and approached by letter to take part. This progressed in three different recruitment tranches from February to May 2015. Eventually, 16 participants were recruited for the study¹. The final research participants came from a variety of living situations with some living alone, whilst others shared their home with their husband, wife or adult children. Home visits started immediately after the first recruitment (in March 2015) and continued over a period of approximately 6 months².

Analysis

Being interested in the richness and diversification of human experience, qualitative analysis, and in particular, Thematic Analysis (TA), which is based on transcription, analytic effort and theme identification, was considered to be appropriate for this study. With regard to transcripts, all data available following home visits (in-depth interviews, opportunistic conversations and observations) were transcribed. Interviews were transcribed using the secretarial/playscript method. All data was imported in NVivo11 for Windows, a qualitative data analysis (QDA) computer software package, with the purpose to analyse them directly on the computer screen.

The researcher then analysed the data in order to generate the main themes relating to “general experience of the CareLink Plus service”, “Telecare’s impact on the home” and “Telecare’s impact on the provision of care”. These formed the main headings for the findings and then sub-themes were developed within these providing the subheadings in each section.

Findings

General experience of the CareLink Plus service

Most participants were satisfied with CareLink Plus service. CareLink were perceived as having a helpful attitude, its staff members referred to the customer by name, thus showing a

¹ For more information, Appendix A will provide demographics of the recruitment procedure.

² For more information about research participants’ demographics, such as age, gender, town of residence, living arrangements and general information see Appendix B.

personalised approach to the service, and then provides time for the customer to explain her issue. Hannah, 70, seems to be very fond of CareLink's promptness in answering after alarms had been triggered. She also expressed feelings of admiration towards CareLink Plus team members, too:

'Oh, they're lovely people. Very understanding. They're evidently trained to be able to talk to an elderly person, you know, not just brush you off. They really talk to you'.

Among the others, Claire, 93, also displayed a positive attitude towards the Telecare provider. Albeit having used CareLink service only once in all the years she was in her last home, she recalled that once she had a fall in her bathroom, triggered the alarm and CareLink members showed at her place after just ten minutes.

However, not everyone had positive experiences with the care provider, even though things are not so clear-cut. Emily, 91-year-old, explained that she had to wait for 'ages' for the ambulance to reach her at one stage. In spite of her negative experience, though, Emily claimed that when she called the provider once a month for maintenance, CareLink team members thanked her and were *'very good in that way'*.

Now we go on to explore how Telecare changed our older participants' experiences of home and care.

Telecare's impact on the home

In the course of the ageing process, the daily life of older people takes place mostly at home. Literature dealing with ageing in place (Milligan, 2009; Mowl et al., 2000; Langan et al., 1996) focuses on the premise that the home is the elected place in order to grow older and maintain independence as the years go by. Confirming ageing literature findings, participants showed attachment to their own dwelling during interviews and observations. More specifically, some of them expressed fear of leaving their home to be hospitalised or to move into a safer environment, such as a flat with no stairs.

CareLink Plus make it possible for their clients to stay at home by providing an immediate presence within their homes at times of crisis. This presence was appreciated as it allowed them to continue feeling safe in their own homes. One participant, aged 95, recalled different episodes in which CareLink Plus team members entered her house and

helped her while waiting for the paramedics:

'They can get...they get in when the voice says, um, what the trouble is. And they say: "Well, we'll get your help straight away". The people come to me and if I'm on the bathroom floor I manage to get the towels down around me. Pull them down and then I say to them "Will you turn the shower off", while they're waiting to let the paramedics in, you see'.

At times, it was not possible or appropriate for CareLink Plus to provide an immediate physical presence. Under other circumstances, it was the pressure of loneliness rather than a physical dilemma that made staying at home difficult. Here CareLink Plus were able to provide a virtual presence in the home that was equally welcomed,

'... they [CareLink team members] sat talking to me and asked me how I felt, and I told them, and I said 'No I don't feel I'm alone. I don't feel alone. Although I'm on my own. I don't feel alone. It gives me the confidence to know that if I fall and I can't get up, there's somebody going to come and rescue me'.

What became clear in such examples was the reassurance that CareLink was able to provide to their clients within their homes on a physical and psychological level, helping them to feel safe and 'not alone'. This feeling of reassurance was also something that transferred onto the Telecare devices for some, with them acting as embodied representations of this reassurance. This was particularly evident with the alarm pendant which was predictably worn when alone at home but also with some wearing them when they were outside the house and the pendant was redundant.

The aesthetics of home

Home has meanings that go beyond the physical place or the opportunities for affirming one's independence. Home is also a place of self-expression where the aesthetics of objects within it are called into question. Clearly, this is influenced by the introduction of new technologies, such as Telecare. A few participants expressed their disappointment about the design and appearance of Telecare devices when placed in their living spaces. Jack, 82, attempted to camouflage his alarm unit under his sofa, located in the living room, while Claire, 93, placed her alarm unit on the top shelf of the kitchen, hardly reachable because of

the height. Both attempts at camouflage show a clash between the aesthetic values of the home and the utilitarian design of some Telecare devices particularly the alarm unit. The alarm pendant was also hidden at times because of aesthetic concerns with John, 61 leaving his on a table and Fiona, 67 on the side of her bed. These participants also highlighted a possible stigma about their use which obscured their ongoing use because it identified them to others as a frail person in need of help.

Turning home into 'technical issues'

Most of the older people interviewed, appeared to be unaware of the different functions of their Telecare devices. For example, different respondents confused the 'flood detector' (a radio sensor that provides an early warning of a potential flood) with the 'shower pendant' (a waterproof alarm pendant, which can be placed in the shower) or confused the 'carbon monoxide detector' with the 'smoke detector'. Their technical knowledge of Telecare was clearly limited and they were not concerned to learn more.

However, participants did notice their Telecare devices when they went wrong or did not work as they had expected. John, 61, recalls:

'Um, it seems like the older pendants seem to last longer than the newer ones', referring to the battery life. And he added several times: 'Well, it lasted longer, the very old ones', 'Lasted a lot longer, the batteries... '.

Such 'technical issues' were common amongst the participants and tended to colour their awareness of Telecare's presence in their home. Another issue mentioned by John and four others was the over-sensitivity of the smoke detectors:

'The only snag is every time I open the kitchen when I'm cooking, it sets the alarm off, so... So they're [CareLink Plus team members] always phoning up... The smoke detector, yeah... off as well... '.

According to CareLink, the smoke detector was over-sensitive, automatically sounding an alarm in John's home and sending an alarm call to the monitoring centre because it detected smoke. The monitoring centre would then alert the fire brigade. Another participant, aged 84, reported similar technical issues with the extreme temperature sensor in his kitchen. He had

to keep the living room door open while he slept so that this did not trigger an alarm. In the past, his keyholder had called him at 6 o'clock in the morning responding to such a false alarm.

Inevitably these participants' main source of contact with CareLink was through false alarms such as these and 'intrusions' into the home were often linked to resolving these technical issues rather than any personal crises or medical emergencies.

Another common technical issue experienced by many of the participants was in relation to the alarm pendant which often triggered contact with the CareLink monitoring centre without participants' deliberate intent. Participants tended to blame this on the oversensitivity of the pendant as Jane, 87 points out it *'is just so fragile... but they don't mind'*. Fortunately, Jane was not distressed by this issue, explaining that the CareLink Plus team members *'were not bothered by unnecessary calls'*.

On the face of it, these technical issues appear to present irritating problems for CareLink staff and the participants in their own homes. However, it seems they are not understood in this way by the Telecare recipients. They seem to provide the perfect excuse for establishing and maintaining CareLink's supportive role in the home, a reminder of their reassuring presence. The dependable response from the CareLink team whatever the issue seems to be an important aspect of this form of support.

[Telecare's impact on the provision of care](#)

The place in which care is delivered is relevant. In fact, remote care, such as Telecare, affects the nature of the interactions within the home and can offer frail older, or disabled people a level of empowerment in their lives. In fact, older people using Telecare may decide to rely on care at a distance only, or receiving care in person, either professional or informal. 6 respondents disclosed that they were provided care from agencies such as CareWatch Care, Mears Care, Prime Care Community Service. Another participant has been provided care in the past, under the Direct Payment Scheme. Other two participants referred that they received help at home, such as housekeeping or domestic work (e.g. vacuuming) from, respectively, Age UK HELP AT HOME and the Brighton and Hove Adult social service department. Those who do not rely on professional carers were helped informally by their adult children, or relatives, or friends.

The interface between CareLink Plus and other care agencies

This does seem to be a cause for concern for some of our participants. Emily, 91-year-old, explained that she had called CareLink because her carer was not there at the time scheduled. Because of this delay, she could not get out of bed by herself, and she was getting dehydrated. She pressed the pendant and a CareLink Plus team member answered:

'You only press that [the pendant] if it is an emergency!', so I said: 'This is an emergency! It's an emergency to me!', I was furious! I said: 'Can't you understand that I am in the bedroom, I know it wasn't their fault, my phone is in the sitting room, I can't get to my phone, and all I wanted you to do, is... ', I don't want, I don't want to get anyone in trouble [The respondent is visibly worried to cause harm to one of the carers].'

In spite of her negative experience, Emily claimed that when she calls the provider once a month for maintenance, CareLink team members thank her and *'are very good in that way'*.

Nevertheless, care at a distance appears to have a relevant role in providing safety for older people. One respondent, aged 88, living with her adult child, affirmed that **the alarm pendant 'reassures' her when her daughter is not at home. She claimed,**

'It's nice to have it [the fall pendant], reassure me when she [Jane's daughter] is not here... I do know that I can call someone, and if I have this one, you know, it's so easily done, if I fall... ' supposed to go on its own [the fall pendant], not waited to be pushed'.

Clearly, the participants in this study had a lot of faith in CareLink Plus and wanted them to take on more responsibility in relation to their broader care. One respondent, aged 61, made a number of suggestions for possible improvements of the Telecare system by linking it to medical services more directly.

Discussion

Participants' attachments to their own homes continued in the presence of Telecare with it still being a place of sanctuary. They revealed that their involvement with Telecare had allowed them to feel safe at home and less alone. Overall the Telecare service provided by

CareLink Plus gave them reassurance and peace of mind which for some transferred onto the devices themselves. CareLink's presence in the homes of our participants was apparent in terms of immediate crisis management and as a virtual (telephone-based) source of social contact, both of which were appreciated by our participants. Our interviews also highlighted the significance of 'technical issues' in establishing and maintaining a rapport between clients and the CareLink staff.

Aspects of the home environment that can be adversely affected by the introduction of Telecare relate to the aesthetics of Telecare devices and the stigma associated with their presence in the home. Some participants felt that they did not always want to be seen as someone who was frail and in need of help, at times hiding their devices when others were present. Maintaining the aspect of reassurance with a measure of discretion is clearly a challenge for CareLink Plus.

Telecare also appeared to have an impact on the provision of care, affecting interactions with carers, both formal or informal. Our participants were keen for CareLink Plus to take on more responsibility in this regard arguing that they should have more direct influence over care agencies and medical services. Given the reassurance that they experience in their relationship with CareLink this perhaps unsurprising.

The approach outlined in this study should be replicated with other older people, in order to be able to investigate about certain issues. First of all, it might be interesting to find out, from the older user's perspective, how the design of Telecare devices might be improved, thus making them aesthetically more appealing and less stigmatising. Another field of research might focus on the (limited) technical knowledge of Telecare, meaning the functions of specific Telecare devices, shown by participants.

This study is limited in terms of how far its findings can be generalised to other places or other older people. However using an ethnographic approach has given a deeper sense of how older people's experiences frame their involvement with Telecare and their ongoing attachments to home.

Conclusions

The purpose of this doctoral research project was to investigate how older people's experiences of Telecare change the meaning and experience of home and care for them. Using a qualitative approach we visited and interviewed 16 older people receiving Telecare from CareLink Plus. Findings revealed the continuing significance of the home as a place of sanctuary for older people. In spite of concerns about technical issues, aesthetics and the stigma of use, participants confirmed how important Telecare was for them in terms of making them feel safe and reassured in their own homes.

Implications for future research might include the improvement of Telecare devices' design, using a more user-centred perspective. Another recommendation might be to expand the potentiality of the Telecare network, with a particular attention for those adults who are homebound. In this respect, one participant suggested to create a wider Telecare network, so that it would be possible to be communicated directly from his Telecare provider all diagnostic tests and results, included routine medical procedure results, without the need to contact or even getting out of his home in order to meet his GP or other professionals.

Appendix A - Research participants' recruitment tranches

Table 1. Tranche one of the recruitment (13th February 2015)

Invitations	
*Sent	40
**Accepted	5 (15% return rate)
***Not accepted	1 (return rate)
****Not suitable	*1 (2.5% return rate)
*****Validated	4 (10% return rate)

* Please note that after the 2nd recruitment, due to the shortage of participants, the research design was modified so that the non-suitable participant (she was not living on her own) in the 1st recruitment became suitable. Therefore, the table 'Altogether recruitment' includes this initially non-suitable participant.

* Sent by regular mail

** Validated informed consent forms

***Those who replied the invitation refusing to partake the research

****Those who did not fit the criteria

*****Validated informed consent forms

Table 2. Tranche two of the recruitment (30th March 2015)

Invitations	
Sent	63
Accepted	4 (3.17% return rate)
Not accepted	3 (4.76% return rate)
Validated	4 (3.17% return rate)

Table 3. Altogether recruitment after tranche two

Sent	103
Accepted	7 (6.8% return rate)
Not suitable	1 (0.97% return rate)
Not accepted	4 (3.88% return rate)
Validated	6 (5.83% return rate)

Table 4. Tranche three of the recruitment (21st May 2015)

Invitations	
Sent	52
Accepted	5 (7.69% return rate)
Not accepted	1 (1.92% return rate)
Validated	5 (7.69% return rate)

Table 5. Altogether recruitment tranche five

Altogether recruitment	
Sent	155
Accepted	16 (10.32% return rate)
Not accepted	6 (3.84%)
Validated	4 (2.58% return rate)

Appendix B - Research participants' demographics, home visits and general information

Table 6. Potential gendered research participants

Gender	
Women	116
Men	39

Table 7. Gendered research participants

Gender	
Women	11
Men	5

Table 8. Research participants visited, number of visits total number of visits conducted

Number of participants	Number of visits	Total number of visits
12	3	36
3	1	3
1	2	2

Table 9. Research participants'. A short summary

N.	Name	Age	Sex	Living arrangements	Town of residence	Type of dwelling	Ownership status
1	Katherine	81	W	Living on her own	Brighton	Two flats property converted in one with caretakers	House owner
2	John	61	M	Living on his own	Brighton	Council semi-detached house	Tenant
3	Jennifer	83	W	Living on her own	Brighton	Council flat	Tenant
4	Benjamin	65	M	Living on his own	Hove	Council flat with part-time caretaker	Tenant
5	Jane	88	W	Living with one of her two daughters	Brighton	Terraced house	House owner
6	Carl	72	M	Living with his wife	Brighton	Semi-detached house	House owner
7	Fiona	67	W	Living with her husband	Portslade	Terraced house	House owner
8	Helen	70	W	Living on her own	Brighton	Extra care retirement apartment	Tenant
9	Craig	84	M	Living on his own	Hove	Housing association flat in a semi-detached corner house	Tenant
10	Claire	93	W	Living on her own	Brighton	Flat with caretakers	House owner
11	Jack	82	M	Living on his own	Brighton	Flat with caretaker	House owner
12	Rebecca	94	W	Living on her own	Hove	Flat with caretaker	Tenant
13	Ingrid	79	W	Living on her own	Hove	Semi-detached bungalow	House owner
14	Hannah	95	W	Living on her own	Portslade	Flat	House owner
15	Karen	86	W	Living on her own but temporarily living with a friend	Hove	Semi-detached house	House owner
16	Emily	91	W	Living on her own	Brighton	Flat	Tenant

References

Hamblin, K., Darowski, A. and McShane, R. (2013) Chapter 1. Demographic ageing, falls and dementia, pp. 3-23. In: AKTIVE Consortium (2013). *The Role of Telecare in meeting the Care Needs of Older People: themes, debated and perspectives in the literature on ageing and technology*. AKTIVE Research Report Vol. 1, online publication:

<http://www.aktive.org.uk/publications.html>

(last access on 21th November 2016)

Langan, J., Means, R. and Rolfe, S. (1996) Factors that influence retirees' propensity to move at retirement, *Journal of Housing for the Elderly*, 1(1), pp. 85-105.

Leeson, G., Nanitashvili, N., & Zaloznik, M. (2016). 'Foresight Trends: Future of an Ageing Population' Research Report. May 2016.

Milligan, C. (2009) *There's No Place like Home: Place and Care in an Ageing Society*. Farnham: Ashgate.

Mortimer, J. and Green, M. (2015) Briefing: The Health and Care of Older People in England, Age UK. October 2015.

Mowl, G., Pain, R. and Talbot, C. (2000) The ageing body and the homespace, *Area*, 32 (2), pp. 189-197.

Oswald, F., & Wahl, H-W. (2005). Dimensions of the meaning of home. In G. D. Rowles & H. Chaudhury (Eds.), *Home and Identity in Late Life: International Perspectives* (pp. 21-45). New York: Springer.

Silverstone, R., Hirsch, E. and Morley, D. (1992) Information and communication technologies and the moral economy of the household. In Silverstone, R. and Hirsch, E. (Eds.). *Consuming Technologies. Media and information in domestic spaces* (pp.15-31). London: Routledge.

Online Sources

<https://www.brighton-hove.gov.uk/content/housing/general-housing/patching-lodge>
(last access on 17th November 2016)

Appendix M: Research participants: brief description and living situation

Katherine

Katherine was an 81-year-old former gynaecologist. Not long ago she experienced serious health issues – two strokes that left her with a limited arm coordination and other mobility issues, and eye burn leaving her eyes very sensible to light. She was a widow and had two adult children. She lived on her own in her property, two flats merged into one huge property. The building had a caretaker, with whom Katherine was on good terms. Sometimes the caretaker took her books from the library so that Katherine, who enjoyed reading very much, could read them.

Katherine had had a paid carer in the past, but she was dismissed after about six days. Neither her or her adult children were fond of the carer and she was not getting any formal care at the time of the research. Her daughter visited her 3-7 times a week, depending on her job schedule, and her son came twice a week. Her daughter took care of the flat and sometimes stayed overnight in a dedicated bedroom.

Katherine also had two grandchildren who sometimes visited her. Being on very good terms with two neighbours, who lived on first floor and third floor of the same building and were willing to go out for her, Katherine could get whatever she needed (such as food).

As for her home, Katherine seemed to be fond of living in a huge apartment, containing memories such as old photographs of her family, including her husband who passed away a quite a number of years ago. Katherine revealed: *‘[...] it’s much too big a flat for a single woman, but I can’t think of where to go next, you know, I mean...’*.

Confirming her attachment to her home, Katherine appeared to be worried about moving to other accommodation in the future. This might be explained by her rich environment in terms of informal care network, which was based on her adult children, her caretaker, and her neighbours. In fact, she seemed happy to live in an environment rich with memories.

Katherine had been using Telecare, in particular the neck-worn alarm pendant and the smoke detector, for approximately two years. The alarm unit was located on a shelf, close to the telephone. Katherine mentioned that she never pressed the button on the

alarm unit, preferring the use of the alarm pendant instead. During the three home visits, Katherine expressed feelings of satisfaction towards her local Telecare provider.

John

John was 61 years old and had retired due to serious health issues. Before retiring, he was an orthotist at the NHS. He revealed that he had always lived with his family in a semi-detached council house with rear garden. John had an 80-year-old brother, living with his ill spouse. John also had a few nephews. After the death of his parents, he continued to live in the same house. John explained that he had been living in this house for 45 years as he and his family moved there in May 1970. The previous family house had an ample garden, which required more care than his current small garden. This might not be the only motivation for moving to the current dwelling, but John would not add more details. John briefly mentioned that he would prefer to die in his house than in a nursing home. He seemed very attached to his memories, adding that he enjoyed reading a lot, watching TV and keeping a huge number of confidential papers from his voluntary job in his house. John, who suffered from mobility issues and got tired very easily, admitted that he could not keep his house in order. The living room displayed a few pictures of John's nieces' marriages and a few paintings on the wall, while newspapers littered the floor.

John had both a neck-worn and a wrist-worn alarm pendant, the smoke detector and a key safe outside his house, and one of his neighbours acted as a key holder. During the three home visits, John spoke very fast, looking willing to answer the questions asked. He seemed to really enjoy talking and appeared to be intellectually lively. However, it was quite difficult to follow him because he jumped from one topic to another and engaged himself in telling extremely detailed life stories, especially when it came to his former profession. John discussed his life as it were a book divided into different chapters: one chapter was his education, another his jobs and a third his health. John made use of a care provider, Trust Care community services. A trained carer came to his home every day, got him out of the bed, then cleaned the house, took John shopping, and showered him. John had a busy life, characterised by a weekly routine. To start, every Thursday he went shopping with the carer at 11am. During the week, he took care of all sorts of tasks and on Sunday he went to Mass. His 'fully-booked'

weekly agenda might suggest that John was at the same time a care receiver and a caregiver. He volunteered for the church, for the NHS, and was part of a patient participation group. One day a week he went to a disabled swimming session with the paid carer in a town located approximately eight miles from his dwelling and seemed fond of swimming. John also seemed fond of chatting with other people who approached him to tell him about their problems while swimming.

John adopted Telecare more than twenty years ago, due to his many health issues. He used the pendant (both neck-worn and wrist-worn) and had placed the alarm unit behind the curtains, close to the landline. He had also a smoke alarm and a carbon monoxide alarm. John was eager to make suggestions about Telecare, showing interest and knowledge of the healthcare system in UK.

Jennifer

Jennifer was an 83-year-old former nurse, living on her own on the ground floor of a Council flat, surrounded by a green area. There was a bus stop close to her home. Jennifer suffered from a number of health issues including breathing problems and poor blood circulation. Jennifer's flat was rich in things and memories. In particular, the living room displayed photographs of pets and people, as well as many souvenirs, some of which looked really aged. Jennifer mentioned that the carpet was 23 years old and was still in good condition. Many different kinds of objects were also displayed in her bedroom. The bathroom had been adapted to her health needs. On the whole, Jennifer's flat conveyed an impression of 'warmth'.

Jennifer explained that her paid carer came three times a day: in the morning at around 9am, in the afternoon at approximately noon (for lunch time), and in the evening around 6pm, for dinner. The carer spent approximately half an hour each time. However, Jennifer was not at all satisfied with the service provided the home care provider stating: '*the care provided is not enough*', as she had to face serious health problems, such as having had sore legs for months. Apparently, her nurse had not taken care of her problem yet. During the home visits, Jennifer wore a wrist alarm pendant, and her alarm unit had been placed not far from the landline. Her Telecare system, which also included the smoke detector and the carbon monoxide detector, had been installed ten

years previously, due to her repeated falls. Jennifer was fond of Telecare and admitted that it was useful for those prone to falls.

Benjamin

Benjamin was a 65-year-old retired plumber. Benjamin, whose wife and son died in a car accident in 1991, lived on his own in a two-bedroom rented apartment on the 7th floor of a block of flats which offered a part-time caretaking service and was located close to a bus stop. Benjamin has been living in this flat for fifteen years (from 2000). Before living there, he rented a one bedroom flat in a nearby town. Benjamin had five brothers and two sisters, with whom he had no contact. He was in touch with his adopted half-brother, who was brought up as his mother's son. Benjamin's half-brother, slightly older than him, lived in the South of England but not close to Benjamin's town, and he could not see him very often. Benjamin adopted a young boy in 2005, now a young man, who lived with his wife and two children abroad. Benjamin revealed that, due to his health issues, he was unable to visit them anymore. However, he kept in touch with them by telephone and internet.

Benjamin was keen to talk about his care experience and revealed being abused by a paid home carer. He also revealed that he was on the waiting list for colostomy surgery. Benjamin, who was always wearing the pendant during home visits, had a number of Telecare items: two pendants (the fall pendant and a waterproof pendant in the bathroom), smoke detectors in the kitchen and hall, a carbon monoxide detector, a pull cord in his bedroom and a bogus caller alert fitted by the front door of his flat. This alarm would call through to the Telecare provider when pressed and enable Telecare staff to listen in on the conversation with the caller and the call would be recorded at the monitoring centre. The bogus alarm made Benjamin feel safe in his home. For him, Telecare meant safety and peace of mind. On the whole, he had an excellent experience with the Telecare provider. Benjamin felt confident with his different informal carers. His keyholders were two neighbours, and his key safe was located outside his flat. During my visit to Benjamin's flat I entered the kitchen, which contained many different objects as well as a considerable amount of food.

Benjamin's flat contained many memories. Being a cat owner, and enjoying cats very much, he collected cat ornaments such as porcelain cats. Benjamin also collected elephant figurines and showed me his collections and other souvenirs from India. All Benjamin's collections were located either in the living room or in the corridor.

Jane

Jane was an 88-year-old woman who lived with her 61-year-old daughter, who had a few years part-time work left. Working 12 hours a week, Jane's daughter cared for her mother. Jane's other daughter lived on her own and provided help when needed, such as when Jane had to go to her GP's clinic. Jane did not receive any paid care. Occasionally she was visited by a professional pedicurist. Jane and her co-resident daughter lived in a terraced house in what was once an affordable residential area. When I first visited them, I realised that, due to a severe hearing impairment, Jane could not understand what I was saying outside her house. Eventually, her daughter saw me and opened the main door to let me in. Later on, her daughter kindly offered a tea, which I accepted. Jane's house looked clean and well kept. The living room, in which Jane spent most of her daytime, contained teddy bears and other soft toy collections, while the main hall displayed a collection of thimbles. The living room's walls were decorated with many framed needlepoint cross-stitches and a few family pictures.

Jane's house had many different smoke detectors (one in the kitchen, another one in the main hall on the ground floor, another one in the hall upstairs, and others in the bedrooms). Two carbon monoxide detectors had been installed in the kitchen and on the first floor. Outside the terraced house, a well-kept garden was visible. It was explained to me that a gardener took care of it. Next to the front door was a key safe, whose combination was known by both Jane's daughters, who acted as keyholders, and the Telecare provider. Jane, who had been using Telecare for approximately three years, had a neck-worn last generation pendant, which had been pinned to her sweater due to the sensitivity of the item (it had triggered false calls to the monitoring centre). Interestingly, Jane used her pendant only when co-resident daughter was not at home. Her opinion of Telecare was positive as she felt reassured by having it.

Carl

Carl was a 72-year-old former gardener. He was a house owner and lived with wife Julie, who was still in work, in a semi-detached house on the outskirts of town with their two dogs (a Springer Spaniel and a Cocker-Poo) and their cat. When I first met them, his wife was sitting on the sofa with him. His two dogs welcomed me with enthusiasm as I entered their dwelling. As soon as I sat on his sofa, Carl showed me a notebook (of which I kept some extracts), in which he had carefully notated his blood pressure variation during the day. I felt that he might have been willing to meet me mainly in order to share his health issues. Later, I found out that Carl, being very meticulous, had developed an in-depth knowledge of the illness he suffered from (epilepsy). Carl wore the next generation of alarm pendant and had a smoke detector from the Telecare provider. In his bedroom, he had an Epileptic Seizure Alarm. This alarm will generate an alarm call when it senses a seizure and this can be linked to a vibrating pad that goes under the carer's pillow to alert them during the night. As Carl lived with his wife Julie, she would be alerted, thus preventing her, who slept in another bedroom, to make regular checks during the night, Carl's wife, who slept in another room, in order to be alerted whenever Carl experienced seizures.

During my first interview with Carl, Julie remained sitting on the living room sofa and seemed to read a book on Kindle. Yet I felt that she was following the conversation between Carl and myself. In fact, she participated in the discussion by occasionally uttering short sentences. On the whole, the atmosphere was almost familiar, I felt at ease and had the chance to discuss different issues besides the Telecare system. As I was talking to Carl, I had the feeling that the impact of technology in their home had been huge, in particular when he discussed how the trueCall call blocker, a device he had installed in order to block nuisance calls, had interfered with the Telecare alarm unit. As Carl and his wife explained how a Telecare staff member had solved this technical issue, they showed an understanding of how different kind of technologies worked and seemed eager to know more about them.

Carl seemed to be a very active person, as he was still taking good care of his greenhouse and garden, with different trees and plenty of different kinds of flowers. Sometimes he practised sports such as bowling and mini golf. His wife Julie proved to be passionate about reading novels. In fact, she had a collection of books (thrillers and

others) grouped by author. Both Carl and his wife were collectors: together, they collected matching animal plates and mugs (Springer Spaniels, cats, and the like). Furthermore, Carl was passionate about plant pots of all different sizes, which he watered himself. A large number of these plant pots were perfectly arranged in his greenhouse. As for his experience with Telecare, Carl and his wife had a good understanding of technical issues and were very satisfied. Carl was clearly reassured that Telecare devices allowed him and his wife to feel safe in spite of his serious health issues.

Fiona

Fiona was 67 years old. She was retired and lived with husband David, a former fireman (70) in a semi-detached bungalow in a small town. Fiona and David moved to their current dwelling in 2004 from a nearby town, where they lived in a flat. As the flat had stairs and she could not climb them, the couple realised they had to find more suitable accommodation. For many years Fiona had been suffering from rheumatoid arthritis, a long-term condition that causes pain, swelling and stiffness. Fiona had different Telecare devices: the neck-worn pendant, the smoke detector and the flood detector. Once a week, Fiona and her husband were provided one hour of house cleaning, paid for by the council. However, Fiona felt that it was not enough to clean the house. As the couple's home looked tidy and in order, it was explained that husband David took care of it, as well as caring for his wife. David showed me around and pointed to the wet-room they had had installed. The couple were very happy with it, as it made easier and safer for Fiona the use of the bathroom and shower.

Fiona and her husband were married for the second time and both of them had adult children from previous marriages. Fiona had one daughter, who lived in a village located approximately six miles away. In turn, David had three daughters from his first marriage. The couple also had a small dog (a very friendly crossed Yorkshire) and a fish. Fiona and David's house, with a conservatory and a garden, looked very comfortable and was conveniently located just opposite the bus stop. Fiona explained that she could not take her electric wheelchair on the bus, as her particular kind of wheelchair had not been approved by the local bus company. However, Fiona was able to count on her husband to drive her to her GP and to the Polyclinic, when needed.

David could also drive long distances and Fiona gave the feeling of relying on her husband very much. Fiona did not wear her alarm pendant when her husband was at home. She seemed to be very worried about her husband's health and suddenly started to cry when talking about him. Furthermore, Fiona felt sad not only about her daughter who apparently did not visit them very frequently, but also about her husband's three daughters, who '*have their own families*', as she explained. Fiona seemed to be very fond of Telecare, which she had once used to help her husband, when he had been affected by a heart-related issue.

Helen

Helen was a 70-year-old lady who had had multiple sclerosis for thirty years. She had also suffered from a stroke. A couple of months before the first interview, Helen, who lived on her own after the divorce from her husband, with whom she was still on good terms, moved to a retirement flat. Her rented retirement apartment, which came with 24-hour on-site care, was customised according to her health needs. Before moving to the retirement apartment, Helen lived in Hanson Court, where she rented a two-bedroom ground floor flat under the 'Better Homes scheme'. She already had paid carers. Prior to that she had lived in a flat with a live-in carer from social services for twenty-five years. When I entered her retirement flat for the first time, she was having a chat with one of her friends, who had just returned from a journey. Helen's friend gave me the impression of being very close to her as she seemed to be aware of how the apartment had been customised in terms of furniture and also in terms of availability of specific Telecare devices.

Helen used many Telecare devices: the neck-worn pendant, the easy press (a transparent layer which fit onto the pendant alarm button and made it very easy to activate, helping those with reduced dexterity or restricted movement to activate an alarm call more easily), the smoke detector, the carbon monoxide detector, and from 2014, the 'sip or puff' device, and a hi-tech alarm system, which was apparently the first of its kind in the UK. In addition, Helen had a formal carer three times a day, every day. In spite of her significant health issues, Helen was very lively and interested in everyday things. To give an example, she had been doing a course (based in her retirement facility) to improve her knowledge of her iPad's multiple functions. Helen seemed to be deeply

interested in my research study and provided much information about Telecare and her experience with it.

Craig

Craig was an 84-year-old former French speaker at H&N Telecommunications. He had been living on his own in a small rented first floor flat in a semi-detached corner house in a residential area for seven years. The corner house in which he lived was divided into three small flats, and they were all rented at reasonable prices. As I walked into Craig's hall during my first visit, I noticed the alarm pendant hanging from a peg on the coat rack. Shortly after, Craig took the pendant and wore it, because he carried his alarm only when he was at home. Thus, when he went out, he hung it up so that he knew where to find it when he returned home. Besides the neck-worn pendant, Craig had also the smoke detector. Craig was very friendly. However, I had trouble making my questions understood, as he suffered from a serious hearing loss caused, according to him, by having worked for many years at H&N Telecommunications. In order to keep his small flat clean, Craig paid a cleaner but in spite of the reasonable fee, he could only afford two hours every fortnight. Craig seemed to be concerned about the cleanliness of his home, which was interpreted as a way of showing attachment to it. Having moved from a larger dwelling for financial reasons, Craig had not taken all his furniture and objects with him. Obviously, it had not been an easy task for him having to make a selection of his belongings, so that they could fit in the new home. Craig had no carers.

When asked about his experience with Telecare, Craig explained that he had been using Telecare for five and a half years. Unusually, Craig had decided to register for care at a distance following his participation in a local Telecare event. Craig did not have the key safe but the building in which he lived provided a few tenants with a shared locker in the communal area located in the ground floor hall. The locker, that contained copies of all tenants' flat keys, was locked for security reasons. Each tenant had a copy of an apparently easily duplicable key. Craig had two keyholders, a friend and a neighbour. Craig's experience of Telecare was good. While I was visiting him, in order to show me that he regularly performed the monthly maintenance, he pushed the button on the alarm unit so that he could get in touch with the Telecare provider.

Claire

Claire was a 93-year-old former school librarian. Her husband died in 2004, at the age of 95, in a local nursing home. They had no children. Claire lived on her own in an apartment located in a wealthy district, not far from the largest urban park in the city. Her property was part of a huge building complex, spread around a beautiful area, surrounded by communal green areas. Two caretakers were employed by the building. Although claiming not being able to rely on them, Claire revealed that the caretaker(s) acted as keyholders, together with a neighbour and a friend of hers. Claire's health issues included hearing impairment and mobility problems. Claire, who had three Telecare devices: the neck-worn fall pendant, the smoke detector and the carbon monoxide detector, seemed quite independent. In fact, she took care of herself and also of her not so small apartment. Claire discussed how she wanted to renovate her bathroom and replace the bathtub with a walk-in shower, for safety reasons. The living room displayed antique paintings, with relatively high market value. Unfortunately, (in her words) having moved from the previous house, which she had shared with her husband, to a much smaller dwelling, she regretted not having been able to take all furniture with her. Looking at her, I felt that Claire regretted the loss of objects which had a sentimental value, as they reminded her of her life with her husband, who had passed away.

During home visits, Claire revealed to me how fond she was of having been visited by her niece during the weekend. She explained that her niece, who lived in Edinburgh, cared for her at a distance by shopping online for her. Claire seemed very affectionate towards her niece, who obviously represented an informal carer at a distance. Besides her niece, Claire was very attached to a good friend of hers, who had recently been hospitalized. Claire had a good relationship with the Telecare provider, with whom she got in touch with by telephone, despite wearing the alarm pendant. She revealed that she had got in touch with the Telecare provider just once, a few years ago, after she had collapsed.

Jack

Jack was 82-year-old Canadian former musician and music teacher. Jack lived on his own in a beautiful ground floor garden flat (although the bedroom was on the first floor) in a trendy residential area in the town centre. Prompted to talk about his family, he spontaneously admitted that he had almost no contact with the last living member of his family, his sister, who lived in Canada and was 3 years younger than him. Jack's apartment seemed to be expensively furnished, as the open living room displayed a number of paintings and other objects, arranged with attention to aesthetics, thus revealing how meaningful they were for him. Jack had been living in his current apartment for 15 years since he had left the metropolitan city in which he had spent many years as a young man. He recalled how he used to move from one rented accommodation to another very often, how much fun he had had at the time even though he was not well off, and how that city had changed recently (for the worse, according to him). It seemed as if Jack missed not only the multicultural city in which he had spent many years of his life, but also his youth. It might be that he had idealised a certain environment, which had become meaningful to him because of the memories attached to it. In a way, Jack thought that the current town in which he was living was a replica in miniature of the metropolitan city which he had enjoyed so much in the past.

After the death of his partner, with whom he had shared his flat, Jack had experienced health issues. He had many friends who provided him companionship. At least once a week he went out for lunch with some of them. His friends, cleaning lady and gardener provided him the informal care which allowed him to live on his own. Jack felt independent but at the same time acknowledged how important it was to have many friends and how lucky he was to have them. One of his friends had suggested Jack register for Telecare, which he had done. When I visited him, Jack had the neck-worn pendant and the smoke detector. Jack recalled that in the past he had fallen twice. Neither the first time he fell nor the second time had he thought about pressing the alarm button, justifying it with his 'being worried' and therefore having forgotten to trigger the alarm. Although injured, Jack had been able to get up. Jack asked me to mention what happened and revealed that, in spite of his experience, he was fond of Telecare.

Rebecca

Rebecca was 94-year-old former housewife. She lived on her own in a rented apartment which was part of an apartment block, close to a residential district. The property had two lifts and employed a caretaker, who worked 9 to 5, except at weekends. Her dwelling was close to both her GP and the bus stop. Rebecca had been living in her current apartment for fifty years. At first, she shared the apartment with her husband, who passed away many years ago. Rebecca was still very attached to her husband and she showed me the urn containing her husband's ashes.

When I first met her, she looked quite suspicious. As she opened the door to let me in, she asked me for proof of identity, so I showed her my university card. Later on, Rebecca asked me if I worked for the Telecare provider or for the NHS. Eventually, she understood that I was conducting research at the University of Brighton. Rebecca explained to me that her only income was her husband's pension, consisting of approximately £450 per month. Rebecca suffered from different health issues among them an eye impairment. The impairment was so serious that she had received help from the NHS, which had provided her with special sunglasses and a magnifier. Maybe her health issues influenced her behaviour when approaching me the first time; not being able to see well, she might have become wary of individuals whom she did not know.

Rebecca seemed to be quite worried about financial issues as she claimed that, despite her eye impairment and mobility issues (which had led her to install a walk-in shower in her bathroom) she had not been receiving any disability allowance and was having a hard time getting financial support from social services. Her son, aged 65, was trying to get some provision from the NHS. Rebecca's health issues had led her to register for Telecare three years previously. Besides the alarm pendant, she had a smoke detector and a key safe, which had been bought and installed by her son. However, she did not know the key safe combination. Rebecca's son seemed to take good care of practical issues in his mother's life. The significance of his presence emerged while conversing with her. I could meet Rebecca only once. In fact, when I called her to reconfirm my second visit, she did not answer (she has hearing issues). Later, I contacted her by regular mail, and she replied explaining that she preferred to drop out because of her eye impairment.

Ingrid

Ingrid was 79 years old. She was a house owner and lived on her own, with her parrot, in a semi-detached bungalow where she had been living for nineteen years. Ingrid was a former nurse who specialised in neurology. Ingrid was quite independent. As bus stops are not close in the residential area she lived, she owned a car that she used to do shopping and to visit her GP and the Polyclinic, all close to her home. Only when she needed to go to local hospitals did a friend of hers drive her there. During one of my home visits, she told me: *'Well, I was always independent, I always lived on my own'*. Ingrid participated in different social activities. In particular, every Monday, she exercised (extended exercise for people with back pain), and every Tuesday she went to a community event, run by a physiotherapist. She had no paid care but received informal care from her niece, who came to clean her house every week. Ingrid had three friends, *'people that go to the church'*, in her words. Once a fortnight a caretaker (gardener) came to her home in order to take care of the garden.

Ingrid had had multiple falls, the most recent being in March 2015. As a consequence of this fall she broke her ribs and spent eleven days at a local hospital. Due to her multiple falls, she explained, *'my [her] family got directed to the CareLink [the Telecare provider]'*. Ingrid had the following Telecare devices: the neck-worn alarm, the smoke detector, the carbon monoxide detector and the key safe. It is noteworthy to mention that her family already knew about Telecare because her sister-in-law had it installed.

Hannah

Hannah was a 95- year old lady at the start of the fieldwork and turned 96 just before my last visit. Before retiring, she had been a housekeeper and a maid. Hannah had a sister, who lived in Canada, and a daughter, who lived in the US. Before living in her current flat, Hannah lived with her husband, now passed away, in a top floor house very close to the flat she now lived. Before that, they lived in another small town and prior to that in London. Hannah's family network appeared rich and meaningful. Hannah's husband died in 2010, after fifty-eight years of marriage. Hannah had three adult children. Her daughter, who moved in the US at the age of 21, lived in the US on her own. Her son lived in Hampshire. Her other son died years ago.

During my conversations, which took place in Hannah's living room, I noticed that much of the floor space available had been used. The living room contained Hannah's laptop and printer, her rollator walker (on which she kept her alarm pendant), and many souvenirs such as teddy bear collections. Obviously, Hannah spent most of her daytime in the living room, which looked comfortable and had been furnished with a sofa and a sofa chair. Hannah had no paid carer and took care of herself and her flat with no help save for a professional cleaner, who came weekly. When I entered Hannah's flat, she conveyed a very friendly attitude. As I entered her living room, she was using Skype video chat in order to chat with her daughter in the United States (see above). Hannah also had a big button telephone and a mobile telephone. On the whole, she appeared comfortable with the use of technologies that allowed her to communicate with significant relatives living at a distance.

In spite of her many health issues, Hannah was active. For example, she went on her own to her GP, located across the road where she lived. She also appeared to be very independent, as she currently used the community bus in her town. Community Transport in her area is a service which, according to its website, 'provides accessible, safe and affordable transport to community groups, voluntary sector organisations and individuals with mobility difficulties'. Hannah used the community transport in order to go shopping to a well-known supermarket on her own and also to venues in the surrounding area. Hannah showed a trustful and positive attitude towards Telecare. She had a neck-worn pendant, the easy press, the smoke detector, and a key safe. Hannah had three nominated keyholders: two neighbours and one of her friends. Her son, who lived in the UK but not locally, also had a copy of his mother's house key.

Karen

Karen was 86 years old and lived on her own in a quite sophisticated semi-detached house, which she had owned since 1987. At the time of the fieldwork she was sharing her house with a recently divorced friend. This living arrangement was temporary, she explained. Karen's dwelling, located in an elegant residential district, was quiet although easily connected to the town centre by bus. My first home visit started quite late as I took the wrong bus and then experienced difficulties in reaching Karen's home. I apologised but Karen expressed her disappointment. She had prepared tea for me, and

it was getting cold, therefore she showed me the conservatory and served the tea immediately. Karen's house, which was surrounded by a well-kept garden, looked very elegant inside. From the conservatory, I could view her car into an off-street parking. The living room was wide while the conservatory was small but comfortably furnished. Karen explained that she lived on her own and with no carers. At the time of my fieldwork she was temporary sharing her house with a friend.

When I met her, she was wearing the alarm pendant (*amie pendant* model) and had a positive opinion of the Telecare provider, which she had apparently called three times in the past. Karen also had the smoke detector and the key safe and told me that she had been using Telecare since 1990. However, she did not seem completely sure about the date. I would have liked to have verified the date during the following visit, but Karen was to drop out after the first interview. Karen appeared to be physically in shape, as she showed fluidity of movement and still took care of her garden. However, I understood that she had a cleaning lady.

Emily

Emily was a retired 91-year-old lady who lived on her own in a flat located in a residential area in which she had been living since 1971, when she married. Before retiring in the '90s, Emily had worked in the civil service. She recalled having spent a certain number of years working overseas. Before living in East Sussex, she had lived in Hong Kong. Emily's husband died in 2001 and the couple had no children. Emily had three nephews, two of them lived in a metropolitan city and one in her town. The building in which she lived used to employ a caretaker but recent building management had opted for a professional cleaner only. As I entered Emily's flat, she showed me the living room, where she seemed to spend most of her day. Almost immediately, she asked me to turn off the radiator, as she found the temperature too warm. Her flat was simply furnished, and I could not see any ornaments or decorations. However, as I only had the chance to visit Emily once, I only got a brief impression of her dwelling. As soon as I started to chat about her house, Emily changed topic abruptly and asked me if I came from Poland, probably because Polish are the largest foreign-born group in the UK.

Emily made use of formal care. She had a home carer who came in the morning to help her with daily activities such as getting out of the bed and washing. The carer also helped with shopping, as he used to buy milk and eggs on the way to her house. Emily was also the recipient of a home nursing service which came twice a week. At some point I asked Emily her age. As I made a positive comment, she replied with the following words: *'I wouldn't wish to live to ...'* and continued: *'I mean, I am housebound, I have the nurses twice a week...'* Emily's sad comments might be attributed to her suffering neck pain, in addition to mobility issues and hearing impairment, which caused her to break her shoulder bone. Social services had suggested that Emily install Telecare. Emily had a neck-worn pendant, the smoke detector and a key safe, the combination of which was known by her carer, who also had a copy of Emily's house key. Emily's opinion of the local Telecare provider was not straightforward, as she mentioned at least one instance in which the provider responded differently from her expectations. After the first interview, Emily dropped out.

Appendix N: NVivo analysis: Transcript of the 1st interview with Carl

1st Interview with Carl

8th May 2015

150517_001.MP3

Interview held with Carl on 8th May 2015. Julie, his wife, is also present.

I: So if you have read this about Telecare and home...

Carl: That's right.

I: How you like Telecare?

Carl: Yeah, yeah, but I've got the letter there.

I: OK. OK. So let's see what kind of Telecare you have. Ah, you've got the pendant, this one?

Carl: Yeah, that's...that's the one you gave me.

I: Ah OK. You got everything. Good. Thank you.

Carl: Yeah. Do you wanna see that?

I: Yah. No no no. I mean, I...just for you, if you're...

Julie: Yes, so ...

I: I you don't know what to do, just read it. (Laughs).

Julie: Uh-huh. Yes, so he's...

Carl: Do you want my Telecare, Telecare stuff.

R: Yah, I mean I'd like...

Christopher: Right.

I: To see, no.

Carl: Yeah. That's OK.

I: See...

Julie: Yeah, so he's got the alarm that he wears.

I: OK, so ...

Julie: If he's in the house on his own.

I: OK.

Carl: (Indistinct words).

The conversation is taking place beyond the range of the voice recorder at this point.

I: OK thank you. So the dog is allowed.

Carl: Yeah. Yeah, they can come up. As long as we're up here with them...

Long pause in the conversation as they go upstairs.

I: Yah yah yah. Yah yah yah. No no, but it makes sense. Thank you.

Carl: Once Julie's gone to work... (indistinct words).

I: So you see why it's difficult to have a dog in Brighton because I couldn't take on a house like this because it doesn't climb stairs and to follow me it would just have dropped and killed himself, you see, the poor thing. OK here we are again. Thank you.

Carl: Yeah, this, this is the um. This is the other pendant, you see.

I: OK, the the one, the newest, yes, that you can actually. Hm-mmm. OK.

Carl: And it's got my...

I: Hm-mmm.

Carl: Got my initial on the back of course.

I: Yah yah. Yah, this I saw OK. So you're happy with this?

Carl: Yeah, now if you...if as I say, I fall down on the, on the floor...

I: Hm-mmm.

Carl: And I have that...I mean I won't do it now.

I: Hmm.

Carl: Because I don't want to set it...

I: Yeah, no no no don't...

Carl: Off.

I: Worry.

Carl: Er, if I fall down that will set it off.

I: Hm-mmm.

Carl: Or if I press that...

I: Hm-mmm.

Carl: It will set it off.

I: OK.

Carl: And that's where the box is over there.

I: OK. Ah yeah, the alarm unit is here. You have the telephone, OK. Where is it? This one, OK.

Carl: Yeah.

I: Yah. OK, so...

Carl: They had, they had to re, redo something in the box because we've got a, a, a filter thing for our telephone.

I: Hm-mmm.

Carl: It's so as we don't get nuisance calls from India or you know, trying to sell us something.

I: Ah that's why. In fact, I wanted to ask you because it was so difficult to reach you.

Carl: That's why.

I: I wondered if you (laughs), if I could reach you and they were saying like, nine, if you belong whatever or not. It was so difficult.

Carl: Yeah.

I: I said, oh my God.

Carl: Yeah.

I: So what is it called this device?

Julie: It stops all those computerised calls.

Carl: It's um...

I: Ah.

Carl: What's it called?

I: If it has a name.

Julie: Um, trueCall.

Carl: trueCall. It's called trueCall.

I: Ah Twocall.

Julie: trueCall.

I: Ah True like er...

Carl: As in...

I: Vrai. OK. OK.

Julie: Yes.

I: OK. trueCall device. OK, to filter. No, I was worried because I said, how can I reach him? Because I don't know what to say on the telephone when I

Carl: You've got to be patient, haven't you? You go through...

R: Yah.

Christopher: Through the processes.

I: Yah. Yah yah.

Carl: Yeah.

I: Yeah, in fact, so you don't get any, any noise calls.

Carl: Any nuisance calls, yeah.

I: Because I, I get it all the time.

Carl: Yeah. Double-glazing. I mean...

I: All the time, even on Sunday, I get a lot of calls (laughs).

Carl: It was getting, it was getting to me. I was, I was getting very um, very annoyed, very upset you know with calls keep coming through...

I: Yah yah.

Carl: And I, and I...

I: Especially the BT. I have BT, so I dunno whatever, all the, all the telephone companies...

Carl: Yeah.

I: Phoning all the time, and not only telephone companies. I mean they just call it.

Carl: I mean some, some get through.

I: And the mobile companies also bother me all the time.

Carl: Yeah. Some get through but we, we don't know how.

I: Hm.

Carl: But um, I should say 90 odd, 90 odd percent don't get through, do they?

Julie: Yeah. I mean it has, it has to be a live person at the other end of the phone. All, all, all the computerised calls...

I: Yeah, because I also received calls from lawyers or stuff, I dunno. People said, who's gonna have my telephone?

Carl: That's what I said. The reason you got through...

I: Hm-mmm.

Carl: Is because you were a live person.

I: Yah.

Carl: You weren't a machine.

I: Ah OK.

Carl: If it's a machine, it's a different...it, it, it picks up on being, being a machine.

R: I see.

Julie: Cos the machine can't, can't sort of reply when it asks you to do something.

I: Hmm. So you...you've got also an internet connection, no? So you've got a filter. Do you, do you have ADSL for er, for the internet? No, I wondered because you said er about the filter.

Carl: NT, NT, what's er?

Julie: It's cable, it's er Virgin Media.

I: Ah Virgin. OK.

Carl: It was, it was NTL originally and then Virgin took it over.

I OK, so the CareLink came to fix the filter in order...the machine that you had before?

Carl: Yeah, they had to do something in their machine.

I: OK.

Carl: So as it would come through.

I: OK. That's interesting.

Carl: Yeah.

I: OK.

Carl: Yeah it is yeah.

I: You have a special house because you have Truecall, a filter, I dunno I will find out, had to be like added let's say to the alarm unit. OK. That's it.

Carl: Only the er, the person that came to fit it initially. He didn't know why he couldn't get through.

I: Hmm. Hm-mmm. I see.

Carl: So the person that designed er that tube for the lady?

I: Yah.

Carl: Right? He came.

I: Ah OK. So, it's kind of engineer.

Carl: Picked it up, took it back to the er...

I: CareLink.

Carl: CareLink, fiddled with it and he brought it back and it worked OK. So yeah.

I: Well, it's nice.

Carl: Well, it's nice that I've got both things.

I: Yah.

Carl: That, that I don't get...

I: Yah.

Carl: The nuisance telephone calls and that, that I can always talk to them at any time.

I: Yeah.

Carl: And I can hear that in the garden.

I: Ah. OK. Maybe, maybe if you want, we can go in the garden. I didn't want you to, to er, to er...but I always like to look at the living room because it's very interesting.

Carl: Do you know what that stuff is? What all the plates and that are?

I: Hm?

Carl: Do you know the actual collective name? Of what they are?

I: No. No.

Carl: Tell her Julie.

Julie: Chockin.

Carl: Chockin.

I: Ah.

Carl: C-H-O...

I: K.

Carl: I...

Julie: I-N.

Carl: I-N.

I: Oh

Julie: Metallic medallions that come from China.

I: Ah.

Julie: We've been collecting them for years.

I: Yah.

Sue: We pick them up at car boot fairs and jumble sales.

I: Yah yah yah. It's written Art of Chokin, OK. Beautiful.

Carl: And the art of Chokin was er, you know the samurai warriors that they used to have in Jap, in Japan?

Julie: Samurai.

Carl: Samurai.

I: Ah, Samurai OK.

Carl: Yeah. Well, their armour was decorated...

I: Hm. Oh.

Carl: With those lozenges.

I: Oh.

Carl: And when the er Simaru was done away with, you know they became um defunct. All these people that were making all these things for the, for the armour, they were already out of a job as well.

I: Oh OK.

Carl: So they turned themselves to making decorative things for, you know, people to buy.

I: Nice.

Carl: And Julie...the only thing Julie's bought is a mug somewhere.

Julie: It's got a bird...it's a bird one. So, is it in there? Because we've got them in...in categories.

Carl: Yeah. It's just a, just a mug that we bought.

I: Is it here?

Carl: We bought that in Lanzarote. Have you got it?

I: There is a mug down there. Behind, yah.

Julie: Yeah.

Carl: That's the only thing that we've bought in a shop.

I: Ah OK.

Carl: All the rest Julie says, Julie says she's got in charity shops...

I: Ah OK.

Carl: Boot fairs.

I: Hm-mmm.

Carl: Er things like this.

I: Yah. I find everything in charity shops. I've bought a lot of stuff.

Julie: Hmm.

I: I like the plates, the how d'you say? The plates?

Carl: Yeah.

I: Two, the dog with the cats.

Carl: Yeah...

Julie: Yes, there's an artist called Lesley-Ann Ivory.

I: Hmm.

Julie: She paints. She does lots of things with um...

I: That's great.

Julie: Cats on. They're brilliant pictures.

I: The cats in the window, nice.

Julie: You can almost feel the fur, can't you? They're so realistic.

Carl: And there are, there are...

Julie: And she, she does...

Carl: All cats.

Julie: She does lots of um intricate patterns for the backgrounds as well.

I: Ah, I like them, yeah.

Julie: Nice, aren't they?

I: Yah. I wish I had more space.

Julie: The one I like best actually is a set up, up there. They're um the seasons plates, the ones on top.

I: Ah!

Carl: No. The one on top, look.

I: Ah.

Carl: Spring, summer, autumn and winter.

I: OK. Oh yeah. How do you call this er, you call the er, call the?

Carl: The seasons?

I: No, the seasons, like the the object in itself. D'you know because in Italy when you have like three things, you say *trittico*.

Julie: Yeah, I don't, don't think it's got a name. It was just, it was just a set. They, they came...you sort of pay for them. You get one each month.

I: Ahh.

Julie: And they send you the...they send you...

I: Ah OK.

Julie: The stand to put it in free as well.

I: Ahh. I see. Nice. Yeah, you've got a lot. And there too.

Julie: Yes.

Carl: Yeah yeah.

I: Hmm.

Carl: They're her...

Julie: I've got a set of dogs as well.

Carl: They're her cats, the top two. And then the bottom two are her kittens.

I: Oh yah. They actually are everywhere eh? (Laughs).

Carl: Oh I've got some, I've got some next door... I've got dogs next door.

I: Oh. Ah.

Julie: (Laughs).

We go into another room to look at the other decorative plates. The start of the conversation in the other room is difficult to hear.

Carl: And gradually we er, Julie, bought, bought the others.

I: Wow. You've also the cup, the mug.

Carl: Yeah. The cup goes, goes with...

I: With this.

Carl: Yeah, that's right. You've got this mug, this cup...

I: Oh.

Carl: Goes with this plate. That size with that size.

I: Oh I see. You have double, OK.

Carl: Yeah.

I: So you've got six plates and three mugs, and that one.

Carl: Six, six plates...

I: Ah yeah, each one goes with...

Carl: Six mugs and twelve plates.

I: Amazing! Did you buy here in Brighton, or er?

Carl: Er they are from Brooks & Bentley. They're a Danish company.

I: Oh. They've got amazing, like detail. I dunno how to say...they seem very...I mean, I dunno for example, I like (indistinct words).

Carl: Yeah, yeah.

I: And also for animals and stuff, because I went to the Botanical Garden and (indistinct words) I bought a lot of things for the kitchen.

Carl: Yeah.

I: Hm.

Christopher: As you see, Julie's a little bit of a reader.

R: Yah! Nice.

Carl: (Laughs).

I: (Indistinct words) (Laughs) It's a book library.

Carl: She used to, she won't mind my saying. She used to...when we went on holiday, she'd take between 24 and 30 books on holiday.

I: Wow really?

Carl: That was in the case first...

I: Yah, three cases.

Carl: And then whatever she could get in in clothing. So, it was a tough (indistinct word) and then three years ago, I said to her...we pooled our money together to buy her a Kindle.

I: Hm-mmm.

Carl: (Indistinct words).

I Yah yah yah. OK, yah.

Carl: Yeah and...

I: Because the space is over (laughs).

Carl: (Indistinct words) what she does. There are some here which she's got temporarily.

I: OK.

Carl: You know, like the Dick Francis ones.

I: Hm-mmm.

Carl: And those wrote by an ex-jockey, and it's all er murder, mystery...

I: OK.

Carl: All round (indistinct word).

I: OK.

Carl: You know? So they're ones she'll never ever get rid of. There are others which she'll, she'll read and then put back on the shelves, come back and read them and then she may get rid of them. Others she'll have for a short, a shorter space of time (indistinct words). What she's done now, she's downloaded books that she's taken to the shop (indistinct words), so she's got those.

I: Hm-mmm.

Carl: She's also got another (indistinct words) on the Kindle just for holidays, so when she's read them on holiday, she can wipe them off. Clever in it?

I: Yeah yeah. I, I like the, the dogs mug.

Carl: Oh yeah. That's for their food.

I: Yeah, but my dog is more...

Carl: Well we have one and either one's being used and the other one'll be (indistinct words) and we er also give them (indistinct words) in the evening as well.

I: Hm-mmm.

Carl: So that stays on top of the full one and that gradually goes down, and then when that one's finished, we start on the next one (indistinct words).

I: That's nice.

Carl: Yeah.

I: I love your dogs. They're so friendly. I don't think I could live without my dog.

Carl: We'll have, we'll have to check you when you go.

I: (Laughs).

Carl: (Indistinct words) taking one with you.

I: (Laughs).

Julie: My sister only comes round to see the dogs. She gets withdrawal symptoms after a few weeks. Aww.

I: In Italy we don't have those. We have a lot of Cocker, some Cocker Spaniel but these ones, no so many. Or they're rare. It's strange.

Carl: It's only because she got caught by the wrong breed.

I: Oh (laughs).

Carl: It was a, it was a Cocker that sired her.

I: Oh I see.

Julie: Yeah, she's a Springer and he's a Cocker, so they call them Sprockers.

I: Oh. And you have the Cocker, Cocker Poodle. How it's called?

Carl: Oh the Cockerpoo.

I: Yeah, Cockerpoo. (laughs). That's beautiful too.

Carl: You get a Labradoodle.

I: Labra... Yah, I saw that too. Because I ask people what is the breed.

Julie: You get a Cavapoo, which is a Cavalier King Charles and a poodle.

I: Ah! (Laughs).

Dog toy squeaks.

Carl: There's my blood pressure.

There's a noise in the background.

I: Oh!

Julie: Oh I bet you couldn't do that again!

I: Oh I'm sorry.

Sue: (Laughs).

I: Oh I'm sorry.

Carl: That's OK don't worry.

Julie: Off her nose. You couldn't do that again if you tried, could you Gen (dog's name)?

I: Sorry. You, you...Ah OK. So, you measure every day.

Carl: Yeah.

I OK.

Carl: Prac, practically every day. Um, where it points down...

I: Hm-mmm.

Carl: Is where I've been sitting as I am now.

I: OK.

Carl: And then a few minutes later...

I: OK.

Carl: I do a, er, standing one and as you see they do, they do differ.

I: Oh OK.

Carl: And mine's um um...

I: Sorry, I hope I didn't...

Carl: No, no that's OK. I have got to dust it. That's what I was in the throes of doing. Um my um specialist that I saw er when I went in for um my suspected stroke, um, he asked me whether I could keep a, a diary, so er we got ourselves a, um er pressure...

I: OK. Yeah yeah you got the machine.

Carl: But as you can see there...I mean like Julie would say a bog-standard one...

I: Hm-mmm.

Carl: Should be er 130, did you say?

Julie: What's that?

Carl: 130 a bog-standard?

Julie: What? Blood pressure?

Carl: Yeah.

Julie: 120 or 130.

I: Hmm

Carl: 120, 130 over 80.

I: Hm-mmm.

Christopher: And as you see...

R: Yeah.

Carl: Er I'm...

I: Is always lower than.

Carl: I'm always low.

Julie: Nobody can quite believe it. Any time he has to go into hospital...

Carl: I mean...

Julie: The first thing they do is ask him if he's got high blood pressure.

I: I know, because it's... Yeah... yeah because it's very common.

Carl: And I did have one April, er, 129 over 109. And that was good.

I: Hm-mmm.

Carl: I was sitting down, but when I stood up, it went down to what? 84 over 54. And then er, there was one here um the 16th of March. When I was sitting down it was 83 over 48...

I: Hm-mmm.

Carl: Which is still low...

I: Yeah.

Carl: Look how it...

I: It's terrible (laughs).

Carl: It went right down to 66 over 43.

I: Wow.

Carl: Now I have chiropractor sessions. You've heard of chiropractors?

I: Choro?

Carl: Chiropractor. Where they manipulate you like a...a, like an osteopath.

I: Ah OK. Yah.

Carl: Yeah, they're very, very similar in the ways...

I: Ah. OK.

Carl: They do things for you. She says I don't know how you stand up sometimes, because...but as you can see I recorded that I was light-headed and I had a migraine.

I: OK.

Carl: Hardly surprising when that was what was happening. So, yeah but, er, one interesting one here...there that was my morning one. I take a...we generally take it round about 8 o'clock.

I: It's very, very...

Carl: 92 over 55.

I: Hm-mmm.

Carl: Sitting down, went up...er down to 75 over 49...

I: Hmm.

Carl: And that, that, that was in the morning. And at night-time after I'd, I'd had a cranial session, it went up to 124 over 66. So, it's interesting isn't it?

I: Yah, really is.

Carl: Yeah, so um I think some of my, um some of my problems is not, not epilepsy.

I: Hm-mmm.

Carl: Per se, it can be my blood pressure being as low as...

I: Hmm.

Carl: It is that makes me feel so groggy.

I: I know. How do you feel now? Are you OK?

Carl: Oh yeah, great today, yeah. Well, this this week, funny enough, um I go Greens Bowling you know with the heavy woods and go after...you know they go after a little white jack? On the grass?

I: Not the regular bowling, no? It's another one?

Carl: Well, not ten-pin bowling... No.

Julie: It's the sort you do outside.

I: Ah!

Carl: We're all dressed in white.

I: Ah OK!

Carl: On very, very fine grass.

R: OK. Hm-mmm.

Christopher: Well I do, I do, I do that now.

I: Hm. Ah OK.

Carl: I started it 2009 and I wish I'd started it earlier, but there we go. Er, hindsight's a lovely thing. Well, this week I bowled Tuesday, didn't I?

Julie: Yeah, you bowled several times this week.

Carl: Yeah, I've had quite a busy week this week.

I: (Laughs).

Pause in conversation.

Carl: I've got two diaries, one for my when I, when I'm doing things...

I: You're very, very...you're much better organised than me.

Carl: Yeah, er...

I: I've got plenty of diaries and I forget things, you see.

Carl: We...

I: (Laughs).

Carl: We had the boiler man come on Monday.

I: Hm-mmm.

Carl: I bowled on Tuesday, had massage on Thursday, I bowled on Friday and I bowled yesterday. And I've got you today. So...

I: You also play golf? Or mini-golf?

Carl: Golf?

I: Or mini-golf?

Carl: Er I have played mini-golf, yeah.

I: It's like a miniature adventure. It's nice.

Carl: Yeah.

I: I've been. It's quite expensive though because you pay like £6.50 and you can do only 18 holes.

Carl: Oh right, yeah.

I: You can choose, it's upstairs or downstairs. But you cannot do it again. While if you go to the other one, Happy Golf, the other one...

Carl: Yeah.

R: Closer to the West cinema, you can play all day and you spend I dunno, three pounds maybe four (Carl laughs). That's awfully expensive.

Carl: Yeah.

I: I was fast yesterday, after ten minutes I'd finished.

Carl: Yeah, um...

I: (Laughs).

Carl: When I was...

I: I like mini-golf.

Carl: I was ten-pin bowling for about 18 years, and um that's what's helped me with my um Green Bowling, because I've got the natural swing.

I: Yeah.

Carl: But I have to temper my...

I: Hm.

Carl: My weight otherwise I'm sailing weight right past like, you know. But when I was ten-pin bowling I used to go out most Saturday nights.

I: Hm-mmm.

Carl: Have a drink with the lads. And um on a Sunday morning, we would then go er mini-golfing.

I: I like this.

Carl: Yeah.

I: It's very nice.

Carl: My Dad, my Dad played er proper golf.

I: Hm-mmm.

Carl: But er, this eye, yeah, I can hardly see out of...

I: Oh.

Carl: So I haven't got a, a good...

I: Hmmm, I see.

Carl: You know, er that way.

I: Hm-mmm.

Carl: I'm not complaining. I was born with it.

I: Hm-mmm. OK.

Carl: I've got used it. I drove for ooo, I started driving...riding a motorcy...a motorcycle....

I: Do you still drive now, yeah?

Carl: No.

I: No. Ah OK.

Carl: No, because I've had epilepsy.

I: Ah yeah, OK.

Carl: Er, once you've had epilepsy and then you're put onto drugs...

I: Hm. Hm-mmm.

Carl: You can't for a certain period of time.

I: OK.

Carl: And then, er, after a certain period of time fit free...

I: Hm-mmm.

Carl: Your doctor can um write to the er licence people and get your licence reimbursed. Well, I, I did that first time cos it was '92, wasn't it? When I was diagnosed.

Julie: Um.

Carl: When we moved down here.

Julie: '90... '91 when you had the seiz...seizure and you were diagnosed.

Carl: Oh right.

Julie: Because you had to do sick leave before you could leave work, didn't you?

Carl: That's right, yeah. Er, and then um (pause)...sorry, it's my short-term memory.

I: Hm.

Carl: That's what, that's what the stroke's done for me.

I: OK.

Carl: It's given me short-term memory loss...

I: Hm.

Carl: And something else which I can't remember what they said. Um, where was I Julie? Where was I coming from?

Julie: When you had your...when you were diagnosed.

Carl: Oh yeah. I er, so um...then my doctor told me, you know, he, he wrote to them and got...I got my licence back. I drove again until er 2004 when I was working...

I: OK. So, ten years ago.

Carl: Yeah, I was working in Arca er stocking shelves in the eve, in the evening originally, originally with Julie.

I: Arca? Ah OK.

Carl: Yeah.

I: Arca, the one in Brighton Marina?

Carl: Arca. No the one up Hollingbury.

I: Ah OK.

Carl: Er er, because we were living in Stanmer Village at the time.

I: Ah OK.

Carl: And er, anyhow I carried on as I say until 2004 but I'd always...I'd had a bit of problems before 2004 where I was finding sunlight through trees or whatever...

I: Hm-mmm.

Carl: I was finding that a bit disconcerting.

I: Hmm.

Carl: And it was getting a little bit worse.

I: Hm.

Carl: Before I had my stroke. And I gave up driving.

I: OK.

Carl: I, I, I left my car on the driveway. I said I'm not driving anymore because I might have family in the car with me...

R: Yah.

Christopher: Or I might have family in the car...

R: Yah...

Christopher: And hit somebody else.

I: Yah, but even yourself, yeah.

Carl: So, I thought...so I thought, no. And um anyhow, I, I haven't drove since. I could...I could get behind the wheel and drive but um...

I: You don't feel like it is or maybe...

Carl: No. I mean I started, I started driving in the early 60s, 1960s and I drove, as I say, right, apart from that little gap, I drove right the way through until 2004. There we go. That's life.

I: Yah.

Carl: At least...at least I packed up on my own terms.

I: Hm-mmm.

Carl: And not be told to pack up,

I: Hm-mmm.

Pause in conversation as dog does something.

Julie: (Laughs).

Carl: Did you do that? Did you do that? (Talking to dog).

I: Wait, because I don't want to break anything (laughs).

Carl: (Laughs). No no no, it's just, I said, could you do what she did?

I: Ah no.

Carl: No.

Dog does a trick.

I: (Laughs).

Carl: Right.

I: So...

Carl: Is there, is there anything else you want to?

I: Well, I, I don't want to bother too much today because originally like the research design, umm, umm, let's say I, I should come here another two times to ask you other questions if you want about your home, but not too much the first time because it becomes too... a burden like for...

Carl: Yeah.

I: People to answer. And, yah, this time...

Carl: Yeah for me, as you can see it doesn't, (I. laughs) it doesn't, it doesn't worry me.

I: (Laughs). No no no, but it...it's hmm. I like to follow the people like during let's say six months' time to see if there are any changes, because maybe people, I dunno, move or er...

Carl: Yeah, that's right.

I: Or there can be other changes in life.

Carl: Yeah.

I: One, one one single day you don't, you know, notice. And I'm very interested in your Telecare because you are the only one that has all the devices. As I told you, most of the people have only the pendant. So they have the alarm unit and the pendant, that's it. There was one man with another..., a fixed like water um waterproof pendant.

Carl: Yeah.

I: Because he lives on his own so, on his own...and it's interesting work. Can I see the garden maybe? I like gardens.

Carl: Yeah. It's, it's possible um because all this stuff...

I: Hm-mmm.

Carl: Is gradually being...is being upgraded

I: Hm-mmm.

Carl: It's being improved.

I: Yah.

Carl: And things like that. It's possible that they've been able to put me on with having a device like that.

I: Ah. OK.

Carl: Whereas maybe...

I: Hm-mmm.

Carl: Five or six years ago, they might not have been able to have done it.

I: Hm-mmm. OK. Let's see the...

Carl and I get up to go into the garden.

Carl: Two, two steps down.

I: Oh I wish I had a garden. (Carl laughs). I live in such a small place. But you know my dog, look, it's still a problem for me to do this...

Carl: Ah.

I: Because you know he was paralysed.

Carl: Yeah.

I: He had slip disk. He had surgery. Now he can walk around but, you know, for him it's difficult.

Carl: What's your sense of smell like? Have you got a good sense of smell?

I: Sometimes... (indistinct words). Hmm yah.

We move too far from the voice recorder to hear the remainder of the conversation.

End of interview.