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Women Speak Gendering the Mobile Phone

Carla Ganito

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To my daughters, Constança and Madalena,
may they always be free to speak.

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Foreword

The take on Carrie Bradshaw and Co., the celebrated *Sex and the City* ensemble, that opens Carla Ganito's important book on (en)gendering the mobile phone is not a celebrity stunt. In fact, it speaks into the seismic role of popular culture in shaping behavior. And this is a book about technology and its role in the both adapting to and transforming gendered behavior. Clearly, what the *Sex and the City* stunt shows is that women and technology, particularly the mobile phone, have changed together, that they have mutually influenced each other and that there is plenty more to come.

It was indeed a pleasure and a privilege to supervise Carla Ganito's dissertation, now turned into a superb book. She has produced a very relevant study that deepens the understanding of women's relation to technology and her situated findings of the Portuguese case have been a springboard for a revision of well-intended but quite simple readings of this theme, that have truly changed the landscape of Portuguese studies on mobility. The study brought complexity into an otherwise gender neutral discussion of the mobile phone. And wherever complexity comes into play, tensions occur, opening up the space for other questions beyond those sketched out in the initial research design. That is, the research not only denounced the hoax of gender neutrality in tech affordances, as it opened up the field to other identity based discussions on the use, the shaping and impact of technology in daily Portuguese life.

The book draws both from historical-cultural approaches to technology (SST theory) and gender studies to argue against the stereotypical denigration of women in their relation to technology. The culturally held views, constructed by conservative blood and soil ideologies in the early 20th century, criticizing the impact of technology as a strategy of feminization, changed along the century to a radical dislocation of all things female from tech euphoria. Arguably, both *techphobia* and *techeuphoria* worked to denigrate women as tech users. What

is more, the suspicious look at technology as a form of imprisonment instead of empowerment – specifically in the critique of the wired kitchen as a hallmark of submission and repression – also marked certain feminist strands of the second wave. In a certain way, even technofeminism is heir to this critical appraisal of technology, as it clearly draws on stereotypes that these research findings obviously disrupt, namely the notion that technology is a patriarchal instrument for the submission of women. It is against this backbone that this study brings novelty to the world by questioning traditionally held views, both conservative, progressive and radical, on women's usage of technology.

The conceptual architecture of the research and its critical drive seem to clash head on with a pervasive euphoria over the mobile phone and its civilizational possibilities. It is 'A huge opportunity' (p.196) indeed, but one that cannot do away with the complexity of appropriation. The findings resulting from life stories show that the mobile phone is used by women in complex ways. The role they take on both mimicks male professional usages, and reflects the managing of household tasks, maintaining traditional roles within the family, such as that of the housewife as manager or as caretaker. Instead of underlining Manuel Castell's assertion that gender differences tend to disappear as technological access is widened, what Carla Ganito's research shows is that, as far as the mobile phone is concerned, there continues to be a very complex, contradictory even, appropriation of technology. This gendered use both promotes parity and stresses traditional gender roles. In a way, these findings clash with the rather warring, *guerroyant*, and even instrumental approach to technology as a subversion of patriarchy defended by technofeminists.

Another relevant finding is the phatic use of the mobile phone, that is, how this mobile technology is a source of security in the public arena, how it allows women to move freely in the public space and provides a reassuring presence. Remarkably, this trait is indeed a consequential follow-up, a resolution even, of one of the feminist first wave's agenda's: the ability to move freely in the public space. A Russian aristocrat and painter, living in Paris in the last decade of the 19th century, Marie Bashkirtseff, wrote in her journals that "her deepest longing was the possibility of walking alone, to stroll along the Tuilleries gardens, in Paris, and sit on its benches freely'. The desire to be mobile, in fact, to be able to appropriate the social space without being disturbed seems simple, but it is nonetheless a major conquest along the path of the empowerment of women in western societies. Still, the freedom for women to move freely, to

walk alone, cannot be sadly taken for granted in many locations across the globe today.

The book has as yet another remarkable affordance, as its methodological backbone proves that quantitative data do not tell the whole picture, precisely because they do not filter the complexity of female life stages and use women as a homogeneous category. If the intent of research is to show that gender differences are erased with wider access, categories need to be limited not widened. In fact, it invites the reader, the researcher, into questioning the research frame and to do so not by specifically considering that the category women is a marginal or disruptive stance in the work of technology, but simply that gender is one of the many and complex ways which structures the cultural construction of the technological world we live in.

More than an introduction, I see these remarks as an invitation to reading. To reading a well argued, finely written and eye opening book.

Isabel Capeloa Gil

Abstract

This book seeks to provide a better understanding of the relationship between women and technology through an inquiry into the significance of mobile phones in the lives of Portuguese women. Recent theoretical developments suggest too little emphasis has been placed on differences between women themselves. The initial impetus for carrying out this research stemmed from contributing towards meeting this gap by investigating the scope of mobile phones as the basis for the increased technological intimacy of women whilst without reinstating the old binary oppositions between men and women.

The study focuses on the mobile phone as a site where the nuances of women's experiences with technology become visible and on adult women as a meaningful yet underrepresented group. In choosing to conduct a case study of Portugal, I wished to contribute to the development of future cross-cultural analysis on the gendering of the mobile phone.

This work is theoretically grounded in the more recent feminist debates that identify cultural representation and discourse as important carriers of the gender system. In turn, this is rooted in the understanding that the relationship with technology proves a gendered relationship and that gender is socially constructed.

The study is located at the crossroads of feminist studies, cultural studies and new media studies and correspondingly proposing new insights and approaches to the phenomena interconnected with the gendering of mobile phones – drawn from feminist cultural studies of mobile communications. The research methodology therefore aligns with the assumption of a cultural perspective on mobile communications and clearly opting for a qualitative method designed to ascertain the actual meanings of the mobile phone to different groups of Portuguese women across different stages in their life trajectories. This then argues that the role women play proves determinant to their usage of

mobile phones. Moreover, this role is determined by their positioning in the life course and not by their positioning in the cohort.

The key findings resulting detail how, contrary to a theory of some dominant usage for a technology, an Apparatgeist as proposed by James Katz, the mobile phone instead takes on different roles and affordances depending on the women's respective life stages. As embodied objects, mobile phones constitute part of very complex power relationships and, while women truly have conquered mobility in many ways, they still remained constrained in their achievements by an unbalanced gendering of time, space and the expectations about their roles in society.

The book concludes by putting forward several insights for the industry and urging it's actors to move on from a functional perspective to a broader sociocultural perspective and correspondingly developing products and services capable of resonating with women's lifestyles. The book also proposes a new agenda for future work, namely that of post-convergence, and opening up new paradigms such as the life stage and life course approaches.

Introduction

Gender, not religion is the opiate of the masses

Erwing Goffman (Goffman, 1977, p. 315)

In the movie *Sex and the City* (2008), the main character, Carrie Bradshaw, talks to her assistant, Louise, about her new mobile phone replacing the former that she threw into the sea in the aftermath of her breaking up with Mr. Big.

Louise:	Here, time to rejoin the world.
Carrie:	Already
Louise:	Your new number, area code 347-85 - -
Carrie:	Ho – Ho – Hold it. 347? Oh, no. No, I'm a 917 gal, always have been.
Louise:	I tried, it's no longer available. Now, you're 347.

Later, talking on the mobile phone with her friend Samantha:

Samantha:	Samantha
Carrie:	Carrie, Bradshaw, or I used to be.
Samantha:	Talk to me
Carrie:	I'm a 347 area code. How awful is that?
Samantha:	347 is the new New York
Carrie:	Well, I want the old New York with my old 917 and my old will to live.

What establishes the basis for this identification with a mobile area code? Feminist theory maintains that our relationship to technology is a gendered relationship and that "technology itself cannot be fully understood without

reference to gender" (Cockburn, 1992: 32). Should the mobile phone convey an expression of our identity then this also gets gendered. However, how does this gendering occur? The option to apply the verb "gendering" is rooted both in the understanding of gender as socially constructed and the objective of studying gender as a process:

> The shift to using gender as a verb ('to gender', 'gendered', ´gendering', engender') is a reflection of changed understandings of gender as an active ongoing process, rather than something that is ready-made and fixed. In this sense, then, something is gendered when it is, in and of itself, actively engaged in social processes that produce and reproduce distinctions between women and men. 'Gendering' and 'gendered' are concepts which 'signify' outcomes that are socially constructed (Pilcher & Whelehan, 2004: 322).

If society is co-produced with technology, the gender[1] effect cannot be ignored in the design, development, innovation and communication of technological products: "Technology, then, can tell us something we need to know

[1] The distinction between sex (biological characteristics) and gender (socially acquired characteristics) began with second wave feminism. Frequently researchers "use the term gender as a variable in empirical research, although this is simply dichotomized into male or female and thus is really used as a proxy for sex" (Coulthard & Castleman, 2006: 31). Nevertheless, the interest in finding biological differences still persists both in academic productions and in popular culture as evident by the proliferation of books and movies on the subject of what biologically separates women from men. With third wave feminism, scholarship took a critical approach to gender and has acknowledged that gender cannot be reduced to biological sex and that it encapsulates more complexity than the dichotomy of man and women and that there are a wide set of differences accounting for gender differentiation, "The theoretical challenge has been to develop a new approach to gender that recognizes these differences but does not reduce them to biology or simple social conditioning" (Coulthard & Castleman, 2006: 33). One example of the contemporary approaches to gender is West and Zimmerman's (1987) distinction between sex, sex category and gender and the proposal of gender as a "doing". For them, sex is "a determination made through the application of socially agreed biological criteria for classifying persons as males or females" (West & Zimmerman, 1987, p. 127). This determination is the outcome of a social process that allows us to find criteria to classify what constitutes a male or a female. Thus, at birth, we are placed into one sex category and from there on we relate to others based on their displays for the according sex category such as hair or clothing. So, sex category is a proxy for sex. Gender is the process that enables us to display our sex category. Gender is not something we are but something we do. In the same sense, Butler posits gender as a performance (1990, 2004b, 2004c). It is in this scope that we will use the term gender throughout this book, as a concept that has moved from being an assumed natural category to one in which gender is a process, an ongoing unfolding act that is continually shaped and refined: "Gender behavior is not informed by an inner core, biological or otherwise. It is informed by the mundane, everyday need to make sense to oneself and to others" (Coulthard & Castleman, 2006: 34).

about gender identity. Gender identity can tell us something we need to know about technology" (Cockburn, 1992: 42). The emergent "technofeminism" theory proposes a relationship in which technology proves simultaneously both the cause and consequence of gender relations (Wajcman, 2004b: 107). Technofeminism allows us to take into account women's agency and report a more complex account of the gendering process and susceptible to incorporating contradiction. Judy Wajcman defined the challenge in the following terms:

> The literature on gender and technology has grown to become a broad and diverse field. It foregrounds the need to investigate the ways in which women's identities, needs and priorities are being reconfigured together with digital technologies. This opens up fresh possibilities for studies that are more attuned to how different groups of women users creatively respond to and assimilate numerous ICTs in diverse real-world locations (Wajcman, 2007: 295).

Indeed, this research took up Wajcman's challenge and thus provides the following study of just how different groups of Portuguese women responded to and assimilated the mobile phone into their daily lives.

1. Motivation and Contribution

One of the earliest motivations for writing this book stems from empirical observation of how women feel so comfortable using the mobile phone. Younger or older, they all carry one around in their bags and treat it as a mundane object. This observation was followed by statistical evidence that women, and contrary to other technologies, were adopting mobile phones at the same pace as men (Ganito, 2007a). The following step involved questioning this apparent equality in numbers (Ganito, 2008). In fact, much of the previous research on gender and mobile phone use has taken the comparative approach, women versus men (Fortunati, 2009). In this type of research, we end up finding no meaningful differences between men and women. And, in turn, that lack of difference gets left without any explanation. This book strives to fill this gap and contribute with an explanation and thus this research does not center on differences between men and women but rather on women's specific experiences and thereby generating the space for the contradictory effects and meanings held by different groups of women. Hence, this does not deal with the differences between men

and women but rather throws the spotlight on the different meanings held by mobile phones and their trajectory in women's lives.

Previous works (Ganito, 2007a, 2007b, 2008, 2009, 2010b; Ganito & Ferreira, 2009) have also served to conclude that most of the popular views around women's use of the mobile phone are simply not true. One such urban myth tells how Portuguese women make more phone calls than men and that they personalize their mobile phones more through applying contents such as ringtones and wallpapers. Stressing the difference between men and women would only reinforce an essentialized view of gender that has been articulated around politics of power and as stated in the fact that "[…] in virtually all cultures whatever is defined as manly, is more highly valued than whatever is thought of as womanly" (Harding, 1986: 18). Whilst women should not be treated as a homogeneous group, that approach nevertheless remains encapsulated in the binary analysis that most commonly prevails in this field. Gender should be articulated far beyond sexual difference and instead grasped as a social construct. Thus, this research is theoretically grounded in the more recent feminist debate, identifying cultural representation and discourse as important carriers of the gender system. The aim includes contributing to a better understanding of the gender-technology relationship through focusing on the mobile phone as a complex set of relations and affordances.

Another motivation derived from understanding just how women constitute an underserved market. They control the budgets for the vast majority of the product categories, they are a source of innovation and diversity and thus a major potential leverage out of the current financial crisis, hold an increasing share of the labor market and are, contrary to popular beliefs, highly interested in technology. Nevertheless, and regardless of all this potential, most brands and companies do not know how to address women: "[…] too many companies continue to make poorly conceived products, offer services that take up way too much of women's precious time, and serve up outdated marketing narratives that portray women as stereotypes" (Silverstein & Sayre, 2009b: 7). Women get portrayed as some synonym of consumption and are in fact both undervalued and underestimated. In surveys and market research around the world (Parmar, 2007a, 2007b), women describe how patronized they feel whenever either buying technology or the subject technology company advertising. Women do seek far more than the simplistic solutions, fashion oriented designs, pink coloring, or second-grade versions of men's products. Women

want "above all, more time. More understanding would be good too, especially for the complexities that come with playing multiple roles" (Silverstein & Sayre, 2009a: 1).

The need to understand the differences in the nature of women's relationships with technology and mobile phones extends beyond any market orientation. Mobile phones can empower women and, in an increasingly mobile society, not deploying them to their fullest potential may mean being left behind on the margins of the mobile revolution. The mobile phones penetration rates reporting equality in adoption rates nevertheless hide other phenomena that hinder women's full inclusion such as higher male smartphone ownership and the more diversified usage of services and features by men, which includes the mobile Internet. Without their full inclusion, women face the persistence of a gap in the same process that Manuel Castells describes in relation to the Internet. Castells drew attention to the fact that access alone does not solve the problem of the digital divide because we need also to account for differential access: "The centrality of the Internet in many areas of social, economic, and political activity is tantamount to marginality for those without, or with only limited, access to the Internet, as well as for those unable to use it effectively" (Castells, 2001: 247). We can easily argue that the mobile phone today enjoys a similar centrality in the currently prevailing socio-technological system to that of the Internet and the lack of proficient mobile phones usage might trap women in a new digital divide.

Although the mobile phone is currently one of the most pervasive of communication technologies, there has been little discussion framed within a gender perspective and still less from a feminist standpoint. This book seeks to contribute to filling this gap by putting forward a feminist standpoint and striving to attain a better understanding of women's relationship with technology and thereby potentially improving just how their needs are met: "For feminists, research on technology is not just about adding to our academic knowledge, it is also an emancipatory project. One of the questions which it asks of any theoretical or methodological approach is whether and how it can contribute to women's liberation" (Grint & Gill, 1995: 21). This research aims to encapsulate the relationship between women and technology by approaching the mobile phone as a site where the nuances of women's experience with technology become visible and thus resulting in a more complex account of the gendering process of the mobile phone capable of incorporating both contradiction and agency.

2. Research Problem

Past debates about gender and mobile phones have frequently focused on differences between men and women (Fortunati, 2009) and have resulted only in ambiguous, muted or contradictory findings. Hence, instead of proposing another response to the issue of gender difference, this book instead reorients the focus towards discussion of the stability and homogeneity of the category woman. In turn, the research is guided by the following overall research problem:

> What is the meaning of the mobile phone for different groups of Portuguese women in their respectively different life-stages?

The study focuses on adult women as a meaningful group and one that has hitherto been constantly underrepresented in academic and commercial studies of the mobile phone. The field of mobile phone studies, as with much of the new media research, deals primarily with the practices of young people while neglecting adult women as an interesting and powerful group. This research therefore contributes to advancing knowledge about the relationship between women and mobile phones through critically investigating if and why mobile phones increase technological intimacy for women. The initial impetus for this study stemmed from not only discovering just what was hiding behind the sheer numbers behind the strong uptake of mobile phones by women but also ascertaining how mobile phone gendering occurs in Portugal.

In addition, the following focus questions were posed during the fieldwork:

What is the trajectory of the mobile phone in women's lives? How do mobile phones enter women's lives? How do mobile phones evolve by means of use? The research gives voice to women in order to trace this trajectory and analyze just when do women approximate and become distant to the mobile phone.

How does gender get performed through the mobile phone? By addressing the mobile phone as a "social stage" (Caronia & Caron, 2004; Goffman, 1959; Oksman & Turtiainen, 2004), it becomes a site where gender performativity takes place: what presentations of self do women produce in mobile communications and what kind of frame does mobile phone communication enable? The cultural meanings attributed to the device are a part of the social stage on

which women construct meanings of themselves and others and this occurs through the choices they make around the device. What symbolic meanings do they attribute it? What is its gendered nature?

How does the mobile phone affect women's experience of mobility? And what role does the mobile phone play in the feminized temporal crisis, especially in a country such as Portugal that registers one of the highest rates of female employment and thus ensuring serious constraints on women's time? Space and time constitute two of the most important human perceptions. We define ourselves as human beings within the context of a certain time and space. These dimensions are now undergoing transformation as our experience is mediated by mobile technologies. But how is this transformation actually occurring in women's lives? Are women conquering new spaces that were traditionally hostile to them? Do mobile phones affect the regulation of power and the negotiation of a woman's place? Are women empowered with a greater scope for the management of their time?

Finally, can women build a more intimate relationship with technology through the mobile phone and thereby subverting traditional gender-role stereotypes? The stereotype is that women are neither interested nor capable as far as technology is regarded. This study aims to sketch the mobile phone as a location where the fragility of gender stereotypes becomes apparent with this "fragility" also serving as an analytical tool to incorporate contradiction and agency in women's appropriation of the mobile phone.

But firstly why choose the mobile phone and what contribution does a case study of Portugal make?

2.1. The Mobile Phone as a new media

Mobile communication is becoming a way of life
(Katz, 2006).

Currently, we are facing a new technological revolution – a mobile one. Our lives are increasingly performed within a mobile context. The mobile phone is with us, in our every step, from the moment we wake up to its ring to the time we go to sleep, after sending our one last text message, and even during our sleep as it stands (turned on) on our bedside table. There is unanimity regarding

the profound impact of mobile communications on the way that we live, interact with others and see the world (N. Green, Harper, Murtah, & Cooper, 2001; J. Katz & Aakhus, 2002; Levinson, 2004). In sum, we live by the mobile phone and construct meaning through it.

Mobile phones are now part of the lives lived in societies across the five continents and, despite their respective cultural differences, those populations seem to have converged around a common set of practices, concerns and negotiations of time, space and identity concerning the usage of mobile communications (J. Katz & Aakhus, 2002). The mobile phone also presents symbolic aspects in different cultures and groups and, closely related to aesthetics and fashion, presents itself as a cultural artefact. The meaning of the mobile phone is not just utilitarian or instrumental but also emotional and entertaining (Ganito, 2007d). As a cultural object, the mobile phone may be deemed a place of performance. However, what makes the mobile phone an interesting object in the scope of this research is that, in opposition to the telephone and other communication technologies, the mobile phone is perceived as both a highly personal object and an extension of the body (Lasen, 2002). What is new in the mobile phone, as a medium, is its ability to reach a person and not a place (Feldmann, 2005). And, as personal objects, we want them to express our personality and identity and thus we correspondingly personalize them: "The mobile phone could be our personal miniature representative" (J. Katz, 2006: 51).

The mobile phone has become such a part of us that should we lose it, it feels like a lost limb. Losing a mobile phone means losing the connections it enables; the connection to our network of friends, of comfort, our contents, our knowledge. Once again, in the movie *Sex and the City,* when the main character, Carrie, seeks to disconnect from Mr. Big, who had spurned her at the altar, she throws her mobile phone with all his voice messages into the sea and thus symbolically ending her mourning period and readying herself to start a new chapter in life. It is also unquestionable that the mobile phone represents one of the most pervasive technological artefacts of our days. Its adoption rate grew at a speed never before seen (Castells, Fernández-Ardèvol, & Qiu, 2004a). However, does the mobile phone constitute a media in its own right? A media is first of all something that generates a codified transmission of symbols within a predefined framework and structures signs between sender and receiver. Unquestionably, the mobile phone proves a transmitter of symbols. And may we then define it as a new media? Fausto Colombo (1993) defines new

media as all the media of communication, representation and knowledge in which we find a signal and content digitalization and that have multimedia and interactive dimensions. Furthermore, Roger Silverstone (1999) proposes that what is new involves the convergence of several distinctive characteristics in the same technological support: interactivity, globalization, virtualization, digital convergence and many-to-many communication for which the mobile phone with its Swiss knife nature represents the perfect example: "The cellphone allows the reception, like the book or the radio, and production, as the camera. And allows it instantly, at long distances and interactively" (Levinson, 2004: 53). Nevertheless, a new media also means new ways of communicating, new models of social organization, new audiences, new rhetoric and new contents.

> New media can be called that way because they mediate communication and bring novelties that incorporate new technological dimensions that combine in the same platform interpersonal communication and mass media, because they induce change in organizations, new ways of managing time and because they synthesize textual and visual rhetoric and promote new audiences and tools of social reconstruction (Cardoso, 2006: 189).

New media allow for new forms of production, access, new business models, new professions and new forms of culture. Mobile technologies are not new: newspapers, magazines, and radio were already mobile; but the mobile phone brings new affordances that range from safety to the expression of one's identity. Amparo Lasen (2002) also draws attention to the fact that while mobile phones are personal, they are not individual and instead form collaborative tools of network creation and management. Thus, the mobile phone also takes effects as a creative technology enabling users to create and share their contents: pictures, videos, music, games. This multifunctional and multidimensional artefact induces profound changes in our context: new uses of time, new ways of interacting with others and alongside the end of spatial barriers between the professional and private, leisure and work. As with the Internet, the mobile phone simultaneously becomes a media of interpersonal communication with high levels of interactivity and a mass communication media providing services such as mobile television.

Should mobility have become the context of living, we also have to understand gender against that background. The statistics regarding mobile phone handling between men and women may be similar (Hans Geser, 2006) but

differences emerge whether in qualitative usage (Hans Geser, 2004) or in purpose and nature, and as well as in the discourse (D. Lemish & A. Cohen, 2005).

2.2. Portugal as a case study

Being a ubiquitous technology worldwide, some authors defend a global mobile culture with equally global usage patterns. James Katz and Mark Aakhus (2002) argue for an *Apparatgeist*, for a spirit of the machine, that surpasses cultural differences:

> We argue that technology does not determine what an individual can do; rather, it serves as a constraint upon possibilities. Much as a cafeteria menu will not offer infinite meal choices, but rather presents a finite selection of meal courses, so too historically bound technology offers us a flexible menu of extensive, but not infinite, choices. The *Apparatgeist* refers to the common set of strategies or principles of reasoning about technology evident in the identifiable, consistent and generalized patterns of technological advancement throughout history. It is through these common strategies and principles of reasoning that individual and collective behaviors are drawn together (…) Regardless of culture, when people interact with their PCTs they tend to standardize infrastructure and gravitate towards consistent tastes and universal features (J. Katz & Aakhus, 2002: 307, 310).

For Katz and Aakhus, the logic driving personal communication technologies, such as the mobile phone, is that of "perpetual contact". This has proven controversial with authors such as Mimi Ito strongly disagreeing with the *Apparatgeist* theory. According to Ito, technologies are "both constructive and constructed by historical, social and cultural contexts" (Mizuko Ito, Okabe, & Matsuda, 2005). This work also draws on an understanding as to how knowledge is always contingent. Thus, the option for a case study is grounded in the theory of "situated knowledges" (Haraway, 1988) and in the need to specify contexts:

> As gendered subjects, our research is situated within specific discourses, times and places, class relations, knowledge structures, and so on. Thus we do not insist that our research has the answers but insist that we produce knowledge valid within certain contexts and frames of analysis. This applies to the concept of technology as well as that of gender (Berg & Lie, 1995: 343).

Portugal is an interesting socio-technical system for studying the gendering of the mobile phone, namely due to its high mobile phone penetration rate in conjunction with ranking high among the countries where the most women are in full time employment ,and responds to the "need to broaden and intensify the cross-cultural work on mobiles (…) further, extended, systematic and comprehensive studies of the insertion and shaping of mobiles in national cultural contexts" (Goggin, 2008: 358).

3. Theoretical Grounding

Theory is a toolbox where you choose your tool
according to the question and the context
(Lawrence Grossberg, 2008).

This research is rooted in an understanding of "communication as culture" (Carey, 1992b). Carey understands communication as "a symbolic process whereby reality is produced, maintained, repaired, and transformed (…) To study communication is to examine the actual social process wherein significant symbolic forms are created, apprehended and used" (1992b: 23, 34). The implications of this approach reach beyond the range of theoretical and conceptual frameworks able to be brought to bear on the research questions and generating deep implications for research practice. This articulation is not without tension (I. C. Gil, 2006):

> To look at communication as a form of cultural production presupposes the cultivation of a dialectic and semiotic model of interpreting the media as representational acts and situated cultural products. Only thus may they be subjected to a cultural analysis that is also oriented by differentiation mechanisms, constructivity and contingency (I. C. Gil, 2006: 9).

Culture is also that which mediates this analysis of the gender-media relation. Within the scope of feminist media studies, this work understands that "the relation between gender and communication is primarily – although not only – a cultural one – concerning a negotiation of meanings and values that informs whole ways of life" (Zoonen, 1994: 148). The research themes thus lie at the crossroads of feminist studies, cultural studies and new media studies

(figure 1) with the book's original motivation stemming from building a theory of feminist cultural studies of mobile communications. This correspondingly strives to make a strong case for incorporating a feminist perspective into the debate around the social significance of the mobile phone. In the end, the reader will hopefully better understand the gendered practices prevailing in Portugal and thus also laying the ground for further cross-cultural and comparative studies.

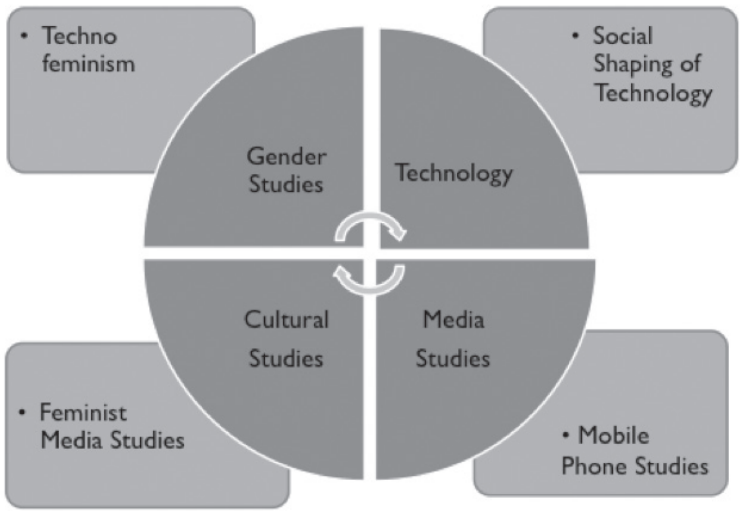

Figure 1. Theoretical grounding.

From the field of cultural studies, the research draws on the contribution of feminist media studies even though two other authors prove central to this research project: Michel Foucault (Foucault, 1977, 1978) and Erving Goffman (Goffman, 1959, 1963, 1971, 1974, 1976b, 1977). Central to Michel Foucault is the concept of "Technologies of the Self". Also central are his considerations as to the self and how individuals – shaped within specific cultural contexts – might come to choose actions that would result in sanctions but nevertheless do so willingly. In turn, Goffman sets out a cultural and symbolic reading of social interaction that has been refashioned to frame mobile communication (Ling, 2004a, 2008a, 2008b). The concepts of "symbolic interaction", "structure" and "agency" and their articulations prove central to this research approach.

From the feminist studies point of view, the research turns to the "techno feminism" concept (Wajcman, 1991, 2004a). Judy Wajcman defends a relationship in which technology simultaneously serves as the cause and consequence

of gender relations in a theoretical framework central to this research. Furthermore, other authors studying the relationship between technology and women also provide major contributions: Donna Haraway (1988, 1991a, 1991b, 2004), Rosi Braidotti (1993, 1994, 1996, 2002a, 2002b, 2003, 2006) and Teresa de Lauretis (1987, 2004) in particular.

This research project applies an interpretative research strategy that draws from theories approaching technology in an interactive fashion such as the social shaping of technology (SST) (MacKenzie & Wajcman, 1985), the social construction of reality (Pinch & Bijker, 1987), and the actor-network theory (ANT) (Callon & Rip, 1986; Latour, 1987). Both the SST and the social construction of reality theories hold a strong influence in feminist theory, especially the technofeminism foundations of this research. ANT, while criticized by Wajcman and by technofeminist authors, provides a strong anti or de-essentialist perspective through concepts such as that of "interpretative flexibility" that do help in framing the trajectory of the mobile phone. The study also borrows from the phenomenology tradition to reinforce the notion of the co-construction of technology, namely the post-phenomenology of Don Ihde (2002), especially the concept of intentionality; Heidegger's notion of "In-the-World" (1962) and the doctrine of "constituting acts".

Phenomenological approaches to everyday life help us understand how meaning gets constructed through human actions. These actions also take on a material aspect with people involving objects in a "mutual co-construction process" (Caron & Caronia, 2007). The mobile phone proves one such object. Technological artefacts mediate our sensorial relationship with reality and by doing so transform our perception. This capacity for transformation is designated by Don Ihde (2002) as "intentionality" and meaning that technologies play an active role in the relationships established between human subjects and the world. Nevertheless these "intentionalities" do not form fixed properties of the artefacts and are instead shaped by the relationships humans establish with them. In the context of different relationships, technologies may reflect distinctive identities. Ihde calls them "multistabilities": the same technology containing different stabilities according to its context of usage. Similar to gender, technology is also conditioned by history, cultural patterns and stereotypes: "We take our tools as "relevant" tools within a range of cultural practices that already reveal it as such or such a possibility to act" (Introna, 2007: 130). All our interactions with the world involve not only our thoughts and our bodily capabilities

but also our past and our context, our social and cultural understanding that contextualizes and provides clues for dealing with whatever catches our attention: "Technics is the symbiosis of artefact and user within a human action" (Ihde, 1990: 73).

Within the scope of gender, Judith Butler reinterprets the phenomenological conception of an "act" to present a socially shared, historically constituted and performative notion of act: "In opposition to theatrical or phenomenological models which take the gendered self to be prior to its acts, I will understand constituting acts not only as constituting the identity of the actor, but as constituting that identity as a compelling illusion, an object of *belief*" (Butler, 2004b: 188). Butler builds on Simone de Beuavoir's claim that "one is not born but rather becomes a woman" (Beauvoir, 1949) to propose a theory of identity as a performative construct:

> If there is something right in Beauvoir's claim that one is not born, but rather *becomes* a woman, it follows that *woman* itself is a term in process, a becoming, a constructing that cannot rightfully be said to originate or to end. As an ongoing discursive practice, it is open to intervention and resignification (Butler, 1990: 33).

As for the theoretical contributions of mobile communications, this has only recently gained recognition as a field and the research has hitherto been dispersed across a wide range of areas of knowledge. The field furthermore still lacks coherent and stable theories susceptible for application as analytical tools. Even the very concept of mobility has become a synonym for very distinct technologies such as wireless computing, new and fluid social realities, space negotiations and traveling, to name but a few (Ganito, 2007a). When compared to other communication technologies such as the Internet, we may easily state that the mobile phone has been neglected, inheriting the lack of interest to which his predecessor, the telephone, had already been subject (Pool, 1977). Nevertheless, even though an international scholarly community is now taking shape with the literature expanding, especially in sociology and anthropology, the cultural approach chosen here still remains rare not only as far as the mobile phone is concerned (Goggin, 2006) but also representing a similarly rare approach in to be considering the mobile phone as a media with its absence spanning both feminist media studies and media studies in general:

While there have been quite some studies attentive to cross-cultural contexts, there has been little work that systematically explores local or international cell phone culture, and its implications for general accounts of culture. In particular, I think there has been a lack of recognition and analysis of how power relations and structures shape cell phone culture (…) Secondly, an important way to approach inquiry into the nature of cell phone communication is to take the medium itself seriously (…) Intimately related to the matter of the medium – or media – are questions of culture. Communication is embedded in media, and ultimately too in the elusive yet nurturing realm of culture. To date, cell phone and mobile technologies studies may have not needed to consider the media dimension of cell phones. However, as the cell phone moves centre stage as a device criss-crossed by media flows and cultural forms and content, borrowing and cross-fertilising from audio and radio cultures, television cultures, print cultures, Internet and other new media cultures, and is increasingly regarded as a mobile medium, media studies approaches are likely to be very helpful (Goggin, 2006: 5-6).

In the absence of a prolific literature, this project makes recourse to authors that adopt a cultural approach to the study of the mobile phone such as Gerard Goggin (Goggin, 2006, 2008; Goggin & Hjorth, 2009), Leopoldina Fortunati (Fortunati, 2001, 2002, 2005a, 2005b, 2009, 2010; Fortunati, Katz, & Riccini, 2003) and Larissa Hjorth (Hjorth, 2005b, 2007, 2009a, 2009b). A seminal reference, even if not directly related to the mobile phone, comes with the "circuit of culture" framework applied in the case study of the Sony Walkman (Gay, Hall, James, Mckay, & Negus, 1997). In much a similar way, we here sketch a gendered "biography" of the mobile phone. As du Gay et al. studied the Sony Walkman "culturally to use it as a clue to the study of modern culture in general" (1997: 8), we also study the mobile phone "culturally" to use it as a clue to understanding the gender-technology relationship. Building on past work on the cultural study of the mobile phone but situated within the scope of technofeminism, this study investigates the possibilities of new forms of gender-technology relations without reinstating the old binary oppositions between men and women.

4. Research Design

Every Inquiry is a seeking.
Every seeking gets guided by what is sought

(Heidegger, 1962: 24).

Informed by the theoretical insights generated by the different fields converging around the proposal of a feminist cultural study of mobile communications, the research was structured around a dialogue between theoretical explorations and qualitative fieldwork as previous research had already made clear that quantifying the overall mobile phone usage trends would return little insight into either the mobile phone biography, its trajectory in women's lives or the social, cultural, institutional and economic factors driving such a trajectory.

This book strives to convey a better understanding of the relationship of women and mobile phones in taking Portugal as a case study. As Yin (1981a, 1981b, 2003) defines it: "A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used" (Yin, 2003: 23). Therefore, the case study method proves highly useful to this particular study wherein we seek to study the relationship between a phenomenon – the gendering of mobile phones – and the context within which it occurs – Portugal.

The research started out with a small preliminary set of interviews of qualified actors in the field: mobile communication companies, advertisers responsible for mobile communication campaigns, mobile phone manufacturers, mobile phone vendors and consumer associations. There followed the construction of categories from these interviews before proceeding with a set of in-depth interviews with women at different life-stages and focusing on adult women as a meaningful, interesting and powerful group, which is otherwise constantly underrepresented in academic and commercial studies of mobile phone usage that commonly take more interest in young people.

The qualitative data was drawn from 37 in-depth interviews of Portuguese women. The option was for semi-structured interviews to enable the questions be navigated as best befitted the flow of the conversation while also picking up on interesting comments and following them up more comprehensively

in keeping with how the research interest lay "in thoughts and feelings that are often not articulated as stable opinions or preferences" (Turkle, 1984: 318) and otherwise not susceptible to capturing by more directive methods. These women were aggregated into seven groups corresponding to the life course approach:

> As a concept, the life course refers to the age-graded, socially embedded sequence of roles that connect the phases of life. As a paradigm, the life course refers to an imaginative framework comprised of a set of interrelated presuppositions, concepts, and methods that are used to study these age-graded, socially embedded roles (Mortimer & Shanahan, 2004: xi).

Previous research on gender and technology seemed to argue that gender differences were less marked in younger populations (Richard Ling, 2001; Rich Ling, 2001) but other authors argue that gender differences in behavior are shaped as much by socialization as by generation (Gill & Grint, 1995; Herring, 2002; Selwyn, 2007; Singh, 2001; Wajcman, 2004). Within the scope of this latter view, gender roles would depend on the respective stages of life women and men are at and thus gender differences will not disappear in the future and "the behavior of adults who currently find themselves at these life stages would in this case be a better predictor of what future adult online behavior will look like than young people's current behavior" (Helsper, 2010: 353).

To define the seven groups or seven life-stages, the study applied a modified version of a Portuguese consumer market research study[2] (Marktest, 2006). This study adopted five variables (marital status, age, occupation, number of people in the household and children and teenagers in the household) to span the life cycles[3] of Portuguese consumers as constituted by eleven distinctive groups:

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[2] The study was based on a Portuguese population sample with 10,093 interviews.

[3] A distinction should be made between life cycle or life stages and life course. The first approach emphasizes ages and stages and the second the transitions between those stages (Allatt, Keil, Bryman, & Bytheway, 1987). The life course approach enables the researcher to account for change and complexity. Manuel Castells described how societies had to replace the biological life cycle by a socio-biological one and proposed that the network society is moving toward social arrhythmia "characterized by the breaking down of rhythmicity, either biological or social, associated with the notion of a lifecycle" (Castells, 1996: 446). As societies become more complex, the use of the life cycle approach has to resort to a more flexible understanding of how the different stages unfold. In this study, we understand that stages and the roles women play in each stage

- Single dependent;
- Young independent;
- Nesting;
- Married with children aged 0-6 years old;
- Married with children aged 7-12 years old;
- Married with children aged 13-17 years old;
- Married with teenagers aged 18-24 years-old;
- Other married coupled;
- Sole caregivers;
- Empty nests;
- Independent over 35 years old.

This research aggregated women into seven life stages:

- Single dependent: Women in this life stage are aged over 18 but both depend on their families financially and still live with them
- Young independent. In the next life stage, young women have gained their financial independence and, even though they may still live with their family, they are able to control their purchase decisions;
- Nesting. The nesting life stage is determined by the beginning of a cohabitation relationship that may or may not be formally constituted as marriage;
- Mothers: contrary to the Marktest study, we have aggregated women with children at different ages in acknowledging some differences in mobile phone usage according to the age of their dependents and whether these are old enough to have mobile phones of their own;
- Single mothers, whether because they have become widows or have divorced or separated from their partners. We were particularly interested

help in better understanding the relationship with technology but that those stages no longer follow a sequential path and that individual turning-points (Hareven & Adams, 1982) along an individual life course should be taken into consideration. This research thus follows an analysis based on trajectories understood as sequences of roles and experiences incorporating social context and individual variation. We also understand that the analysis of these trajectories is based on the principle of agency: "individuals construct their own life course through the choices and actions they take within the opportunities and constraints of history and social circumstance" (Elder, Johnson, & Crosnoe, 2003: 11).

in analyzing the effects of the absence of the masculine part of the couple on the relationship between women and technology;
- Mature independent: those around the age of 35, have no children and have either never been involved in a co-habitation relationship or have divorced or separated from their partners;
- Empty nests: women whose children have left home and who have either retired or whose professional careers have entered a period of stagnation.

This last stage has also become more complex to define and correspondingly displays far greater variability: "while old age once considered a homogeneous last stage of life (…) it is now a highly diverse universe, made up of old retirees, average retirees, able elders, and elders with various degrees and forms of disability" (Castells, 1996: 446).

To select women for the seven groups, we applied a convenience sample. This is a non-probability sample that deploys criteria of relevance to the research. This sample type was adopted as it best fits the "ideal types" analytical strategy. However, while individuals are representative of a certain type and the interviews do provide heterogeneity, this does not represent a probabilistic sample and thus only strives to be statistically representative. The women interviewed were also subject to identification by "snow-balling" from a pool of urban heterosexual women.

Max Weber produced the notion of "ideal types" in association with the construction of pure cases designed to illustrate a particular conceptual category. Within the scope of Max Weber's work, these ideal types are fictions even while in this research, and in accordance with a similar strategy deployed by Turkle to study computer cultures (Turkle, 1984), real cases were isolated in order to serve the same function – to highlight particular aspects of the gendering of the mobile phone. The ideal type analysis was carried out in keeping with the method deployed by Marc-Henry Soulet (2002) following the methodological proposal for an interactive approach to qualitative research design by Joseph Maxwell (1999).

5. Structure

The first section of the book sets out a theoretical framework and cultural history of feminism and technology. Chapter 1 identifies the theoretical contributions that serve as the foundations for this research project before chapter 2 focuses on analysis of previous studies on the gendered use of the mobile phone and providing an overview of the research state-of-the-art and pinpointing the gaps along the way.

The second part of the book is devoted to the investigation of the Portuguese Mobile Society. This draws on qualitative data to render visible women's experiences of the mobile phone. The aim is to provide a suitable answer to the first research question: What is the trajectory of the mobile phone in women's lives?

After mapping the territory, part III the book puts forward analysis of gendering mobile phone practices in Portugal according to four categories: performance through color, personalization and sound; space; time and fragility. Part III relies heavily on contributions from the fieldwork, in particular the in-depth interviews. Nevertheless, this also spans those insights returned by other studies already conducted on gender and mobile phones around the world (Hans Geser, 2006; Hjorth, 2005a; J. Katz & Aakhus, 2002; Lasen, 2005; D. Lee, 2005; M. Lee, 2006; D. Lemish & A. Cohen, 2005; Richard Ling, 2001; L. Rakow & Navarro, 1993; Shade, 2007; Steenson, 2006). In chapter 1, and by adopting the concept of performativity, we propose a view of the mobile phone as a place of acting and of gender construction and transformation. In turn, this argues there are specific gender acts as conceived by Butler (2004b) related to mobile phone usage that contribute to gender construction and transformation. This further explores how mobile phone's characteristics of disembodiment give rise to new gender (bending) performances. Chapter 2 and 3 resort to the ground work of Manuel Castells (2003) on the transformation of time and space to answer questions as to whether women can conquer new spaces through the mobile phone that were traditionally hostile to them and what roles the mobile phone actually plays in women's negotiations of time. This section concludes by looking at the relationship between women and mobile phones through the lenses of fragility and proposes that mobile phones are not only a privileged site for men and women to perform gender identity but also a location where the fragility of gender stereotypes becomes

apparent. The research resorts to theory on gender stereotypes to portray the mobile phone as a fragile technology both as a fragile product in itself and as a producer of social fragility. The contention is that the mobile phone unveils the fragility of gender stereotypes in the relationship between women and technology.

The book concludes by suggesting some further implications of the research findings for cultural and media studies approaching the gendering of the mobile phone and for the industry regarding the development of gender sensitive mobile technology, services and contents and, above all, making clear that the gender gap is not about pre-conditioned competences but rather about opportunities and choices.

I Part Framing Female Mobility

I'd like to be just like my Dad
He's handsome and he's keen;
He knows just how to drive the car,
And buy the gasoline

I'd like to be like my Mom,
She's pretty and she's nice;
She knows just how to make the bed,
And cook things out of rice.

Song lyrics, "Mister Rogers' Neighborhood", 1960s

The lenses we choose definitely produce a distinct picture of the object at hand. In the same sense, the way we see the world alters our own perception of it. This research is theoretically grounded in the more recent feminist debate about gender and technology. This section's first chapter is devoted to tracing that feminist debate and clarifying the theoretical approaches deployed throughout the subsequent analysis.

Choosing a frame also means choosing what goes in that frame and what does not. This first chapter analyzes the feminist debate and not the whole theoretical discourse about women and technology that might be traced back as far as Aristotle. The aim is to clarify just how the debate has evolved from analysis of the exclusion of women in the seventies to the intersection between cultural studies, communication studies and feminist studies where our knowledge is now situated.

1. Feminism and Technology

Women's usage of technology has historically been presented as dystopic[1]. Women are culturally considered as the guardians of nature (Hopkins, 1998). They are the ones who become pregnant; they raise the children and their usage of technology correspondingly gets viewed as a corruption of nature. For eco-feminists, such even gets considered as metaphorical rape.

> In the philosophical and literary discourse, noted Adorno and Horkheimer, it is common to identify women with nature. This shows up as the repressed subject of the bourgeois male that gives the female body two functions: represent a site of exploitation and a potential utopia. The bourgeois subject is always male and women a male projection. The utopia is conceived as a reunification of the body and the bourgeois subject, which would mean reconciliation with "nature" (Silveirinha, 2008a).

Mary Ann Doane describes this as a process of transference by which the anxieties regarding technology are transferred to the feminine (1999). The author provides several examples from cinema. The first is that of the robot Maria in Fritz Lang's *Metropolis* (1926) and the corruption of motherhood. At the end, "the machine is returned to its rightful place in the production, the woman hers in reproduction" (p. 25). The notion of technology tainted motherhood is presented in recent films such as *Alien* (1979), *Aliens* (Cameron, 1986) and *Blade Runner* (Scott, 1982).

The concept of what technology is also relegates women´s role to a secondary level. The Western imaginary of technology is related to technologies generally wielded by men. Those technologies generally used by women do not even get classified as proper technologies, kitchen appliances for example: "in virtually all cultures whatever is defined as manly, is more highly valued than whatever is thought of as womanly" (Harding, 1986, p. 18).

Women's spheres simply did not make up part of the picture: "The statistics reveal no technological activities which are strictly feminine. One can, of

[1] We could trace the association of science to masculinity and nature to femininity back to the Enlightenment when the legacy of Aristotelian philosophy defined women as passive and intellectually inferior to men. The Scientific Revolution that started out a process of dominating nature also implied a domination of women. The set of values associated with femininity were deemed inferior and of less inherent value to those associated with masculinity.

course, name activities that are strictly feminine, e.g., nursing and infant care, but they fall outside the range of technological pursuits" (Murdock and Provost, 1973, p.210 cited by (Stanley, 1998, p. 17)).

Men and manly technologies are the norm to which women have to comply. "The discussions about the concept of technology are important because technical artefacts used by mainly women tend to be excluded, reinforcing the connection between men, masculinity and technology" (Berg & Lie, 1995, p. 340). Whenever technology used by women does gain acknowledgement, it still does not get valued in the same way. As technologies enter everyday life, they seem to lose their research interest and women, as the vast majority of users of massified technology, do not get a part in the picture.

The feminist debate itself has ranged from viewing technologies as part of a patriarchical frame, shaped and mostly deployed in destructive and oppressive ways, to the view incorporating technology as a liberating tool for women.

According to Don Ihde, the root behind this polarization between utopian and dystopian visions of technology derives from a contradictory wish: we simultaneously want the power of transformation that technologies bring along with a natural experience and in total transparency. An impossible synthesis because technologies are not neutral:

> The actual or material technology always carries with it only a partial or quasi--transparency, which is the price for the extension of magnification that technologies give. In extending bodily capacities, the technology also transforms them. In that sense, all technologies in use are non-neutral (Ihde, 2002, p. 504).

Technological artefacts mediate our sensorial relation to reality and by doing so they transform our perception. This capacity for transformation is designated by Ihde (2002) as "intentionality" meaning that technologies play an active role in the relationship between us as the world. However, these *intentionalities* do not constitute any fixed properties of the artefacts; they are shaped in the relationship that humans establish with them. In the context of different relations, technologies may take on distinctive identities. Ihde calls them "multistabilities": the same technology displays different stabilities, according to its context of usage.

Technology has proven a controversial issue in feminist thinking. We shall trace the diversified approaches to gender and technology even while "feminist thought resists categorization into tidy schools of thought" (Tong, 2009, p. 1).

We cannot speak of any chronological evolution and labels are themselves controversial and contestable. Nevertheless, this controversy does also serve the nature of this research and its interdisciplinary approach.

1.1. Early Feminist Theories on Technology

Early feminist theories were profoundly pessimistic about the role technology would play in women´s lives. Their main concerns revolved around access and stereotyping. The association of technology with masculinity was so deeply rooted that even feminists did not at first contend it.

With *Liberal Feminism,* technology itself was not questioned and rendered neutral. In a certain sense, this represents an extension of first wave feminism as the struggle was all about equal opportunities in education and employment related to science and technical skills. The argument was that women, given the same opportunities, were able to perform as well as men.

> The most important goal of women's liberation is sexual equality, or, as it is sometimes termed, gender justice. Liberal feminists wish to free women from oppressive gender roles – that is from those roles used as excuses or justifications for giving women a lesser place, or no place at all, in the academy, the forum and the marketplace. These feminists stress that patriarchal society conflates *sex* and *gender,* deeming appropriate for women only those jobs associated with the traditional feminine personality (Tong, 2009, p. 34).

The problem arising with this argument stems from how women were effectively compromising their own identities to gain access to an otherwise masculine world. This degendering process remains even today still very much at play in the corporate world. Young women, still building their careers and with much to prove, choose their technology not according to their own personal tastes but rather to conform to the aesthetics of the male standard. In *Why Can't a Woman Be More Like a Man?*, Bethke Elshtain makes a strong case against liberal feminism for wanting women to aspire to a male norm and to correspondingly reject or undermine biological differences, in particular mothering.

> Mothering is not a "role" on par with being a file clerk, a scientist, or a member of the Air Force. Mothering is a complicated, rich, ambivalent, vexing, joyous activity, which is biological, natural, social, symbolic, and emotional. It carries

> profoundly resonant emotional and sexual imperatives. A tendency to downplay the differences that pertain between, say, mothering and holding a job, not only drains our private relations of much of their significance, but also over-simplifies what can and should be done to alter things for women, who are frequently urged to change roles in order to solve their problems (Elshtain, 1981, p. 253).

In turn, the attention of social and radical feminisms turned to how gender was embedded into technology. Radical feminism, no longer wanted to find a place for women in the status quo, on the contrary, radical feminists wanted to combat the system: "radical feminist perceived themselves as revolutionaries rather than reformers" (Tong, 2009, p. 48). Nevertheless, whilst *radical feminism* celebrates women´s differences, *socialist feminism*, influenced by Marxism, is concentrated on the machinery of production and how women get exploited by the introduction of technologies representing only male power.

Socialist feminism first brought along an anti-technology attitude even while later dismissed. "Technology was seen as socially shaped, but shaped by men to the exclusion of women" (Wajcman, 2007, p. 290).

Another response comes from ***Eco-feminism*** that reproduces the association of women and nature and perceives technology as a masculine technology of power and control over women. This approach derives from a biological understanding of women´s abilities – a woman's way of doing things along with female values of pacifism and nurturance. Eco-feminists were particularly critical of military and medical technologies for their exploitation of the female body. Although this approach celebrates women´s natural characteristics, it nevertheless reifies the essentialistic view of the gender-technology relationship. It also leaves no room either for agency or for transformation as every technology becomes another mere instrument of patriarchal society with rejection proving the only answer for women.

Radical feminism was later criticized for reinforcing gender essentialism and for failing to account for agency. Feminism then began building on the concept of a culturally constructed gender; women's alienation from technologies is thus explained, not in essentialist terms but rather as a historical and cultural construction. This approach found its predecessor in Simone de Beauvoir´s work and her refusal of biology as destiny. In Simone de Beauvoir own words, "one is not born, but rather becomes a woman" (1989, p. 267).

> One is not born, but rather becomes, a woman. No biological, psychological, or economic fate determines the figure that the human female presents in society; it is civilization as a whole that produces this creature, intermediate between male and eunuch, which is described as feminine (Beauvoir, 1989, p. 267).

A landmark in this transformation was Candance West and Don Zimmerman´s "Doing Gender" (1987). In this groundbreaking article, West and Zimmerman propose gender as something that is generated out of interactions with others: "Rather than as a property of individuals, we conceive of gender as an emergent feature of social situations: both as an outcome of and a rationale for various social arrangements and as a means of legitimating one of the most fundamental divisions of society" (p. 126).

The association of technology and masculinity thus becomes perceived as resulting from a complex set or relations and processes and historically evolving. Authors such as Cynthia Cockburn describe technologies as gendered (Cockburn, 1985, 1992; Cockburn & Ormrod, 1993). In what she describes as a "circuit, technology operates under a double logic – as both sign and source of women´s oppression" (Grint & Gill, 1995, p. 10).

As a result of developments in the studies of technology, namely the Social Shaping of Technology Approach (MacKenzie & Wajcman, 1985), technology was attributed a symbolic dimension.

1.2. Feminist Media Studies

With second wave feminism began the systematic work of media analysis as sites of gender construction.

> Second wave feminism is a term used to describe a new period of feminist collective political activism and militancy, which emerged in the late 1960s. Whereas the first wave lobbied for women's enfranchisement via the vote and access to the professions as well as the right to own property, the second wave feminists talked in terms of "liberation" from the oppressiveness of a patriarchally defined society. The key site for struggle was the female body itself – its representation and the meanings attached to the bald fact of biological difference" (Pilcher & Whelehan, 2004).

In a famous dialogue of the movie *Who Framed Roger Rabbit* (1998), Jessica Rabbit, the femme fatale, meets detective Eddie Valient and presents herself as a victim of a patriarchal production and representation system:

Jessica Rabbit:	You don't know how hard it is being a woman looking the way I do.
Eddie Valiant:	You don't know how hard it is being a man looking at a woman looking the way you do.
Jessica Rabbit:	I'm not bad. I'm just drawn that way.

The critique of this form of female representation has played an important role in the feminist debate ever since the beginning of second-wave feminism. There was a growing awareness among feminists that social and political power was won and lost in representation. The argument had been that "the way women perceived themselves and were perceived was ineluctably shaped by the ways in which images of women were constructed and communicated to the population at large" (Pilcher & Whelehan, 2004, p. 135). There was absolute conviction that material images affect people, their attitudes and behaviors As Debord says, "in the society of Spectacle only what appears exists, and the major media have something approaching a monopoly over what appears to the general population" (Hardt & Negri, 2000, p. 340) and the media have become the centre of feminist critique.

> The expectation of feminist cultural and media critique is a "univocal, confident and unswerving denunciation of popular culture, both for its sexist and oppressive portrayal of women and for the devastating effects it is supposed to have on women and men (Zoonen, 1994).

The media were accused of maintaining gender stereotypes on the assumption that audiences would not only become affected by sexist content but that such also contributed to the acceptance of the dominant ideology. This incorporated an assumption of the female audience as passive individuals, completely immersed and incapable of recognizing the ideological maneuvers embedded in texts. Most methodologies applied were based on text analysis with representation presented as a matter of distortion.

The first major works at the intersection of media and feminist studies came about in the 1960s and 1970s. Betty Friedan (1963) in *The Feminine Mystique* denounces sexism towards women in mass communication media through a

portrait of sex roles in women's magazines. A few years later, Germaine Greer (1971) in the *Female Eunuch* also condemns the media for encouraging people to believe that happiness was found in heterosexual romance. Another landmark comes with Gaye Tuchman's (1978), *Hearth and Home: Images of Women and the Media,* where she presents the symbolic annihilation of women by the mass communication media, which stereotype women as sexual objects, housewives or in domestic or caring jobs. She connected the notion of stereotype with that of the "symbolic annihilation of women", meaning that culture production and media representation ignored, excluded, marginalized and trivialized women and their interests (Silveirinha, 2008b). Indeed, Tuchman effectively took the concept further and did not restrain the concept of stereotype to a false image or a distortion of reality and instead seeking to understand the whole process of (re)presentation.

Media analysis studies in the 1970s were, according to Silveirinha (2008b), limited by three factors: the exclusive recourse to content analysis, the inherent model of communication and the assumed relationship with reality. They centered on the ways the media conveyed meaning and not on the way they produced meaning. The idea of direct effects was also present: media effects were direct and independent of any audience capability. Audiences were thus held to be unable to construct meaning. Finally, there was the assumption that there was some reality independent of the communicative process and that might be presented and that the media should in some way manage to reflect this reality.

> Many analyses tend to generalize about the stereotypical nature of media content being insensitive to the specificities of genres, media and audience experiences (…) This type of research assumes an unequivocal meaning and effect of media content, with stereotypical images leading more or less unproblematically to stereotypical effects and traditional socialization patterns. The audience is thus implicitly conceptualized as a rather passive mass, merely consuming media messages (Zoonen, 1994, p. 18).

Feminist theory about the relationships between women and technology was thus pessimistic and left little room for change, transformation or women´s agency within the scope of that process.

Meanwhile, in the 1970s, two new ideas took shape: the growing awareness that there are differences shaping the female subject; that representations are not expressive of any prior reality but instead actively constitutive of reality

itself. Henceforth, the study of representation was thus able to reach beyond stereotypes:

> In the end of the seventies, it seemed clear that the importance of studying women's images did not reside in the question of stereotypes as false and simplified models of women, but in the fact that these images had inscribed a cultural dimension destined to make all believe that they represent what women are or should be. What mattered now was not only to fight sexism and invisibility but also to understand them (Silveirinha, 2008b, p. 118).

At the intersection with cultural studies, several feminist and communication scholars brought about a new vision of the role of media and of technology. In *Feminist Media Studies (1994),* Liesbet van Zoonen looks at media production, texts and audiences from a feminist perspective. This book now constitutes a worldwide point of reference for feminist studies of the media.

> (...) meaning is understood as constructed out of the historically and socially situated negotiation between institutional producers of meaning and audiences as producers of meaning. Meaning is no longer conceptualized as a more or less consistent entity, but is seen as contradictory, divided and plural, in other words polysemic" (Zoonen, 1994, p. 27).

The focus no longer lay on whether stereotypes did or did not reflect reality but rather on media representations regarded as key ways of understanding how reality actually gets constructed. The construction of meaning is viewed as a contradictory process, divided, plural and polysemic:

> Audiences should be understood as producers of meaning instead of as mere consumers of meaning taking up prescribed textual audience positionings. This production of meaning can only be understood in its everyday context, which is, in its turn, located within social and power relations that circumscribe the potential of audiences to make meaning (Zoonen, 1994, p. 108).

It thus became important to analyze not only media content but the whole system of (re)production and consumption. Should society undergo co-production with technology, the gender effect cannot be ignored in the design, development, innovation and communication of products. New methodologies began to get applied: semiology and ethnography. Without setting aside the role of stereotypes for better understandings of media representations of

women and men, it instead became necessary to grasp the entire extent of the Circuit of Culture and, thus, the way media functions:

> Although we cannot despise the images of identity produced by the media, an analysis of representations cannot limit itself to quantifying stereotyped images. Not only are new and wider frameworks necessary but also other methodologies that, without disregarding the contents, do not limit themselves to quantifying them" (Silveirinha, 2008b).

Teresa de Lauretis in *Technologies of Gender: Essays on Theory, Film, and Fiction* (1987) presents the limitations of "sexual difference" and proposes gender as a product of various social technologies including among which media such as television, mobile phones, radio and newspapers. The Lauretis concept of "technology of gender" is rooted in Foucault's "technology of sex" itself defined as "a set of techniques for maximizing life". Lauretis takes this still further and proposes that the technologies of gender represent concerns in and of themselves: "Not only how the representation of gender is constructed by the given technology, but also how it becomes absorbed subjectively by each individual whom that technology addresses" (Lauretis, 2004, p. 223).

> The construction of gender goes on today through the various technologies of gender (e.g., cinema) and institutional discourses (e.g., theory) with power to control the field of social meaning and thus produce, promote, and "implant" representations of gender. But the terms of a different construction of gender also exist, in the margins of hegemonic discourses. Posed from outside the heterosexual social contract, and inscribed in micropolitical practices, these terms can also have a part in the construction of gender, and their effects are rather at the "local" level of resistances, in subjectivity and self-representation (Lauretis, 2004, p. 18).

With third wave feminism, media analysis has overcome a simplistic and one-dimensional vision to embrace contradiction and diversity: "Only from a better understanding of what is at stake in mediated representation could we promote the production of alternative and counter hegemonic discourses and voices" (Silveirinha, 2008b, p. 127).

1.3. Postmodern Feminist Approaches

Third-wave feminism brings about a rupture with former feminist thought: "postmodern feminists reject any mode of feminist thought that aims to provide a single explanation for why women are oppressed or *the* ten or so steps *all* women must take to achieve liberation" (Tong, 2009, p. 270). Hence, there is more room for more diversity, change and transformation.

The new feminist approaches, coinciding with the new digital technologies and digital media such as the Internet and mobile phones, have given rise to cyberfeminism and a more optimistic and sometimes fetishist view of technologies. Authors such as Sadie Plant, Sherry Turkle and Donna Haraway contend that digital technologies, and particularly their characteristics of disembodiment, transform them into a liberating tool for women.

Recent feminist studies also began theorizing gender not as any prior reality already inscribed into technology but rather as relational construct, a performance, a doing (Butler, 1990, 1993, 2004a, 2004c; Candace West & Don H. Zimmerman, 1987).

1.3.1. Cyberfeminism

Digital technologies and the new media have heralded new possibilities – a new era of empowerment and liberation. Some even contended that these were feminine media and women were particularly well equipped for a networked world (Haraway, 1991a, 1991b; Plant, 1997, 2000; Turkle, 1984, 1995). The work of cyberfeminists, especially Donna Haraway, proved pioneering in highlighting women's agency and thus also becoming very influential among feminist technoscience scholars.

In *Simians, Cyborgs and Women: The Reinvention of Nature (1991),* Donna Haraway articulates the concept of "cyborg" in conjunction with feminism. The cyborg is a creature of a post-gender world that ends with all dualisms, namely the polarity of man and woman, a hybrid of human being and machine which heightens our sense of connection to our tools. She proposes that women must embrace technology as feminist politics and defends the need to reach beyond critiquing representation and to actually incorporate the female subject in all its multiplicity and subjectivity.

In science and technology, Haraway perceives the potential to create new meanings and new entities. Provocatively, Haraway proposes the cybernetic organism as an alternative to a pure and deified vision of women and capable of ending all dualisms.

> There is nothing about being female that naturally binds women together into a unified category. There is not even such a state as 'being' female, itself a highly complex category constructed in contested sexual scientific discourses and other social practices (Haraway, 1991a: 231).

Although Haraway identifies science as a capitalist product arising out of a male dominated military, colonialist and racist society, she nevertheless sees in cyber technology the possibility for feminine emancipation, and thus refuting the anti-technological stance adopted within most feminist critiques that perceives science and technology as patriarchal tools for oppressing women.

The metaphor is especially powerful in its hybridism. An image of "transgressed boundaries, potent fusions and dangerous possibilities which progressive people might explore as part of much needed political work" (Haraway, 1991: 154). Thus, many feminist authors in their revisitation of the gender-technology relation have turned to the cyborg. As an example, Anne Balsamo's work builds on the cyborg theory to articulate bodies, technology and identity:

> Cyborgs are hybrid entities that are neither wholly technological nor completely organic, which means that the cyborg has the potential not only to disrupt persistent dualisms that set the natural body in opposition to the technologically recrafted body, but also to refashion our thinking about the theoretical construction of the body as both a material entity and a discursive process... the cyborg provides a framework for studying gender identity as it is technologically crafted simultaneously from the matter of material bodies and cultural fictions (Balsamo, 1996: 11).

Critics charge cyberfeminism with being merely a different kind of technological determinism, even if an optimistic one. Empirical work on the level of women's participation in the new media reveals that the situation has not dramatically improved and that old stereotypes still remain in place in environments such as virtual worlds. Attributing new technologies with the power to emancipate women also restores a certain form of essentialism. Should we argue that women are better prepared for a networked society then we are

also implying that there is something in their nature that makes them better prepared. This furthermore also opens up debate over just what is "new". Wajcman advises against the "danger of confusing new developments in theory with new developments in the things that theories are about" (Wajcman, 2004a, p. 55). If technology and gender are co-produced and that has always been the case, there then should be nothing exceptional about digital technologies.

1.3.2. Performativity

Judith Butler seeks to convey how you become a woman through performance. In her essay *Performative acts and gender constitution: an essay in phenomenology and feminist theory (2004b),* Butler articulates that gender is not just a social construct but rather a kind of performance, a show we put on, a set of signs we wear, as some costume or disguise – hence as far from essence as can be. According to Butler, there is no connection between a person's sex and a person's gender: "sex by definition, will be shown to have been gender all along" (Butler, 1990: 8).

Judith Butler proposes that gender construction takes place through "Gender Acts". A concept rooted in Simone de Beauvoir and the phenomenological doctrine of "constituting acts". In this post-structuralist analysis, the categories of "man" and "women" are not "real entities but rather constructions or representations, achieved through discourse, performance and repetition" (Pilcher & Whelehan, 2004: xi).

> Certain kinds of acts are usually interpreted as expressive of a gender core or identity, and that these acts either conform to an expected gender identity or contest that expectation in some way. (…) Body becomes its gender through a series of acts which are renewed, revised, and consolidated through time (Butler, 2004a).

Butler expands the phenomenological conception of an "act" to present a notion of act that is not only socially shared and historically constituted but also performative. *Gender acts* are conditioned by history, cultural patterns and stereotypes. Being performative, gender acts are not individual but collective; they imply a social structure and an audience. They do not represent any reality and, on the contrary, they constitute reality through performance, opening up

possibilities of transformation, of constructing a distinct reality, they are "open to the process of parody, mimicry and rescripting, and hence to the possibility of subversion" (Puwar, 2004: 150).

These acts involve actual usage of technology. "Individuals demonstrate their gender identity in part through their daily use of an object" (Wajcman, 2009). This means that the same artefact take on different meanings to different individuals and different cultures: "There is enormous variability in gendering by place, nationality, class, race, ethnicity, sexuality and generation and thus women´s experience of ICTs will be diverse" (Wajcman, 2007: 294).

Butler questions the way feminism has itself conceived of women as a unitary category. Butler points out that in their attempts to unite women, former feminist approaches did not take into account cultural differences or different priorities which "gives rise to a hierarchy of demands (or charter) which as Butler shows produce their own exclusions" (McRobbie, 2005: 72).

Many consider that Butler puts forward a pessimistic view as to the capacity for transformation and the space for agency: "Her controversial suggestion that the very notion of "woman" is overtly essentialist has generated the criticism that without this category we cannot name and work to transform sex-based oppressions" (Deveaux, 2000: 15). In an answer to those critics, in *Bodies That Matter (1993)* Butler further developed her theories to reinforce the possibility of agency and social change.

Although Butler´s work has not been thoroughly applied in accounts of the media, popular culture or technology, her landmark contributions do help us think how technology is involved in the negation of boundaries of gender and gender identities. Nevertheless, Butler's work also represents a constant reminder that we should not take these boundaries lightly. She departs strongly from a radical transformation viewpoint such as that provided by cyberfeminism:

> There is indeed some degree of panic that she be understood as arguing that gender is a matter of choosing what to wear (or what not to wear). Butler adamantly wants to part company with those who endorse the existence of individual agents, endowed with some capacity to bring about change in the gender system, as this is to ignore the way in which the effects of power define the contours of possibility for opposition or transgression. I would suggest that this anxiety on Butler's part (...) is based on her understanding of how profound, embedded, entrenched, and absorbed through time are the normative dimensions of stable gender identities in the name of the reproduction of heterosexuality

> as a foundation of the social order. And so deep is the repudiation of gender instability as a possibility (...) that momentary or fleeting transgressions or even organised social movements which seek to defy these regulative effects, must be understood also in terms of how the dominant order constrains such 'reiterations' and provides the conditions of existence for evasions or displacements so that hegemonic normativity is renewed, indeed revitalised, by such enactments (McRobbie, 2005: 87).

1.3.3. Nomadism

Following Deleuze's (1977) nomadic counter-discourse, Rosi Braidotti builds up a critical discourse of resistance to hegemonic theories, patterns and practices In a discourse rooted in difference:

> Postmodernity is about a new and perversely fruitful alliance between technology and culture (…) We rather need more complexity, multiplicity, simultaneity and we need to rethink gender, class and race in the pursuit of these multiple, complex differences (Braidotti, 1996).

Braidotti strives to find middle ground between the polarized accounts of the effects of new media technologies and advises against any utopian view of digital technologies as inherently liberating for women. She correspondingly notes the persistence of stereotypes, of a gender gap and indeed increasing polarisation between the sexes.

> All this to say that I wish to take my distance equally from, on the one hand the euphoria of mainstream postmodernists who seize advanced technology and especially cyber-space as the possibility for multiple and polymorphous reembodiments; and on the other hand, from the many prophets of doom who mourn the decline of classical humanism. I see postmodernity instead as the threshold of new and important re-locations for cultural practice. One of the most significant pre-conditions for these re-locations is relinquishing both the fantasy of multiple re-embodiments and the fatal attraction of nostalgia (Braidotti, 1996).

To account for variability, Braidotti proposes the "nomad" concept as an attempt to "explore and legitimate political agency, while taking as historical evidence the decline of metaphysically fixed, steady identities." (1994, p. 5). Reality, according to Rosi Braidotti, is never fixed. In: *Nomadic Subjects.*

Embodiment and Sexual Difference in Contemporary Feminist Theory (1994), *Metamorphoses. Towards a Materialist Theory of Becoming* (2002), and *Transpositions. On Nomadic Ethics* (2006), the author sets out the subject as a nomadic figure constantly undergoing negotiation across culture, space and time. Differences exist and not only between genders but also within genders. Braidotti says this about the concept of *difference:*

> If emancipation means adapting to the standards, the measures, the values of a society that for centuries has been male-dominated, accepting unquestioningly the same material and symbolic values as the dominant group, then emancipation is not enough...Putting women in, allowing them a few odd seats in the previously segregated clubs is not enough. What is needed is for newcomers to be able to be *entitled* to redefine the rules of the game so as to *make a difference* and make that difference felt concretely (Braidotti, 1994: 241-242).

1.3.4. Technofeminism

Also serving as a bridge between the earlier polarized positions in the feminist debate comes the work of Judy Wajcman. In *Feminism Confronts Technology* (1991) and *TechnoFeminism (2004a)* the author defends a relationship in which technology proves a simultaneous cause and consequence of gender relations. This research project draws substantial contributions from her work.

Technofeminism builds on the insights of cyberfeminism alongside the theories of social shaping of technology and constructivism whilst also avoiding both technological determinism and gender essentialism (Wajcman, 2009). This thus also constitutes a more integrated approach that stresses how gendering occurs throughout the entire life trajectory of an artefact and from design to consumption. Former theories were overly focused on but a single step in this process.

Technofeminism builds on STS scholarship to allow for agency and fluidity to be taken into account in analyzing the gendering of technology. Concepts such as "interpretative flexibility" (Pinch & Bijker, 1987) and "domestication[2]"

[2] The "domestication" framework proves particularly useful for highlighting the complexity of processes for incorporating technology into everyday life. In common with the social shaping of technology (STS), this recognizes the agency of users in adopting artifacts into their lives. Usage also relates to context and to the collectivity, rather than the individual: "The emergence of the

(Silverstone & Hirsch, 1992) reinforce the idea that technology is not pre-determined and that its trajectory is unpredictable. Technologies are susceptible to subversion, and reinterpretation whilst also resulting in unanticipated and unintended uses. The final result becomes a product of a social and material dialogue. François Bar's work[3] on the technological appropriation of the mobile phone holds particular relevance to this matter.

> "Interpretative flexibility refers to the way in which different groups of people, involved with a technology can have very different understandings of that technology, including different understandings of its technical characteristics. Thus users can radically alter the meanings and deployment of technologies" (Wajcman, 2000: 450).

The problem with the social construction of technology theory from the feminism perspective stems from technologies acquiring a stable meaning when relevant groups accept them with women not usually making up part of those groups and hence gender analysis generally gets overlooked.

Another useful approach derives from "actor-network theory" (ANT) developed by Michel Callon, Bruno Latour and John Law (Callon & Rip, 1986; Latour, 1987; Law & Hassard, 1999). ANT enables the researcher to take the material reality into account and consider the artefact part of the network but with its own agency. The artefact also acts according to a script even while this script once again remains unfixed with different actors able to translate it in different ways.

The research aim here include applying a feminist perspective to mobile studies and for that purpose this chapter has sketched the feminist debates about the gender-technology relationship. Early feminist theories generally offered a pessimistic view about the role technology played in women's lives. Technological determinism and essentialism were pervasive in these initial approaches with the solutions resulting ranging from the prescription of women

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domestication Kept represented a shift away from models which assumed the adoption of new innovations to be rational, linear, monocausal and technologically determined. Rather, it presented a theoretical framework research approach, which considered the complexity of everyday life and technology's place within its dynamics, rituals, rules, routines and patterns" (Berker, Hartmann, Punie, & Ward, 2006, p. 1).

[3] Website for the *abaparu* project: http://abaporu.net/

fighting for their place in the technological male arena through to the complete refusal of technology all together.

With the development of digital technologies that stress brain over muscle and with the onset of a process of "individualization" and "reflexivity", new feminist approaches developed, especially cyberfeminism according to which the limits to gender based differences would disappear amongst the promises of disembodied worlds.

However, what soon became evident for feminists such as Judy Wajcman was that the promise of digital freedom represented no more than a new form of determinism, even if this time striking an optimistic register, and thus called for a middle-ground approach conveying a "more materialist analysis of gender and technology" (Wajcman, 2004a, p. 106).

Other post-modern feminist contributions stress the multiplicity of identities and the different responses of women to technology. These contributions, such as that of Rosi Braidotti, endow the scope for resistance, subversion and parody to be taken into account: "It also foregrounds the idea that women want to participate in technoscience on their own terms, and not as surrogate men" (Wajcman, 2004a, p. 113). One example of that capacity for subversion is the precursor of the mobile phone with studies of the telephone, detailed further in the next chapter, revealing how women subverted the inscribed or prescribed uses. The telephone was designed with the intention of serving business purposes but was soon taken up by women for social interaction, kinship and breaking their isolation.

It may only be ironic that so much of post-modernity is articulated around the feminine when women still have so little voice in a reality sometimes hidden under the illusion of equal access and sex equality as proves the case with the mobile phone. Adopting a technofeminist perspective enables analysis of the mobile phone to reach "beyond the discourse of the digital divide to connections between gender inequality and other forms of inequality, which come into view if we examine the broader political and economic basis of the networks that shape and deploy technical systems" (Wajcman, 2004a: 121).

2. On Gendered Use of the Mobile Phone

You just don't understand men and women in conversation

(Tannen, 1991).

Phenomenological approaches to everyday life help us to understand that meaning is constructed through human actions. These actions also take on a material aspect. Don Ihde in *A Phenomenology of Technics (2002)* points out how "technology turns out in most cases to have a fairly large number of ways in which that technology is or can be used and these are never restricted to what designers intended". The author also presents technology as a "symbiosis of artefacts and users" within a certain context. People thereby involve objects in a "mutual co-construction process" (Caron & Caronia, 2007). And gender forms part of that co-construction: "Feminist politics cannot do without an understanding of the power of technology, and technology studies will remain rather stodgy without the tensions and pleasures of gender politics" (Berg & Lie, 1995: 347).

Although the mobile phone currently stands out as one of the most pervasive of communication technologies, there has been little discussion framed from a gender perspective and even less from a feminist viewpoint. As many researchers do point out, usage figures between men and women are similar (Hans Geser, 2006) even while differences do emerge when considering qualitative usage (Hans Geser, 2004), its purpose and nature as well as in the discourse applied (D. Lemish & A. Cohen, 2005).

2.1. Lessons from the Telephone

The telephone may be pinpointed as the predecessor to the mobile phone with some interesting parallels and insights to be drawn from studies on the gendered usage of the telephone.

Amparo Lasen (2005) developed a historical comparison of the two technologies: the telephone and the mobile phone. Lasen describes how for decades the industry ignored the telephone as an object of socialization and even came to consider this an undesirable facet, expressing fears of less than appropriate

contact between men and women from different social classes. The same pattern was again repeated with the introduction of the mobile phone that first targeted professional uses and men due to the punitive consequences for nonconformity to cultural and historical patterns: "Those who fail to do their gender right are regularly punished" (Butler, 2004a: 157). Marvin (1998) notes how the constraints of the producers and promoters of technology extend beyond technical or financial issues and are in fact rooted in their interpretations of uses conditioned by their own respective histories and cultures:

> Technologists are not solely members of professional groups; they are social actors with a variety of loyalties that may not always be perfectly congruent with professional goals. Even their professional roles cannot be fully understood without attention to their efforts and aspirations, as members of families, citizens of countries and possessors of gender and race (Marvin, 1998: 232).

These repeated patterns of introducing technology into the market do raise the question as to the role of users in the circuit of technology right from design to adoption. Madeleine Akrich (1992) introduced the concept of *script* to draw attention to how designers establish rules about both just who should use the technology and how they should use it. These rules may be inscribed into the technology but this does not mean they are affixed forever:

> A technology turns out in most cases to have a fairly large number of ways in which that technology is or can be used and these are never restricted to what designers intended or what is thought to be the outcome of the technology. This means that any given technology will end up having different kinds of uses in different kinds of contexts most of which cannot even be predicted (Albrechtslund, 2003).

The social construction of technology approach and the notion of *interpretative flexibility* help understand that users do have voices. Hence, while gender scripts are inscribed into the technology, there remains room for not abiding by those scripts and for renegotiating their meanings and uses (Berg & Lie, 1995). "Gender Scripts" (Oost, 2003:196) provides an analytical tool that adds the gender dimension to the concept of "Script" (Akrich, 1992, 1995). This is seemingly grounded on the conception that users and their contexts are embedded by designers in technological objects.

This also gets built into discourse as the vivid electric journals example clearly puts it regarding the inappropriate usage of telephones by women: "talkative women and their frivolous electrical conversations about inconsequential personal subjects were contrasted with the efficient, task oriented, worldly talk of business and professional men" (Marvin, 1998, p. 23).

Women were completely disregarded as users whether for their technical incompetence or for being frivolous. There was an underlying moral panic as to loss of male control over women.

The book edited by Ithiel de Sola Pool (1977) on the social usage of the telephone not only notes the lack of studies of this technology but also how little consideration was given to gender. The first analyses were concerned with labor issues within the scope of socialist feminism (Maddox, 1977). Women did play an important role in the development of the telecommunications industry itself. The industry provided new opportunities for women to work outside the home whilst their low wages helped maintain the telephone system during its early introduction years. Hence, we again border on irony with women's uses of the telephone dismissed as trivial even while women were operating the switchboards to make the system work. Young males were recruited in a very initial phase but were soon dismissed as inadequate. Indeed, the position got promoted as highly respectable (Martin, 1991).

Companies prescribed specific uses for the telephone: business, appointments, protection, shopping and personal conversations. Nevertheless, women still continued to make the telephone serve their own needs and with time that impacted on the way the industry addressed this technology (C. S. Fischer, 1988; S. Fischer, 1992). Among those unintended practices carried out by women was talking to friends, neighbors and relatives and thus both breaking their isolation and saving time:

> The unexpected uses of the telephone practiced by women influenced the companies' notion of its value. This technology, which had been conceived exclusively for business, seemed to have alternative uses that were worth considering. However, among these uses, only those approved by management were retained. For instance, collective calls, regularly practiced by women on party lines, were gradually replaced by private lines and telephone calls between two parties. However, of the practices retained by the companies, some had been created by women. One of them was the use of the telephone for sociability (Martin, 1991: 154).

The first contradictions regarding the telephone were soon noticeable: The telephone began to be presented as an emancipating tool for women, liberating them from household chores with women also beginning to use the telephone to entail bolder conversations with men. However, women still seemed to simultaneously reproduce the same passive behavior expected of them in a public outing with girls warned not to initiate phone conversations with boys (Martin, 1991, 1998; Marvin, 1998). In these studies, there were hints that technology might hold different meanings for different women but that were not subject to scrutiny. Nevertheless, Michele Martin's study of the telephone made an important contribution in conveying a feminist perspective that "shows that women may contribute to the distribution of a technology despite their underrepresentation as direct contributors to its development" (Martin, 1991, p. 172). At this time, a strong association between women and talking on the telephone may have taken root with popular opinion beginning to convey the perception that women talked too much on the telephone.

In his study of women's use of the telephone in North America, Claude Fischer (1988; S. Fischer, 1992) explored gendered differences in telephone usage from a domestication perspective. His focus was on how men and women differed and he suggested three answers for this gender differentiation, primarily reflecting the greater level of social usage of the telephone by women. Those reasons were: women were more isolated than men, women took on the social role of social managers and, finally, women were more comfortable using the telephone because they were in fact more sociable: "Women developed a greater affinity for the residential telephone than men did, because it was more useful to them in overcoming isolation, in performing their network tasks, and in pursuing an activity that they typically both enjoyed more and were better at than men – sociable interaction" (C. S. Fischer, 1988, p. 226). The study also introduced the telephone as pressing women to perform more "socioemotional labor – to advise, comfort, organize" (p. 227) even if this surely does not prove transversal to all women and applicable only to those in relationships that have to perform that function for their own relatives and for those of their spouses. Thus, this study does lack in any differentiation between women.

The work by Rakow and Navarro (Lana Rakow, 1992; L. Rakow & Navarro, 1993; L. F. Rakow, 1998) resulted from an ethnographic study of women's use of the telephone in a small Midwestern community. Their study is of particularly relevance to the field not only because it offers an account of the different

experiences of women with the telephone but also attributes them voices. According to Rakow, the telephone may be regarded as both "gender work" and "gendered work" indicating a contradictory meaning with women stating that although the telephone brought to them a high level of gratification and support it had also added to their social responsibilities:

> The telephone is a site at which the meanings of gender are expressed and practiced. Use of the telephone by women is both gendered work – work delegated to women – and gender work – work that confirms the community's beliefs about what are women's natural tendencies and abilities" (Lana Rakow, 1992: 33).

Ann Moyal (1989, 1992) provided an Australian case study for the gendered use of the telephone. It was the first national survey and commissioned to substantiate the development of new telecommunications policies. Similarly to Rakow's study, Moyal adopted a qualitative and ethnographic methodology based on women's experiences and voices – "hence no male control sample was employed" (Moyal, 1992, p. 52). The study results stressed the importance of kinship with the telephone flagged as a "vital social support system" (p. 56). The study brought out the voices of different women and the different roles the telephone played in their lives: it showed how for aged women the telephone would "offer more effective functional communication or a sense of personal participation and well-being" (p. 60); and how important the telephone became for migrant women and who "with little or no telephone experience in their countries became significant telephone users" and "how it relieved them from a sense of imprisonment". In general, the study stressed the important role the telephone played in women's lives and that the "feminine 'information flow' may be seen to represent a critical social support system that underlies family, community and national development, and to be, arguably, as important to national well-being and progress as the more politically visible and highly rated masculine business information flow" (p. 67).

In all of these studies, the telephone was demonstrated as having evolved from a technology promoted and prescribed for men to a technology that became associated with women. Women became heavy users especially of the residential telephone (Adler, 1993; Frissen, 1995; Maddox, 1977; Moyal, 1989, 1992). Nevertheless, this feminization of the telephone carried with it a misconception of women's uses that were subject to dismissal as gossip, chit-chat,

frivolous and thus the object of reprisal or jokes (Aronson, 1971; C. S. Fischer, 1988; S. Fischer, 1992; Martin, 1991, 1998). Another interesting conclusion from all the studies encapsulates how the role of "hello girl", dating from when women operated the switchboards, seems to have prevailed across time with "women functioning as operators in the home" (Frissen, 1995: 85). Women reported being responsible for answering the phone and making all the social or family related calls: "traditionally it is considered to be women's work to put time and energy into the maintenance of close social relationships" (Frissen, 1995: 86). Thus, it is here that the notion of "gendered work" (Lana Rakow, 1992) becomes important with the author noting how women regarded the telephone as part of their job, as part of their responsibilities. This feminization of the telephone might account for the lack of research on the theme: "as a domesticated and feminized technology, it also became a "mundane" technology (...) Technical apparatuses that do not fit descriptions of being "heavy", "advanced" / "high-tech" or "dangerous" and are, instead, "familiar", "easy to use" and predominantly used by women can find it difficult to retain their definition as technologies" (Lohan, 2001: 189-190).

As for the impact on gendered space, the telephone wielded major change to women's lives. It began by offering them a new opportunity to work outside the house and, as its social uses took off, it offered women a "neighbourhood" (Moyal, 1989, 1992) and a new sense of safety and support. It also enabled them to "commute between public and private spaces" (Frissen, 1995: 90) and especially for working mothers now able to keep track of their homes while at their places of work in a role that experiences further enhancement by the mobile phone.

With the introduction of the mobile phone, researchers began analyzing how some of the gendered telephone patterns would translate to a mobile device with one of the first conclusions identifying how old patterns were being repeated, specifically the refusal of sociability as an interesting usage and the targeting of men and instrumental purposes rather than women and social uses (Frissen, 1995). As we evolve from the telephone to the mobile phone, it will be interesting to notice just how many of these characteristic prevail. Can we speak of a feminine culture of the mobile phone? Does it play a similar role in women's lives? Is it still a tool of socialization? Does it also convey a sense of safety and security?

2.2. Men and women on the phone

Similar to the telephone, the mobile phone has broadly been overlooked as a study object in communication studies and especially from a gender perspective. However, in the last few years we have seen the emergence of a mobile phones literature and the corresponding development of a mobile studies field. From the gender perspective, we may divide the studies about gender and mobile phones into two categories: the studies centered on differences between men and women, and studies that offer a more complex account of gender practices. Among the former, there is an abundance of quantitative studies that provide a mapping of the gender-related differences and the status quo. Within them, the mobile phone gets described as an egalitarian technology and standing in contrast to other technologies where the gender gap still persists as is the case of the Internet and computer usage. After a first introductory phase, where women and even girls lagged slightly behind (Ling, 2001b), and generally justified by men´s positive attitude towards innovation (Ling, 2001a), women, as with the telephone, soon became heavy users and surpassing men in certain cultural contexts and usages. In a comparison between mobile and Internet users, women exceeded males in all categories of mobile phone use (Rice & Katz, 2003) while also seeming to favor written communication (Hans Geser, 2006). In Portugal, as regards gender, there is no meaningful difference between individuals owning a mobile phone with a 50/50 split between men and women even while amongst those without a mobile phone females form a majority: 57.7% women against only 42.3% men (Cardoso, Gomes et al., 2007). According to the same survey, this group of non-users mostly consists of the elderly, female in gender, with low levels of education and generally inactive.

Studies centered on the differences between men and women return contradictory views with some author claiming that the mobile phone, and as similar to other domestic technologies, only reinforces traditional roles; with others instead presenting it as a tool that has levelled the playing field for men and women; whilst still other authors propose the mobile phone as a disruptive technology for gender roles. Most of these however do not account for this contraction.

More recently, some research has reached beyond the simple statistics concerning gender or the polarization between men and women and explored the differences between women themselves.

2.2.1. Reinforcing Traditional Roles

One of the main themes interrelated with the reinforcement of traditional roles conceives the mobile phone as following the same general pattern as the telephone with women applying it for maintaining social networks and coordinating family life (D. Lemish & A. Cohen, 2005; Ling, 2001b; Lohan, 2001; S. Plant, 2001; L. Rakow & Navarro, 1993).

The work of Rakow and Navarro (1993), one of the earliest studies about gender and mobile phone usage, emphasized the mobile phone as a reinforcement of traditional gender roles, especially for women as mothers and described remote-control mothering as taking on a traditional gender choreography:

> The cellular phone seems to be an extension of the public world when used by men, an extension of the private world when used by women. That is, men use it to bring the public world into their lives. Women tend to use it to take their family lives with them wherever they go (1993: 155).

The mobile phone also comes under consideration as a safety and security tool for women (D. Lemish & A. Cohen, 2005; Ling, 2001b; S. Plant, 2001). This trend falls within the scope of fulfilling the traditional gendered behavior of women: "It appears that, at the broadest level, mobile phones provide females with a sense of security that is considered less necessary for men. In this sense, mobile communication technologies are becoming a tool associated with protecting "vulnerable" groups such as women, children and elderly people." (M. Castells et al., 2004: 45). In Rakow and Navarro's study, they conclude that:

> Cellular telephone technology may appear to provide a solution to two important problems faced by middle class, suburban women: the problem of safety and security in a violent and mobile society, and the problem of carrying out family responsibilities across barriers of time and space (L. Rakow & Navarro, 1993: 155).

In Portugal, women are reported as turning to the mobile phone to feel safe when alone in a public space (Gustavo Cardoso, Maria do Carmos Gomes, et al., 2007). In a study about new media uses by young people in Portugal (Gustavao Cardoso, et al., 2007), girls seem to obtain their first mobile phones at a younger age: 75.6% of girls have their first mobile phone at thirteen or less compared to 69.4% of boys (173); Parents also seem willing to support the

phone expenses of girls more (168) and for a higher percentage of girls their parents provide them with their first mobile phone (174).

Another difference attributed to women in mobile phone usage portrays a more emotional and social approach contrary to men that instead stress instrumental uses. Rich Ling (2001b) in his examination of the adoption of mobile telephones by teenagers in Norway identifies how the "symbolic value of the device is more important for men than women" and thus men focus on ownership and women on usage. Thus, even among teenagers, generally regarded as the source of the most innovative usages and transgressions, there seems to be a desire for rules and abiding by those rules. They represent guardians of codes and subjects of permanent evaluation and criticism (Caron & Caronia, 2007). Boys and girls in turn reproduce gender stereotypes with boys more prone to exploring new functionalities and features while girls tend to focus on communicational functions (Gustavo Cardoso, Maria do Carmos Gomes, et al., 2007; H. Geser, 2006b; J. Katz, 2006; Skog, 2002).

In Portugal, the national report on mobile phone usage *Mobile Portugal* (Gustavo Cardoso, Maria do Carmos Gomes, et al., 2007) also points to the same traditional gendering: men stressing instrumental phone uses while women adopt it as the medium for personal and emotional exchanges. Men seem to make more diverse usage of the mobile phone functionalities available and more likely to own 3G phones: 54% of men compared to 46% of women. For all functionalities (alarm clock, calculator, e-mail, MMS, games, applications) the rate of male utilization is always greater to that of women (52). The same holds true for services, although global usage remains very low. Men are also more prone to try out new functions: 30.2% of men against 22.8% of women express interest in using the mobile phone for banking operations (59).

Dependency also gets strongly associated with women: "significantly more women than men have assimilated the mobile phone as a central component of their personal existence: by integrating it into their lifestyle or by becoming so dependent on it that life without it has become unimaginable" (Hans Geser, 2006, p. 21). This dependency would translate into a different level of emotional attachment. In one study about new media habits among young people in Portugal (Gustavao Cardoso, et al., 2007), a slightly higher percentage of girls own mobile phones and they tend to value it over other media (167). A higher percentage of girls, 36.6%, say their life would change for the worse if they spent two weeks without their mobile phone with boys back on only 22.5%

(175). Girls also express a greater level of difficulty over turning the mobile phone off (177).

Another trend that transfers from the telephone to the mobile is undervaluing women's conversations. When women talk on the mobile, this is still labeled gossip (E. Green & Singleton, 2007) with females furthermore deemed to talk too much on the phone while most quantitative surveys in fact point to men as making more calls. Women themselves echo these arguments in self-descriptions as more "chatty" and even conveying a certain sense of guilt (E. Green & Singleton, 2007; D. Lemish & A. Cohen, 2005; Lohan, 2001).

On the supply side, mobile phone companies also seem intent on designing phones to match traditional female and the male cultures (Skog, 2002) and embedding in the technology what Ellen van Oost designates "Gender Scripts". These can "illuminate how gendered user representations are an inextricably part of designing artifacts" (Oost, 2003, p. 194). Mobile companies and marketers strive for a feminization of the mobile phone but do so by deploying gendered stereotypes, reinforcing femininity and hetero-normativity (Shade, 2007) and stressing fashion and the mobile as an accessorizing practice (Mortberg, 2003). Nevertheless, research demonstrates that, as regards personalization through a picture, a screensaver or a ringtone, actually men tend to personalize their mobile phones more: 55% compared to 44% of women (Gustavo Cardoso, Maria do Carmos Gomes, et al., 2007).

2.2.2. Leveling the Playing Field

Gender is seldom an important determinant in explaining differences in mobile usage. As few statistical differences are found, researchers instead tend to place greater stress on class, education and especially age.

Hans Geser *(2006)* proposes that the mobile phone "levels differences between boys and girls" contrary to other technologies that tend to heighten them based upon his empirical study. Limited in scope and restricted to vocational schools in Zurich (Switzerland) and therefore comprising of young apprentices, mostly aged between 17-21 whether in the fields of construction or office administration as well as fashion and design, no broader generalizations may thus be drawn.

Leslie Shade (2007) applies a similar argument in putting forward an American case-study deploying the concept of "Gender Scripts" (Oost, 2003) to analyze the feminization of the mobile phone in North America. He argues that the mobile phone is transforming the way women deal with technology by leveling differences between the sexes. While true that women do seem to approach the mobile phone in a more masculine manner, the inverse is also true. Sadie Plant (2001) takes a similar line when stating that mobile phones are making men more chatty and communicative. According to this author, there seems to be a feminization of the mobile phone and not in the sense explored in usage of the telephone where women became the main users but rather in the sense that uses and practices generally attributed to women (social, kinship, emotional) are also being performed by men. Boundaries are therefore not just being crossed but also being blurred.

However, whilst gendered differences may not emerge out of statistical observation, they are still manifest in discourses. The case study of Israel (Cohen, Lemish, & Schejter, 2008; D. Lemish & A. Cohen, 2005; D. Lemish & A. A. Cohen, 2005) also notes this difference between methodological approaches and practices and discourses. By combining interviews with observations of actual practices, the authors were able to identify the contradictions between the quantitative analysis of habits that pointed towards a feminization of usages and the data from interviews which described the mobile phone as another site for men and women to perform their traditional gendered identity:

> The discrepancy between the conventional construction of gender in discourse about the mobile phone versus the actual practices associated with it that indicate a process of feminization raises a host of new questions regarding the gendered nature of technology and processes of social change. It brings forth once again the argument that gender continues to be constructed through performance and social practices even in situations that are gradually becoming less gendered. Normative discourse seems to remain one such central mechanism, apparently quite resistant to change. It is not only the behaviors themselves that should concern us; it is also the discourse about them through which identity is constructed and negotiated (Cohen, et al., 2008: 167).

In the case study of Israel (Cohen, et al., 2008), the authors make a parallel with the evolution of the telephone and the role played by women in establishing a "calling culture". In their case study considered the mobile phone as

playing a role in the "blurring of gender differences in the actual use of communication technologies" (p. 163). However, the authors do also identify three dimensions where women seem to differ from men: firstly, men stressed the importance of the device more than women, secondly, men adopted a more active role towards the function of the mobile phone in their lives while women displayed a more passive role: "Men tended to talk more about being more able to access others (...) women, on the other hand, discussed themselves in a passive tone as they were more concerned about others being able to reach them" (p. 166) and thirdly, only women were concerned about applying the mobile phone to facilitate household management.

The same phenomenon was also reported in Norway (Nordli & Sørensen, 2003) where in observation men and women displayed equal skills but "there were gender differences in the way our male and female informants talked about their skills in using the mobiles. As expected, several women were quite modest in their assessment of their own skills and tended to see their husbands or boyfriends as more skilled".

2.2.3. Performing New Meanings

We may expect, as women intensify their usage of technological artefacts, "a transformation of women's interest stereotypes" (Skog, 2002). Could women be building more intimate relationships with technology through the mobile phone? Are they are learning to accept new media? Are they becoming producers? Are they performing new cultural meanings? Nevertheless, examples of such performances of new meanings still remain scarce.

On the transgression side, we may turn to the study of camera phone utilization among young South Korean women (D. Lee, 2005). Lee describes how this population sample appropriates the camera phone for their own cultural production and despite the prevalence of advertising portraying males snapping pictures of women. In this context, women are applying mobile phones to perform new meanings:

> (...) these women are not the mere owners of camera phones, but performers who create various cultural meanings. They develop a more intimate relationship

with technology, challenge the convention of gaze, give meaning to what is taken, and circulate their own expressions (D. Lee, 2005: 12).

2.3. Accounting for complexity in mobile gender practices

Arnold in his paper *On the phenomenology of technology: the "Janus-faces" of mobile phones (2003)* adopts this metaphor to open up the "possibility of the presence of tension and contradiction in accounts of sociotechnical outcomes" (p. 231) and approaches the specific case of the mobile phone to exemplify the "Janus faced performance of technology". The author provides us with an analytical frame that allows for taking irony and paradox into account. This also collapses "the distinction between the human and the technical as well as the cause and effect" (p. 240) and thus humans and mobile phones constitute a "sociotechnical hybrid" whenever the phone is in use. As regards gender, Arnold presents the mobile phones as both "boyish" and "girly", "matriarchal" and "patriarchal": "In the case of the Mother the mobile phone might well mediate the performance of a traditional maternal role, but it also mediates her performance in the role of contemporary breadwinner" (p. 250).

Larissa Hjorth's (Hjorth, 2005b, 2007, 2009a, 2009b) study of the Asia Pacific region stands out as a rare example of analysis approaching the differences between women. Her analysis mainly centers on how personalization practices translate women's identities and their levels of intimacy with mobile technologies. Although focusing on a single sub-group, older women, Sri Kurniawan's study of older women's mobile phone practices also derived from the belief that it is important to study differences among women (Kurniawan, 2006). The United Kingdom case study of women above the age of 60 helps to dismiss the stereotyped notion that older women hold no interest in mobile technology. On the contrary, this study reports "that older women are keen to understand, enthusiastic to learn and quite well informed about some advanced features of mobile phones such as MMS (multimedia messaging services)" (Kurniawan, 2006).

However, most studies carried out on gender and mobile phones adopt a comparative approach, masculine versus feminine, that has inhibited a more comprehensive understanding of the changes that might be occurring. Some scholars have recently addressed this issue, in particular Larissa Hjorth (2005b, 2009a, 2009b) and Leopoldina Fortunati (2009).

In this dichotomist approach, the gender category is not problematized and instead rather serves as an operative tool of analysis. They present the mobile phone as holding contradictory meanings whilst neither accounting for nor addressing this contradiction. Thus, we find studies that present the mobile phone as reinforcing traditional roles (D. Lemish & A. Cohen, 2005; Lana Rakow, 1992; L. Rakow & Navarro, 1993), others offering an account of the mobile phone as leveling the playing field between men and women (Hans Geser, 2006; Shade, 2007) and finally those conceiving it as a tool for performing new meanings (D. Lee, 2005).

This approach reinforces the concept of women as a uniform category and does not enable any diversity between women to be taken into account. A few studies do however put forward a more complex account of mobile gender practices. The precursor could be found in Arnold's work that presents the mobile phone as both "boyish" and "girly" (2003) and followed by Larissa Hjorth's analysis of the Asia and Pacific region (Hjorth, 2005b, 2009a, 2009b) and the Sri Kurniawan study of older women and mobile phone usage (2006).

The research inscribed in this more complex account of gendered practices strives to answer Leopoldina Fortunati's challenge: "it is time to develop research that is specifically designed to study the role, meaning, representations, models, and practices of use of the mobile phone beginning from women's life conditions" (Fortunati, 2009, p. 23). These studies are also rooted in the observation that mobile phones are not neutral objects but rather "embody and articulate social and cultural relations" (E. Green & Singleton, 2007, p. 522) and that social relations are also gender relations with the gendering of those relations inscribed into the device from its design to end appropriation (Oudshoorn & Pinch, 2003; Oudshoorn, Saetnan, & Lie, 2002).

II Part Mapping the Portuguese Mobile Society

It is the framework that changes with each new technology and not just the picture within the frame.

(Marshall McLuhan, 1955)

Gender is contingent and knowledge about gendering practices is situated (Haraway, 1991), thus Part II of this book provides knowledge about the context of the gendering practices under scrutiny.

> As gendered subjects, our research is situated within specific discourses, times and places, class relations, knowledge structures, and so on. Thus we do not insist that our research has *the* answers but insist that we produce knowledge valid within certain contexts and frames of analysis. This applies to the concept of technology as well as that of gender (Berg & Lie, 1995: 343).

Part II begins by proposing a portrait of Portuguese women. Portugal went through a long dictatorial regime that ended on 25th April 1974 with a political revolution that opened the country to democracy and a global market economy. This transition was marked by important social and cultural changes that impacted strongly on women's lives. According to Gustavo Cardoso Portugal remains in transition to the network society (Gustavo Cardoso, 2008) and characterized by increasing levels of education, civil participation and adoption of technology. In this portrait, women are given a voice by telling their life-stories based on interviews with 37 women across seven different life-stages.

1. Gender Practices in Portugal

> *Gender inequality has many distinct and dissimilar faces (…) what is needed is not just freedom of action, but also freedom of thought – the freedom to question and to scrutinize inherited beliefs and traditional priorities. Informed critical agency is important in combating inequality of every kind, and gender inequality is no exception.*
>
> Amartya Sen (2001)

The discussion around gender equality in Portugal is a theme for which a single chapter scarcely does justice. Nevertheless, any discussion of the relationship between women and technology necessitates such an attempt.

Portugal experiences a paradox situation as regards women's rights and feminist movements. Women not only do not identify with the feminist ideals but also do not acknowledge the gender discriminations that still occur in their everyday lives such as not being promoted because they are burdened down with child care activities or household management (Vicente, 1998). This also proved the case with the women interviewed. When asked if they ever felt discriminated against for being a woman, the vast majority refused to be labeled as victims of discrimination although their accounts of daily routines, needs and expectations for the future clearly convey an unequal gender division of labor and traditional patterns of self-represenation. One clear example of this contradictory discourse is Sofia's interview where, in a first instance, she denies ever being subject to discrimination but then talks about her divorce and how she felt weighed down by all the family responsibilities and also describing a traditional gendered division of tasks and responsibilities:

> *I never felt discriminated against for being a woman. Not here where I have been working for a long time, nor when I used to work as a lawyer. I think a big part of being discriminated has to do with the way we handle things. Fortunately, we are in a country where we have equal rights for men and women, not only in the law but also in daily practice. Discrimination is restricted to small and marginal clusters of society (…) After my divorce, my routines are the same because I used to do everything anyway, we never used to share family responsibilities. He did the taxes and the rest was up to me. As for technology, that was always a masculine task around the house but, curiously, when he left I decided to buy a*

> *computer, which, for me, is something very strange.* (Sofia, 47 year-old, human resource manager, divorced, mother of two teenagers, sole caregiver)

There is also a view of feminism as old-fashioned and anti-feminine as expressed in an interview[4] with Vera Nobre da Costa, head of a multinational advertising agency, cited by Ana Vicente:

> I am completely anti-feminist, I am feminine. I like to dress well, I like clothes, I love to go shopping, I like shoes and bags so I don't have an anti-feminine attitude. Of course I think it is unfair to set different salaries for men and women but that's not feminism, that being human. It's unfair, it's like setting different salaries for a tall or a short man. What happens is that a lot of women have constraints because it has happened to me not being able to promote a woman because they could not guarantee that they would be able to leave at eight or nine p.m. because they had to pick up their kids from kindergarten or make dinner for their husbands. I think women are to blame because respect cannot be given, it has to be earned (…) The battles of feminism no longer matter that much, women already have the right to vote and there is a larger involvement in public life (…) If I had kids, honestly, I probably would not be where I am today (1998, pp. 18-19).

How in fact do Portuguese women live? What are the constraints they face in everyday life? By probing into the structures of society, family, schools, companies, we hope to be able to provide a summarized yet insightful account of women's everyday lives.

1.1. Family

In Portugal, there is a high percentage of families where women are the sole or main providers for the family. There is also a growing sense of parity between members couples that has mirrored the disappearance of laws that placed men as the heads of household (Cruz, 1996; Vicente, 1998). In a report about gender equality, Sofia d'Aboim Inglez (1997) summarizes the main transformations: a drop in the birth rate, the reduction in the average number of family members, the rise in the divorce rate, the rise of sole caregivers and sole women. These changing roles of women and the newly acquired rights such

[4] The interview was given to the "Grande Reportagem" magazine in July 1996.

as divorce, equal pay and free access to birth control have paved the way to new family structures.

One of the main transformations also shaping women's lives and their decisions to postpone maternity or/and have fewer children derives from a loss in family support. Many of the women who are now at a child bearing age have mothers aged between 40 and 60 and who are still in the workforce and thus unable to provide child care or family support that might otherwise endow younger women with greater levels of flexibility.

Many researchers have searched for an explanation as to why women still accept an unequal distribution of chores in the home. On the one hand, there is a centuries old tradition of women being responsible for the home and for the children that induces a social predisposition that proves hard to overcome given how social structures have been organized around it even while this also might endow women with a sense of power (Vicente, 1998). Gilles Lipovetsky also picked up this argument in a recent interview[5] when questioned about the changes taking place since he wrote the "La Troisième Femme":

> I think that hypermodernity is also the acknowledgment that there are differences and that feminism today is no longer what it was. Women today want to be citizens, they want to have responsibilities in their jobs and in political life, like men, but at the same time they do not renounce their former roles like the family role and the aesthetic role. It's very improbable that they will do it in the future. People think that as women gain a statute in all things similar to that of men they will renounce their former roles but that is not true. We can see women that are very well regarded in the job market but at the same time want to take care of their children (…) women complain about men not doing their share of housework but they don't complain as much about raising their kids Why not? Because that task gives them recognition, it's not a bore (…) because taking care of a child is not something that strikes our identity or leaves us poorer, on the contrary it is something that makes us richer. That is why I think women will always insist on being responsible for raising the children and that roles that have been a historical heritage will not necessarily simply get extinguished.

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[5] Carla Ganito conducted the interview in March 2010 at the Catholic University of Portugal within the scope of the launch of his new book "O Ecrã Global" [The Global Screen] co-authored with Jean Serroy. The interview was then published in an issue of the journal "Comunicação & Cultura" dedicated to "Post-Gender" (I. Gil & Ganito, 2010).

Although a source of symbolic power, being the primary caregivers for the family, and especially for children, becomes the grounds for discrimination in the workplace as explained by Ana C. who, while not stating that she was herself subject to discrimination, does recognize how women gain fewer opportunities than men because of their family responsibilities:

> *I never felt that I was discriminated against but I see that in the job market men gain more opportunities than women. Especially when women get to the age of having kids. I see men changing jobs more easily and being promoted because they have more freedom. When a woman has kids, she holds on to the job she's got and is more afraid of risking changing jobs* (Ana C., 34 year-old, journalist, mother of an infant).

These constraints in balancing work and family life are further explored in close articulation with mobile phone usage in the chapters concerning space and time, nevertheless this unbalance is rooted in an essentialist view of women, of biology as destiny, that still remains widespread in Portuguese society (Vicente, 1998). In a survey about the sharing of family responsibilities, 91.7% of respondents agreed with the sentence: "women, because of their unique nature, are better suited to take care of family than men" with women not diverging greatly from men with 92.3% of men and 90.7% of women agreeing with this sentence[6].

Family responsibilities particularly affect sole caregivers. With the rise in the divorce rate, the number of families with only one head is increasing and women constitute the majority of those heads of households whether by divorce, because they have become widows or due to social constraints that pushed them into being single mothers. Men are left with the advantage of having more availability to remarry and to pursue their love life (A. Torres, 2001), "it's very common for parents to divorce their kids when they divorce their wives (…) courts still award mothers a greater share of the responsibility and thus the father disregards his financial responsibility. 82% of alimony processes are initiated by women" (Vicente, 1998, p. 41).

[6] National Survey about the Sharing of Family Responsibilities', CGTP, Lisbon, 1991.

1.2. Work and Employment

We must, in my view, always have the right to promote the best man for the job,
regardless of sex.

Sir Humphrey, in the BBC series "Yes Minister" (1982)

In Portugal, the activity rate continues to rise on the back of women's contribution and participation in the labor market. Women are thus responsible for a major share of national wealth creation and that is the case even when only considering paid jobs; this number would increase still higher were we able to quantify the majority feminine unpaid labor such as housework, taking care of children, the sick and the elderly. This dimension of women's lives probably constitutes one of the characteristics of Portuguese society bearing a profound effect on their relationship with technology. In Portugal, women entered the job market most notably in the 1960s as a consequence of the economic and political conjuncture. The colonial war and emigration made women working a necessity for national economic development. Women have since then earned their place in the paid labor market and Portugal reports one of the highest levels of female activity in Europe. In phases of economic growth, prosperity and plentiful job offers where the work force is scarce, women represent a valuable resource even while remaining generally underpaid (Perista, 1999). However, in an economic crisis when unemployment rates soar, such as that prevailing in recent years, women become the main target and the first victims of unemployment: in 2007, the unemployment rate for women was 9.7% compared to 6.6% for men and above the 7.8% European average for women.

Portugal is considered a peculiar case within the scope of European Union countries as on the one hand the state has never proven able to provide a satisfactory level of support services such as schools and maternity protection whilst, on the other hand, Portugal proves a country where most women work full time (A. C. Torres, Silva, Monteiro, & Cabrita, 2004). In 2007, 61.9% of women aged between 15 and 64 were employed and above the European average of 58.3%.

Portugal also ranks amongst the European countries where female employment rates are least affected by women having children. However, this in no

way means that women have equal opportunities in the job market and most of the lost opportunities in fact interconnect with maternity as explained by women at the motherhood life-stage:

> *In my job, I feel that I have been discriminated against for being a woman. Although I have a great relationship with my husband, we did make a choice concerning the children's education that takes up more of my time. I don't regret making that choice but I don't get to do a lot of things because of my family and my responsibilities at home. For example, I don't get to do a post-graduation course. And, in the relationship with colleagues and management, being a mother is still an issue. Having to be there for the family is socially condemned. Having to help a family member who is sick becomes more acceptable than keeping up with your family life, such as being home early to pick up the kids from school. Even in daily interactions with sponsors, sometimes they want to talk to someone in charge – a man – before deciding on a subsidy. Maternity is not part of organizational life. I stand up for myself but I felt it every day* (Sara, 35 year-old, social worker, married, mother of two children).

> *I think that being a woman never constrained my life but sometimes indirectly the fact of being a woman carries its weight. It's enough to say that we are asked about having kids in job interviews. In my internship interview, I was asked if having a child would influence my performance at work. In salaries, there also differences between men and women* (Ana A., 34 year-old, web content producer, married, mother of an infant).

> *In the job market, I felt that I had fewer opportunities. My daughter was little when I applied to a bank and they told me in the interview that it was a pity I had a daughter as this meant I could not work nights. I told them that would not a problem but still they preferred a man. Even in the place I am working now, a man just got in and he has had more opportunities to be promoted just because he is a man.* (Fernanda F., 52 year-old, computer manager, married, empty nester)

Discrimination not only translates into fewer opportunities but also differences in wages that still persist even though laws regarding equal pay date back to 1979. In 1993, the average monthly wage for women amounted to 76% of that of men (Silva, 1993). Between 1995 and 2000 women earned approximately 77% of the average monthly gross wage of men whilst women still earned 19.3% less than men in 2005 with the gender gap even more pronounced

when taking average earnings into account with the gap in this category standing at 22.6% in 2005[7]. These differences were also reported by some of the women interviewed once again across different life-stages and generations:

> *Oh, yes. I felt discrimination several times. I had a male colleague that did not have to do the cleaning tasks and still earned more money. It was a big difference in salary* (Manuela, 56 year-old, pre-retired saleswoman, divorced in a new relationship, empty-nester).
> *Yes, I have felt discrimination. The first time I noticed it was in a summer job picking pears. Wages were different for men and women. Then, I noticed that the job descriptions were understood differently depending on whether you are a man or a woman and they also paid according to gender. I feel we always have to do more to earn the same amount of respect. Because I work with a lot of men, I have to excel to show that I am capable of doing a great job. There is a lot of prejudice towards my job and because I am not an engineer* (Patrícia D., 36 year-old, marketing manager, nesting).

Although the regulation and legislation are in place, gender discrimination proves very insidious and frequently interlinked with invisible blockages as one interviewee explained as regards the lack of availability to network or simply with the jobs women tend to occupy:

> *I never felt discriminated against. In my company, we have several policies concerning women's promotion to high ranking jobs. I even participated in some initiatives. But, in the support jobs, we are very penalized in terms of promotions and we could say that women mainly occupy those jobs* (Estela, 36 year-old, communications manager, divorced, mature independent).

> *My perception is that I was never discriminated against for being a woman. But if we look at the statistics, objectively there are fewer opportunities for women, even at this company. There is an invisible blockage* (Cecília, 46 year-old, human resource technician, divorced, mother of a teenager, sole caregiver).

> *It's funny because when I started to work I was the only woman doing what I did, going to construction sites. But I was always respected. But in terms of opportunities to develop your career there are differences that are connected with society at large more than company policies. If the abilities are the same, men are chosen over women because of their perceived availability because women*

[7] Source: MTSS/DGEEP.

> *are thought of as being occupied with the house and the kids. I don't think that is true. They can even work fewer hours but be more focused. But men also do their own lobbying. After work, men more easily go for a drink or networking and women have other things to do and that makes them lose out in the race for corporate promotions.* (Susana, 36 year-old, engineer, single, mature independent)

This also reflects on the precarious nature of women's jobs: In 2006, 21.7% of women were employed on a non-permanent contractual basis compared to 19.5% of men[8]. Women also predominate in lesser qualified positions and remain scarce in senior positions: in 2005, women accounted for only 37.6% of managers and 43.6% of middle managers. Also according to the National Statistics Institute, by 2011 women's average wage was 20,1% lower than that of men and in 2016 none of the PSI-20 companies has a women as a CEO.

1.3. Education

Women came late to formal education. The first female high school was opened in 1906 but education did not represent a priority to the "Estado Novo" dictatorial regime that cut the number of mandatory school years while shutting down many primary schools. However, after arriving late, they are now gaining ground with a high percentage of women at the university level (53% of graduate level students were women in 2009[9]). Portugal also stands out in terms of the rate of women successfully completing secondary and post-secondary education, which is 57% in both Portugal and Germany[10]. One turning point took place in 2001 when women surpassed men in terms of holding graduate level qualification with 8.7% of the female age group graduating that year against 7.0% of the male population. Nevertheless, due to the historical deficit, there are still more women than men without any formal education, 11.8% of all women versus 6.4% of men[11].

However, whilst in terms of access the situation seems to favor women, stereotypes still wield influence over the choice of fields to study. In 2009, only

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8 National Statistics Institute, Labor Force Survey 2006.

9 Source: Pordata, http://www.pordata.pt

10 Eurostat, 2004.

11 National Statistics Institute, 2001 census.

16.6% of all the students enrolled in information and communication technologies degrees were women and the rate also remains below parity when considering science, mathematics and computing as a whole with 46.6% of women[12]. Additionally, there are also more men than women employed in computing jobs. Furthermore, men also reveal a reluctance in choosing fields generally perceived as feminine (Vicente, 1998) even while the reasons for this are not very clearly identified in the research carried out with stereotypes surely playing a role but alongside practical reasons such as the lower wages in effect for typically females jobs such as nurses or kindergarten teachers must also contribute to deterring men from making these choices.

1.4. Leisure and the Usage of Information and Communication Technologies

Mainly due to time constraints, women experience time restrictions as regards leisure activities. The lack of time for such leisure activities or media usage became clear in the daily accounts of the women interviewed. In a subsequent chapter, we approach more closely the theme of time in women's lives even though the words of Ana D. are quite instructive:

> *We have TV on in the living room and in our bedroom but we end up not seeing much TV in the bedroom because I immediately fall asleep (…) If I had help around the house, I could watch more TV or read a book without falling asleep because I would not have to wake up earlier to get the house chores done* (Ana D., 39 year-old, business owner, married, mother of two children).

In their study of Portuguese media audiences, Santos & Cardoso (Santos & Cardoso, 2007) found four profiles for media usage and across all of them men reported a higher frequency of engagement with the set of media activities subject to study, watching TV, listening to the radio, listening to music, reading newspapers and magazines, going out for a walk, reading books and watching videos or DVDs. Watching TV proves the most common activity for both men and women in all the profiles and, in some, the total of women even slightly surpasses men, for example in the 35-54 years subgroup 98% of

[12] Source: Pordata, http://www.pordata.pt

women watch TV versus 95.2% of men. However, the reverse gap also widens dramatically in other activities such as listening to the radio (86% of men versus 76.5% of women in the 35-54 subgroup) or reading newspapers (73% of men versus 52% of women in the 35-54 subgroup). This furthermore yawns still wider when considering media Internet activities with 21% of men reading online newspapers versus 15% of women in the same subgroup, for example.

Although computer and Internet usage have been on the rise for both men and women, there is still no equal access. In 2008, there remained an eight-point lag in computer and Internet usage (table 2 and 3).

Table 1. Computer usage by gender
2002 to 2008, (%) Individuals between the ages of 16 and 74

	2002	2003	2004	2005	2006	2007	2008
Men	33	39	40	43	46	50	50
Women	22	33	34	36	39	42	42

Source: INE/UMIC, National Survey of the Use of Information and Communication Technologies by Household 2002 – 2008.

Table 2. Internet Users by Gender
2002 to 2008, (%) Individuals between the ages of 16 and 74

	2002	2003	2004	2005	2006	2007	2008
Men	24	29	32	35	39	44	46
Women	15	23	27	29	32	36	38

Source: INE/UMIC, National Survey to the Use of Information and Communication Technologies by Household 2002 – 2008.

Many explanations are offered for the persistence of this gap that Turkle designates “computational reticence” (Turkle, 1988) and that ranges from a lower level of qualifications and formal education, processes of socialization that anchor women’s relationship with the machines to fear and a computer culture that is hostile to women. Portuguese women prove no exception in a culture that does not associate technical expertise with women as evident in one example provided by Rita:

> *I felt very stereotyped as a girl when I went to live in Oporto in the north of Portugal. It was the little everyday things like home repairs. Once, someone went to my house to fix the washing machine and he gave me a written note to give to my husband when he got home explaining what he had done to fix the machine. When I explained that I did not have a husband, the guy simply told me to give it to my father instead* (Rita, 24 year-old, designer, dependent).

The Portuguese population does not take gender issues as a key concern, "they live their everyday life without questioning the social construction of gender or equality. A small number are involved in the conscious construction of equal rights" (Vicente, 1998, p. 195). Equality is accepted but many times fails to get translated into everyday practices.

2. Portuguese Mobile Society

In the report *Mobile Portugal* (Gustavo Cardoso, Maria do Carmos Gomes, et al., 2007), we may access an extensive quantitative profile of the Portuguese mobile user. In this analysis, gender serves as a descriptive category and approached from the perspective of analyzing any differences between men and women within the scope of confirming whether, as the mobile phone becomes a mature technology, differences in usage between men and women tend to fade in keeping with the thesis that "the higher the ratio, the more equal it is [and] gender differences tend to disappear with the increase of mobile penetration rates" (M. Castells et al., 2004, p. 52).

The study reached the following conclusion regarding gender differences: there is a 50/50 split between men and women as regards usage even while women form a majority of those that do not have a mobile phone – 57.7% women against 42.3% men (p. 10). This group of non-users is characterized as mostly consisting of older people, mostly female in gender, with low education levels and generally inactive. This would seem to present women as less interested in technology although we should not forget that there is a higher percentage of women above the age of 65 (in 2005, 9.9% of the population were women above the age of 65 with men in this age group back on 7.1%[13]) and that women without any formal education still outnumber men.

[13] Eurostat, http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/

Contrary to the popular belief about telephone usage by women, which got extended to mobile phones and maintains that women talk a great deal, as regards mobile phone usage intensity men tend to make more daily phone calls: 30.8% of men make four or more daily calls against 20.3% of women (p. 12). No explanation is put forward and only actual phone calls are accounted for and not other forms of mobile phone communication such as text messaging, which might prove higher for women. Additionally, women tend to be less mobile than men and thus make recourse to other communication devices, such as the landline phone or social network sites, to keep in touch with their networks. Nevertheless, "popular and scholarly mythology play an active part in sustaining and naturalizing our systems of gender differences" (Lana Rakow, 1992, p. 2) and thereby also constituting the basis of company approaches to female consumer, whether in the designing of pricing plans, services or contents.

When analyzing the affordances of mobile phones to men and women, the global literature review of similar studies points in the direction of men adopting a more instrumental usage of the mobile phone while women tend to apply it as a fashion accessory or to maintain their social networks (M. Castells et al., 2004). Both Portuguese men and women use the mobile phone to maintain their social networks although with slight differences as men call their friends more frequently while women reference their families as their main contacts (74.1% of women versus 64% men (p. 19)). Men also tend to make more professional calls (7.5% of men against 2% of women (p. 20)) and to make more diverse use of the mobile phone functions available; trying new ones (30.2% of men against 22.8% of women expressed interest in using the mobile phone for banking operations) and are keener on acquiring 3G phones (54% of men compared to 46% of women). Nevertheless, on the other hand, men also tend to personalize their mobile phones more (55% compared to 44% of women) and to adopt a different language for writing text messages (53% of men compared to 47% of women). Hence, the stereotype of emotional uses for women and instrumental uses for men does not seem to fully apply to the Portuguese case. As for the networks, one conclusion we can draw is that the mobile phone mostly serves for keeping in touch with family and friends for both genders and that the gap in family talk in fact proves wider than in professional usage and which thus pinpoints the role of women as social networking managers for the family.

The mobile phone also represents a source of reassurance and women tend to use it more to feel safe when alone in a public space and also state they feel calmer when having their mobile phone with them (49% of men against 51% of women totally agree with this statement). Similarly, women tend to feel more anxious when not having their mobile phone with them (55% of women compared with 45% of men totally agree with this statement). The reasons are not pinpointed with this theme returned to in Part III of this book when the gendering of space and time get discussed in further detail. We argue that women apply the mobile phone to counterbalance their fragility and exposure in public spaces and that their dependency and consequent higher anxiety levels when deprived of their mobile phone are rooted in their heavy usage of these devices as time management tools and also in their role as primary caregivers for the family.

In conclusion, the report seemed to confirm the thesis that the Portuguese mobile phone user was not marked by significant gender differences. The report identifies four profiles: the disconnected, the involved, the utilitarian and the home managers with gender correspondingly not considered as a meaningful indicator in the analysis model. This model was instead based on age, qualifications, working status and marital status. However, not only is this lack of gender differences not scrutinized, as is common with similar studies (Fortunati, 2009), but also there is no attempt to identify differences between women.

The aim of this research very involves pinpointing those differences.

2.2. Women's voices

The stories of women presented here illustrate the multiplicity of facets to their emerging relationships with mobile phones and how their life stories intersect with specific different uses of technology and the mobile phone. The stories are the result of the interviews carried out with 37 women in different life stages (See Annexes 3 and 4 for a complete list of the women interviewed and the questionnaire used for these interviews). This chapter aims to give voice to their subjective experience of the mobile phone as a gendered technology and as a tool for "gender work" and "gendered work" (Lana Rakow, 1992). For each life stage, we have chosen the stories of several individual women in order to

best convey a deeper understanding of these women's lives as a whole. We will further incorporate other voices into the in-depth analysis in Part III because the interviews chosen only represent the diversity of views and experiences and in no way exhaust the complexity of contributions from across all the interviews. We therefore aim to generate insights into both how the mobile phone must be understood within a specific context and how subtle socially gendered practices actually are.

Raquel represents the voices of young women still dependent on their families both for housing and financially. Raquel, like other young women in her life stage, is searching for her autonomy and independence and technology is instrumental to that purpose. Inês finds in the mobile phone an important tool to balance her personal and her new professional life. Catarina and Patrícia D. provide two examples of the diversity in the profiles of nesting women: one has recently entered a traditional marriage after a long dating relationship while the other juggles time and space to accommodate a relationship with a divorced partner, father of a young boy. For them, the mobile phone is an umbilical cord for friends and family that are now growing distant from their daily lives. Ana D., Carla D. and Sara also represent the multiplicity of roles mothers play and how the mobile phone becomes an electronic leash with the technological options and leisure taking second stage against the backdrop of time starving routines. Cecilia stands for the women that are or have become sole caregivers through divorce or widowhood. These women derive emotional support and reassurance from the possibility of always being in touch and remotely performing their motherhood role. These women are also entrenched between the needs of their children and their increasingly aging parents and thus the mobile phone provides them the opportunity to perform their gendered emotional labor more effectively. Carla P. and Ana are examples of the challenges mature independent women face when finding themselves back or still in the game for a romantic relationship. Living alone, these women deploy the mobile phone as a social networking tool and in that sense approach it in much the same manner as young dependents or teenagers. The device also proves a safety tool providing them with freedom of movement even when alone. Finally, Deolinda and Maria show how empty nests are not so empty after all. Even after retirement, as in the case of Maria, many women find themselves having to either take care of their grandchildren or they return to work to earn extra income for their families. Deolinda and Maria also represent opposite poles in terms of the media

ecology and provided very useful insights into how different media ecologies determine the actual uses of the mobile phone.

In much the same way as Lana Rakow in her study of the telephone, we are "looking for how gender is both accomplished and thought about" and, similar to the telephone, mobile phone use is interpreted not as "a reflection of differences but an instance of them" (Lana Rakow, 1992, p. 10).

2.2.1. Young Dependent. Raquel, autonomy and connectedness;

Young dependent women are marked by their recent coming of age and taking place within an already very mobile context. In generational terms, these women form part of the "millennials"[14] and, while addressing a generation as a whole represents a process of simplification hiding the many differences within that generation, it also remains true that "Period events and trends often leave a particularly deep impression on young adults because they are still developing their core values; these imprints stay with them as they move through their life cycle" (P. Taylor & S. Keeter, 2009, p. preface). Millennials are described as self-expressive, open to change and connected:

> Steeped in digital technology and social media, they treat their multi-tasking hand-held gadgets almost like a body part – for better and worse. More than eight-in-ten say they sleep with a cell phone glowing by the bed, poised to disgorge texts, phone calls, emails, songs, news, videos, games and wake-up jingles (P. Taylor & S. Keeter, 2009: 1).

[14] According to the Pew Research Center (http://pewresearch.org/pubs/1437/millennials-profile), the millennials got their name because they have come of age in the new millennium and so the label applies to all those born between 1981 and 2000. Among the first to apply this term were William Strauss and Neil Howe, whose 1991 book, "Generations: The History of America's Future, 1584 to 2069", was widely recognized for its contribution to the analysis of cohort differences in U.S. history and their potential impact on the future. In Millennials Rising: The Next Great Generation, published in 2000, Strauss and Howe focused on those born in or after 1982. Although based on American society, this label can easily apply to other cultural contexts, and certainly the Portuguese, as its time frame spans the consolidation of the globalization process, when digital networks enabled people across continents to share the same cultural references. We may easily argue that Portuguese millennials feel much closer to their American peers than former generations did. Millennials also get labeled Generation Y, Generation Next or the Net Generation.

Millennials are also the first generation for which technology is an important feature of their identity: "it's not just their gadgets – it's the way they've fused their social lives into them" (P. Taylor & S. Keeter, 2009: 16); "millennials are more likely to treat their cell phones as a necessary and important appendage. Many even bring their cell phones to bed" (P. Taylor & S. Keeter, 2009: 32).

Young dependent women fall within the category of younger millennials and are at the stage where differences between men and women are less prominent. They are yet to face the challenges of entering the workforce and motherhood, which constitute true hurdles in women's lives. For the women interviewed in this category, the mobile phone essentially formed a tool for social networking and autonomy. The device they choose is nevertheless a personal choice and based only on self-expression. They live in a highly complex media environment characterized by high Internet usage in which the mobile phone only proves one piece in the overall puzzle even if probably the most pervasive. From their perspective, the convergence of mobile and Internet is hampered only by money constraints.

Raquel, a twenty year-old economy student, is one face of that always-connected culture. She has a dream of attending college in Cambridge where her cousins are already studying. She also dreams of working for a big international company abroad: *"in New York, like the movies, where we see those meetings in panoramic rooms with a view of Central Park".* However, she is struggling to finish high school and so attending night classes. She is completely dependent on her computer and mobile phone: *"If I were awake for 24 hours I would use them for about 18 hours and I only do not use the mobile phone while asleep".* She feels a need to always be connected and mostly employs technology that satisfies that need and enables her autonomy from other family members that control other activities like television viewing: *"I only see TV when I have nothing else to do on the computer. The TV is always on and my grandmother is always watching soap operas. Sometimes I keep her company but I don't care much about TV shows".*

Raquel is single and not currently in any relationship. She wants to pursue a career in tourism management outside the country. She has already had some job experience as a table waiter but she dreams of accomplishing more with her life. She has an unconventional living arrangement as she has always lived with her aunt and her son and her grandmother. She grew up in an extended family and treats her cousin like a brother. She describes herself as poor, *"even*

when I used to work, the money was never enough to pay for everything, not even for a little trip. It was always a tight budget. I had to pay for the Internet, school and gas and part-time jobs never pay much. If I had to buy clothes, it would not go far enough". She has now stopped working to concentrate on finishing high school and applying to Cambridge where she still wants to study.

Her typical day is spent sleeping late as she takes night classes. She wakes up around lunchtime and spends her afternoon on the computer before going to school. She only goes out during the weekend. On the computer, she plays an online game that she admits as stupid but she still plays it in order to meet people from all over the world. She also uses the computer as a communication and entertainment device; she uses MSN and Skype to talk to friends and her cousins, Facebook to play and YouTube to listen to music and watch videos. She takes the computer wherever she can and where she knows she will have Internet access as the device proves useless to her without any connection: "the coffee-shop on the ground floor of my house has wireless so sometimes I go there. It's just down a flight of stairs and that way I never lose my connection". Thus, the mobile phone comes into play as an extension of her connection whenever she has no Internet access. It also proves useful for communicating with people without any Internet connection or with whoever is not then online, *"not everyone is online at the same time".* Hence, if she really needs to talk to someone, the mobile phone is the preferred choice.

Raquel's technology uses are centered on the computer and the mobile phone that are in daily usage. Television, as for many millennials, has slipped under her radar. She has had games consoles but now plays on the computer because she lacks the patience for complex console games, *"I like to play but it has to be something easy because I play to relax and not to tire myself and all the console games like my cousin's PlayStation portable are too complicated".* She has also put aside her MP3 player and now listens to music on her computer and sometimes on the car radio. She does not own a camera and she does not make use of the one on her mobile phone.

She considers the mobile phone her most private technology. She has owned one since she was twelve, a gift from her aunt and grandmother. She was the one who had asked for it on the grounds that everyone had already one. She remembers that she did not pay it much attention at the beginning, *"I did not even take it to school, and it stayed at home. I just wanted it to text my cousins"*. Now, she owns a Samsung clamshell that she chose due to her

preference for the clamshell model, *"my mobile phones are always falling so this way they get better protected and don't break as easily"*. Price was also something that she had to take into consideration because if she had had no financial constraints she would have chosen a more advanced model: *"one like my cousin's which is a Nokia, one of the ones with a touch screen that has Skype, MSN and Internet access…it has it all and I think it's great to be there and write with a little pen. And games, it uses sensors which is way cool"*. On her mobile, she only uses text messages and voice but has no particular preference between either means and determined by a question of convenience depending on the person she is communicating with and their respective network carrier. She has a black model and would never choose a pink one although different colors would be acceptable along with designs interconnected to her hobbies like cinema, theater or traveling. She also does not personalize her mobile phone as hers has no features even if she would use images and proper ringtones if she could.

Raquel thinks life would become more complicated without the mobile phone, *"I would survive. I would not die because I would still have the computer so I would be able to communicate. I would especially miss the alarm clock because I can't listen to anything else besides the mobile phone"*. She finds the mobile phone makes it easier to talk to people due to the numbers who still do not have a computer. Given her dependence, she usually carries the mobile phone with her around the house so that she does not leave it behind and she turns back whenever that happens. Furthermore, she does not feel that the mobile phone represents any interference in her life, *"when it's someone I don't want to talk to, I simply do not answer".* However, she does acknowledge that when she used to date, it became a nuisance to her because her then boyfriend, who she did not particularly like, kept texting her all the time and so she deliberately left it at home. Hence, she felt a paradoxical relationship towards the mobile phone as while on the one hand, it provides her with independence and autonomy; it also becomes a form of control on the other. She also turns to the mobile phone to feel less lonely or more comfortable in public spaces: *"when I am alone in a coffee shop, I sometimes pull out my mobile phone to text my friends. It's a way to be talking to someone".*

Although very dependent, Raquel keeps to rules for her usage of the mobile phone and gets annoyed when out having dinner with friends and they are constantly answering calls or checking their mobile devices. She also feels

more comfortable answering calls when alone and feels awkward when having to listen to other people's calls.

Raquel's story encapsulates a portrait of young dependent women. They engage with a complex media ecology that no longer revolves around the television but rather around the computer as also expressed by other young women interviewed: *"We mostly use the radio around the house, we only use the TV to watch the news or while we have dinner but after that I use the Internet to watch series, do my research or go on Facebook and on weekends I would rather go out"* (Constança, 23 year-old, university student, single, dependent); *"I only watch TV on weekends. I share the house with another roommate and the TV is in the living room which is basically my room but she turns the TV more often than me"* (Joana, 20 year-old, student, single, dependent). The mobile phone represents an important part of their lives as an extension of their connection whenever unable to be online. Whilst able to choose the mobile devices they use, financial constraints inhibit more sophisticated usages such as Internet access, personalization or e-mail. Without such constraints they would all choose a smartphone, an iPhone©© or a Blackberry. Hence, voice and text messages end up as their most common uses by default. They all take up special price plans targeting young people and manage their interactions accordingly and correspondingly choosing voice when having unlimited price plans and text messages to people outside their networks on thereby incurring tariff costs: *"me and my boyfriend, we are tag* [an Optimus© carrier brand for a price plan targeting young people that enables unlimited voice and text for a very low flat fee] *and we call each other about seventy times a day, we spend a lot of time on the telephone and so this kind of price plan comes in handy*" (Rita, 24 year-old, internship designer, dependent). However, they all do feel that this always connected culture has its flip side and they sometimes do feel the need to disconnect but whenever doing so there is a sense of guilt and peer and family pressure not to repeat the behavior: *"not being available seems weird. I am always afraid something might happen to someone I love"* (Rita, 24 year-old, internship designer, dependent). This pressure only builds up over the next life stage when professional demands are added to the equation.

2.2.2. Young Independent: Inês, finding a place for femininity;

Young independents are essentially older millennials. They are at a life stage in which employment comes into the picture. Millennial women may effectively distance themselves far from feminism but they also refuse to return to traditional gender roles. They have genuine expectations over balancing their professional and personal lives even though that does not mean that barriers to professional success have fallen away completely. A Accenture survey of millennial women reported the continuation of marriage, maternity policies and pay scales as barriers (Accenture, 2010, p. 10). Other ongoing gender obstacles also included: a male favoring corporate culture; general stereotypes and preconceptions and sexism (Accenture, 2010, p. 12).

For young independent women, the mobile phone provides a blend between a social networking and a professional tool with their main concern over projecting a suitably independent and professional image, which frequently means a more masculine approach to what they wear or choose as technology. Inês stands as a vivid example of how these women struggle to find a balance between their female identities and their professional contexts.

Inês is a twenty-five year old marketing manager who is also going through graduate school. She is single and not in a relationship and still lives with her family although her goal is to find a house of her own. She also has a very strong connection to her slightly younger sister with whom she shares social programs. She comes from a high-income family and that has allowed her to pursue her dreams and live a comfortable lifestyle for which she is grateful. She cherishes responsibility and has always juggled a very time constrained routine combining work and the undertaking her university studies. This has taken a toll on her social life and she feels these time pressures on her leisure and on her connections to her friends with whom she tries to maintain contact through her mobile phone.

Starting her first job was definitely a turning point for Inês. She was able to pursue the career she wanted and that made her feel very accomplished and fulfilled. However, entering the job market brought with it increased responsibilities and commitments such as *"being forced to keep to a schedule and the limited vacation which was confusing for me at first".* Her networks of friends and family are all close by but she is now forced to reach them by mobile phone

and Facebook because time is scarce for anybody working and studying at the same time. Social networks and text messages fill in the void left by the lack of physical presence. She ends up doing lots of things simultaneously time and tries to balance her commitments with her friends and *"trying to have a balanced life in all fields".* She recognizes that *"women have a more stressful life and I think women are more multifaceted, they do more things. They are connected to household management but they also have their job and they like to go shopping and always look good and that is a lot of work. To fit everything into daily life takes up a lot of time"*. Thus, besides having her own house, she craves time for herself and going for walks.

She wakes up very early due to the commuting distance and comes into work while on the days with classes she only returns home at 9:00 p.m. On other days, she attempts to go to the gym but mostly has academic work to do at home. Even on weekends, she no longer wakes up late nor does she try to leave home. Thus, she ends up not seeing much television and only immediately before going to bed or when waking up. Besides the TV, she listens to some radio on the car on the way to and from work. However, her the Internet and the mobile phone are the main media consumed. She describes herself as the social organizer in her social network, *"I like to be proactive and entice people to go out. I set up everything and then I send my friends e-mail and keep track of confirmations. I like doing that".*

She buys her own technology but takes her father's advice into consideration because he is the one that is most up-to-date and enjoys technology. Her most recent purchase was a notebook and she values aesthetics and design in her choice: *"If it were up to me, I would have chosen according to aesthetics and design but my father talked me into buying another brand because, according to him, it was better and would last longer and so he even offered to help pay for it"*. Although she lives with her family, she does not have to share her technology as everyone has their own computer and TV set. She nevertheless still considers that the mobile phone is the most private technology she owns and also feels comfortable in setting it up.

Inês has had a mobile phone since she was 13 years old and recalls how her sister was even younger, 9 years old. She thinks they got their mobile phones at an early age as they were gifts from their mother. Both parents had been early adopters and recognized the value of carrying a mobile phone in terms of control and safety. She now owns a Blackberry Curve that was also

a graduation gift from her parents but that she had asked for. Before that, she had a Nokia that she felt had more features than the Blackberry but now she values being able to see her e-mail, be online on Blackberry messenger because her friends were also on the platform. Besides that, she mainly uses text messages and voice: *"I valued having a Blackberry exactly because my day is so full of activities and tasks and it provides me with the opportunity to have a social life inside a professional life. It completes us because it can't only be about work. It's a way of breaking the routine".*

Because of her work status, Inês is now forced to make concessions on her self-expression such as in her choice over colors. When we showed her a pink mobile phone she immediately liked it but added she would never buy it: *"I would never buy a pink phone but I would buy a white one if it were an option for the Blackberry. Even in my notebook purchase that was a question. There was a pink, a white and a black one and my sister told me not to buy the pink one because I would not be taken seriously. Pink is a childish color and because we tend to associate pink with a more feminine woman or more detail-oriented people might also think we are not professional and serious. I bought white because it is still a good color for technology but is still a bit feminine. If I could choose, I would choose pink. I still have lots of stuff that are girly and I like them a lot. With the mobile phone, I could not choose so I have a black one".* To compensate for the exterior masculine look, Inês personalizes her mobile phone and her computer with an image from a beach that she loves to go to, flowers and a pink screen-saver but does not use ringtones because she is not interested in music. She also does not play games because she lost interest.

Inês feels dependent on her mobile phone that she uses to multitask and expresses dual feelings about it: *"On one hand, being without the mobile phone would be great because I would have a less stressful life. I could enjoy things that now I cannot like simply staring at the landscape or being in silence. On the other hand, I would feel anxious. Even if I do not use it, I need it to be there".* She never turns the mobile phone off even when spending time with her family because it both forms a professional tool and a lifeline to the people she loves and cares about. This symbiosis between professional and private life ensures she takes the mobile phone with her even on vacation and answers phone calls even if work related: *"It enables me to answer something in a few minutes and get that matter out of the way. I feel more in control and reassured that things are going smoothly"*.

The changing routines, the feeling that time flies is something that becomes aggravated in the next life stage – the nesting phase.

2.2.3. Nesting: Catarina and Patrícia D., accommodating new routines

Women are in the nesting phase when sharing a house in a stable relationship that can range from the traditional marriage arrangement, as in the case of Catarina, to more unconventional living arrangements as with Patrícia, whose relationship is with a divorced partner with a child dependent, which means that they have to juggle houses and weekends according to their availability to be together. When entering a more stable relationship, new routines settle in and for women that can also mean slipping into a more traditional gender role as regards household management and their relationship with technology. Women also lose much of their prior interest in social networking whilst simultaneously becoming the social coordinators for the couple especially as regards family activities. The mobile phone becomes the touch point with now "distant" family and friends.

Catarina, 31 years old, has been married for four years and has no children. She married her husband after a long dating relationship that lasted throughout high school and university but still found adjusting to living together a challenge. She works as a teacher with her husband a marketing manager and describes her financial situation as stable although she said it took them some time to adjust to constantly changing jobs because in a still short working experience they have been forced to change jobs several times. Working as a teacher, she has unconventional working schedules that provide her with more flexibility while she simultaneously brings a lot of work home and so technology serves a double purpose in her life – to support these flexible working arrangements and to keep track of her family and friends.

She has always lived her life around the same city and hence her family and friends all live close by. She lived with her parents for three years after starting work and before getting married and so her experience of living alone was limited to an Erasmus semester in England where she shared house with her then boyfriend and now husband. She describes her life as being very protected with the only instability arising out of the nature of her position as a

young teacher getting relocated to different schools every year. Also due to her job, Catarina does not have either a very traditional daily routine or a typical working space and she takes her personal computer with her and works from wherever convenient; at school, a coffee-shop or at home. Thus, she is also a kind of nomad in terms of her media usage. TV viewing does not especially enter her routine except for some news in the morning and at night she would rather be on Facebook, watching a series or a movie on the computer or on DVD.

Household management became one of the challenges she faced when moving into the nesting phase. She admits to having had several conversations with her husband and ending up in a working division that is a kind of compromise between the things that he started doing such as the financial and bureaucratic matters and the things that he does not like doing: *"I notice the things to do around the house more than him. I have to remind him that there are things to be done and he then does them. But there are other things that he absolutely does not appreciate like hanging the clothes out to dry. At the beginning, it was a bit complicated and we even fought about it but have now come to a sort of understanding. It was more difficult in the first year of marriage because I expected him to notice the same things that I did but he did not have the same expectations about cleaning up as I did. Don't get me wrong; I am very lucky because I know how other men are and he is tidy. Even so we have different ways of living and it was a shock".* This more traditional housework division also extends to technology with her husband making all the technology purchase decisions, including household appliances and her mobile phone: *"I don't know much about that stuff so I settle for his decisions"*.

Catarina also stresses because of her professional and her working conditions and also a sense of lacking any balance between her professional life and her personal life. Without a schedule and able to perform her job regardless of space, she ends up working a lot on weekends and not being able to coordinate her life with that of her friends: *"I have to miss out on many dates with my friends because I end up having to work. And I frequently work on weekends because I was not able to organize myself during the week. I feel guilty about it but I cannot help myself*". This lack of balance makes her wish she had more time and more money for leisure and for herself. The leisure time she has is devoted to radio that she usually listens to either on the mobile phone or on the computer and music that she also listens to on the mobile phone and hence

a great percentage of her entertainment consumption takes place through the mobile phone.

Catarina has had a mobile phone since high school when she was given it by her boyfriend (now her husband) and was one of the last persons in her social group to acquire one because her parents did not particularly value the mobile phone probably because all their daily activities were performed in a restricted geographical area. What she values most about the mobile phone is its combination of radio, listening to self-selected music and as well as a nice camera. The next leap might be to social networks of which she is a heavy user on the computer. She has had Nokia© phones and got used to them, which reflects a certain degree of resistance to change. Besides music and the camera, she also described herself as a heavy user of voice and text messages for the purpose of interacting with family and close friends. As regards the device itself, she values design and would like to have an iPhone© because *"it's cool and modern and because it takes great pictures. It also has a big screen that would be good to access the Internet. But I would have to think about it. I still do not know if I really need to have Internet on my mobile phone. I have it on my portable pc and I think it is still more expensive to have it on the mobile phone".* However, while she values how it looks, she does not personalize the devices she has had: *"I pick the ringtone but I do not use a music service. When I was following the 24 series, I set it up with the soundtrack but that was as far as I have gone".*

She values the mobile phone even more than the computer as she carries it around wherever she goes: *"I can be reached by e-mail or Facebook© but I might not see it right away. The mobile phone is the closest physical thing to me".* This physical proximity translates the sense of urgency with which she lives her life, the sense that *"things might happen and I would not know about them".* This constant connection also makes her want to disconnect, expressing strongly mixed feelings about the impact of constant availability on her life: *"Sometimes I turn off the mobile phone so that I don't have any connection with the outside world but then I get anxious when I am about to turn it on and have a lot of messages that I have to answer and all of which ends up being more of a hassle. I feel people related to my work such as students and parents are entitled to have my number and so give it out to everybody but then I feel the need to step away from all those connections, from the "where are you?". On the other hand, for someone like me that spends her week from school to*

home and vice-versa, it's great to be able to keep in touch online or through the mobile phone".

Because Catarina only has one mobile phone number, her private and personal lives become inevitably intertwined and she describes how student parents call her up on weekends. She welcomes the freedom of movement the mobile phone provides her, not needing to rely on a landline number or being able to talk to people that do not have the skills to reach her otherwise, as in the case of student parents, but she also thinks there is an excessive need to always be available, to always be connected, *"mobile phones are sometimes an intruder in the classroom because they are too young to understand the rules and obey them. I try to act naturally according to the uses they give them but sometimes they step out beyond these boundaries".* Thus, even in her own job is Catarina forced to face the ambiguities of mobile phone usage.

Patrícia D. has a very different life story. She is a thirty-six year-old marketing manager with unconventional living arrangements as both her and her partner keep their own houses and live together only for certain periods of the week. Hence, there is little wonder that her main need is for stability: *"he is moving to the North of Portugal and we still don't have a place we can call our own. He is divorced and so some weekends he has to spend with his son and on others we have to visit my parents that live far away and so I don't get to see them during the week. We spend the whole time moving around and we don't really get any rest".* For Patricia who has family living far away and even abroad and who has a very unstable daily routine with her partner, the mobile phone is her lifeline to her network of affections – the easiest way to be reached and to reach someone. The mobile phone also plays an important role in her job and, as with Catarina, she does not own two devices, her private and personal life are blended into a single communications device, which means she is also constantly available for work related issues.

Patricia is slightly older than Catarina and has more professional experience. She has tried out different jobs but now feels fulfilled with the present company she works for, a construction company and thus a very masculine and technical working environment. She was one of the few women who stated having felt discriminated against on the basis of her gender: *"Not in terms of credibility but in terms of recognition, I feel we always have to be one step ahead of men. Even in my job, which is usually more feminine, I feel the same because I work with a lot of men. We have to excel in our skills to prove them that we can get*

the job done. There is a lot of prejudice against my role in the company and my training, because I am not an engineer". This need to excel also proves a source of stress because on top of having to multitask there is a need to prove she is fantastic at her job. Her challenges also lie in the professional field and in her desire to consolidate her performance at the company.

There is no typical day, neither in her job nor in her personal life. At work, she spends a lot of time on the computer and with a stable relationship she reduced her online consumption: *"There was a time when I used to go to Second Life a lot but now I only go there for events like a photo exhibition from a friend. I don't go there anymore to socialize. But up to one point in my life, Second Life was like going for a coffee after work. I lived alone in Lisbon and it was complicated to take the car and then park it. When I started dating, I found myself having less time for that sort of things. Before, I could do whatever I wanted with the weekends, and now we have to share availabilities and juggle routines. During the week, we also try to do things in a different way and spend less time in front of the TV screen or the computer"*.

Patrícia could not remember when she got her first mobile phone, probably when she started working, and now has a work phone that is a Nokia. The features she uses most are voice, text messages and the camera for photos and video, mainly for professional purposes. She has Internet access on the mobile but she only uses it on rare occasions and still has not configured the e-mail although she recognizes it would be useful on the days she is working outside the office. She does not personalize the device; *"those are annoying extras for me"* and she would never choose a pink phone: *"I would choose the iPhone because it has an interesting aesthetics and a fabulous marketing campaign. But I am happy with my Nokia because I value ease of use. I would never choose a pink phone because I am a low profile person and like things to match my personality. I would not see a problem in using that kind of device but it would have to be in another professional context, a more informal one like an advertising agency".*

Because of her lifestyle, Patrícia is very dependent on the mobile phone, *"I would die if I had to spend two weeks without one. Only two hours is enough to feel naked. I do a lot of work from my mobile and I feel less anxious because it is my main point of access. I have no landline phone at home. I feel very anxious when I do not have it and I turn back even if I am already half way in order to fetch it".* She also displays an emotional connection stating that it

plays an important part in the romantic relationship and that she keeps text messages from her nephews to carry around with her. She also said that the mobile phone kept her company when she was alone in a public space and that she also feels safer: *"I park away from home and when I am walking from my car to the door step, I like to be talking on the mobile phone until I reach my apartment".* She also uses the mobile phone as an avoidance mechanism: *"I have sent messages to someone telling them to call me so that I could end a conversation or a meeting".*

But even as a heavy user, she is very strict about rules and she condemns using it while driving or letting it ring at gatherings like church or conferences and also says that she prefers to talk than communicate through text messages: *"When I am talking on the phone I try to be discreet because we all lose the notion of where we are and end up disturbing others. I work in an open-space office and so we also try to be careful about ringtones. I usually keep mine on vibrating. So now I end up using text messages a lot more, even in my job. They come in handy because it's faster and they are more efficient because it's already written down".*

Nesting women have usually moved into a new home where they do not have a landline phone so the mobile becomes their main source of contact with friends and family for whom they have less face time than before. They blend professional and personal live and they usually do not perceive the mobile phone as an intruder. On the contrary, they feel less anxious having one around because it enables them to perform their tasks at a distance or solve problems more quickly. Their levels of personalization are very low and their option is for devices that project a professional look. Having a partner makes them transfer their technology choices, an action they justify by their lack of interest or knowledge. Some of these women's practices will change in the next stage and others will be reinforced, namely the personalization level increases as women have kids and begin using the mobile phone as a portable photo album, which means placing a higher value on the camera's features with their dependency peaking due to the constant need to be available for any problem their children might have or because leisure time and social interaction has been dramatically reduced.

2.2.4. Mothers: Carla D, Sara, and Ana D., craving time

Portuguese mothers do not follow some international trends, such as the American "mommy-trap" phenomenon where women abandon their careers as they become pregnant and raise children. As described in chapter 1, Portugal is the European country where motherhood bears the least impact on female employment and even in terms of full-time employment. However, this in no way means that there is an any less traditionally gendered division of housework with women still retaining the main responsibility for care giving and house management, "Today's woman is still the designated chief operating officer of the home" (Miley & Mack, 2009, p. 1). This pattern leads to a dramatic reduction in quality leisure time for women and reduced media consumption coupled with low levels of Internet usage outside the workplace. With low levels of Internet usage, the mobile phone therefore becomes the sole or at least the main contact resource for women. It also becomes an electronic leash or a tool for remote mothering, replacing their physical presence with their kids. Of course, women's experiences as mothers vary in accordance with the age of their children and we correspondingly give voice to three very different experiences; the first is Carla D., a recent and also unemployed mother of a baby girl, the second is Sara, a mother of two young boys with her case insightful into just how gender roles and "responsibilities on the home front continue to hold women back from taking advantage of professional opportunities and fully devoting themselves to their careers. Women do not have the same career trajectory as men do, either because they opt out, prioritize family over work or take time off to have children, which can handicap them in the long run" (Miley & Mack, 2009, p. 6), and finally Ana D., mother of a young boy and an infant girl whose son already has access to a mobile phone and that although being a successful independent business woman struggles with the traditional gender role division of labor at home. Ana D. provides the best example of mothers assuming the bulk of household and child-care responsibilities in a relationship regardless of whether they like it or not or whether or not they are as successful in their careers as their husbands and partners.

Carla D. is a 34 year-old woman, a marketing manager who recently became unemployed for the second time in her career. She is also a recent mother of a baby girl. She is married and comes from a struggling family. Her family includes a younger sister who does not live close by and so Carla ends up not

having much family support in her daily routines. Her husband also works in marketing and is in a stable job arrangement that enables her to get through unemployment with greater ease. Her first experience of unemployment was very traumatic for her and caused a major emotional shift in her life. Five years ago, she decided to cohabitate with her now husband and that was also a major life shift: *"We feel the responsibilities in a whole different way: Bills to pay and clothes to wash. The first months were really hard, so moving together had a stronger impact on my life than getting married two years after*". Now, she is going through a second major shift after becoming a mother and her daily routines revolve around the baby: *"The day no longer has days or nights, it's organized in periods of three or four hours"*.

Carla and her husband have a typical division of labor that has otherwise been described as inside and wet jobs for her and outside and dry jobs for him: *"He is the one that pays the bills or handles any technological issue like cable TV, he also does stuff around the backyard or fixing things. I do all the rest like cooking and the laundry. I only have outside help with the deep cleaning and the ironing".* Being unemployed, household management has ended up being an even greater burden on her: *"Now that I am at home more, I end up doing more things. But it's a bad habit"*. Not working outside the house enables her to devote some time to some leisure activities including going on the Internet, reading e-mail, browsing Facebook© and Twitter© or writing on her blog about the social media. Besides those activities, she also watches some TV at night, records and then watches some soap operas and watches some series on DVD. Now that she is home, she also spends some time talking to friends and family on the mobile phone. Nevertheless, this all gets structured around the short breaks between breastfeeding and taking care of her baby girl. With this routine, she admits feeling stressed out: *"I think it's harder for a woman because we are in charge of more tasks. The tasks my husband performs are not daily. He can work in the garden every on and off week but I have to make dinner every day. It was very difficult when I was working. To come home and have that responsibility…He only managed dinner on occasions. But society is structured that way. The man immediately thinks he is not going to wash the bathroom, they think it's a woman's job. When we moved in together, my husband told me right away that he was not going to take care of the house or clean it, he would rather have a maid but there are things that I would rather do myself. For example, I like the way I arrange things in the dishwasher, if he*

does it everything gets confused". Technology for Carla represents a valuable help around the house.

Time pressures also bind part of Carla's life: *"I feel I have no time to myself, to go for a massage or lay on the sofa whenever I want to or to go out for a coffee whenever I feel like it. My life has become dull. On the other hand, I know I will miss this time with my daughter. I feel happy for being able to get pregnant but I don't feel 100% fulfilled. I need to have a job and to socialize and go out without my husband and daughter. I miss working outside the house, being with other people and learning new things".* Thus, Carla tries to break up her isolation by using the mobile phone and the Internet on a daily basis. She has also started to value the camera more as a means of taking photos of everything the baby does. She even thinks she uses the mobile phone more now that she is at home and not only to keep in touch with other people but also as reassurance: *"I always think something might happen so I don't leave home without it. I no longer have my own safety to think off. Nothing can happen because my daughter is there"*. She also values having a camera on the mobile phone more so as to immediately share pictures with family and other features that she did not use before like text messages and the agenda: *"I used to make my appointments and reminders on Outlook on my personal computer, I only have open source software so I find it easier to use the mobile phone to keep track of tasks and appointments and I also use text messages more because they are less intrusive in my routine with the baby. I can answer when I am free from my baby tasks".*

Carla has had a mobile phone since she started working and that she bought with her own salary. Now, she has a Nokia© that previously belonged to her husband: *"The company gave him this Nokia but he wanted something better so he bought a Qtek© for himself and I took his".* Nevertheless, if she could choose, she would have an iPhone© because "i*t's modern and it gives you status. I wouldn't mind having a Diva either but most mobile phones targeted at women seem teenage-like to me".* She personalizes her mobile with a photo of her daughter and also uses a special case, some charms and a strap: *"I think the mobile phone can be a fashion accessory but I would have to have lots of money to have mobile phones in different colors or one to use during the day and another to go out at night. I think a mobile phone can be more attractive, have different colors like silver or golden, have a mirror or be branded but for me its main benefit is to be able to talk wherever we are".* So,

although Carla is fashion oriented and a heavy user, she still places emphasis on the communication function of the mobile phone and on efficiency related features. She does not use the mobile phone for any service or leisure content such as games, Internet access or music: *"I don't like things to converge and so browse the Internet on my notebook and I have an iPod to listen to music".*

The mobile phone also plays a role as a shield for social interaction: *"I must admit that when I am alone in a public place I use the mobile phone as a distraction. It seems that if I am there without doing anything, this might get misinterpreted. It seems funny to be eating and staring into space. And maybe that is more common in women because we worry more about what other people think. A man does not care. I think the mobile phone can be a virtual bodyguard in a bar or a restaurant to avoid being approached. It can also be useful when we do not want to talk to someone on the street, we can pretend to be on the phone and it provides an excuse for not stopping".*

Sara is also married and has two boys aged six and five. She is a social worker in a non-profit organization and her husband is a psychologist. She describes herself as middle-class but she also thinks describing her financial situation a complex matter: *"We don't live badly but we do have to manage a lot. As a couple, we can cope with our expenses because my husband earns more than me. We decided that he should work more outside the house and I am in charge of the kids. We made choices that we knew would have a cost, for example our kids attend a private school. We also have a person that stays with them from 4.30pm until I get home. I cut back on traveling and on technology, mobile phones; it's a matter of resource management. We don't have a LCD TV or a fancy car. We also cut back on leisure and the kids eat the food I make and not the school's food".* Sara very consciously describes the trade-offs she made in her life and how they affect their expectations and daily routines. Hence, although she is a real enthusiast for new technologies and formerly an earlier adopter, technology has taken a backstage in her life, as did her career and professional development that makes Sara wish for a new professional challenge in a different field and one where she might learn more.

Aged 23, Sara left her parent's home to live alone. She still depended on them financially but she was solely responsible for her house. She feels that life has treated her well because it was easy for her to find her first job after college and since then she has changed jobs without going to a job interview. She got

married at 28 and had her first child a year later. That for her was the biggest turning point in her life: *"time has to be well managed and you stop making decision only for yourself".* She also felt that motherhood brought with it job discrimination: *"I don't regret having made the agreement with my husband that I would take more responsibility for raising the kids but I missed out on a series of thing like getting an advanced degree. And in the relationship with my boss and my colleagues, I see that maternity is an issue. Having to be there for the family is not well regarded. I get home very late because I don't get any flexibility to work from home and leave early. Being a mother is still something that organizations have problems coping with. I stand up for myself but it's always an underlying issue".*

With all the family responsibilities on top of a full time job, Sara's daily routine is very strict. She wakes up early, drives the kids to school and then has a little bit of time on her own in driving to her job when she listen to the radio. That is also when she is able to check her mobile phone. She spends most of her day working on the computer and because her work revolves around computer based tasks, she uses the landline phone in the office to manage household affairs although she always keeps the mobile phone next to her for any emergency. When she gets back home, she dives directly into her tasks with no time for leisure or television, this stage is all about making the kids dinner, getting them to bed and preparing everything for the next day. After that, she has some time to watch some TV and waits for her husband to before having dinner and spending some time together. At the weekends, she gets some break from this routine but she invests this in getting out of the house and spending time with other family members and therefore without having to cook. This is also the time when she uses the mobile phone most because it becomes her main point of contact for making arrangements. As regards all of this, she feels completely stressed out: *"I have a very scheduled life. Only now that I have reached 35 am I learning to be more flexible because the kids are a bit older and it allows me not to fuss as much"*. The routines also leave little space for a wider network of friends who she keeps in touch with via Facebook, Messenger and e-mail to swap pictures.

Technology, because of financial options and time constraints, is no longer a priority in her life: *"I wanted to have a LEd TV and maybe another one for the kids. But we only have one and it's really old. I also like listening to the radio and we have a good stereo at home but I would also like to have an iPod system.*

The kids have a Nintendo D © but I also wanted a Wii© but it's not a priority. I like technology and I like to be up to date but the question is that it also takes up a lot of space. A camera is something I really have to invest in. I only have a camera on my mobile phone. The computer is the one I have at work because it is a portable one but during the week I try not to take it home because I already spend a lot of time on it". Her history with mobile communications is proof of her interest in technology. She has had a mobile phone for a long time and before that she had a pager: *"It cost 40 contos ["contos" was the popular expression for a thousand escudo and thus 40,000 escudos in the former Portuguese currency and the equivalent of €200]. My father bought it for me because he also likes technology a lot. The pager was transparent and cute but soon after came the first mobile phone. I remember that in my circle of friends everybody made fun of me for wanting to have a mobile phone and I was the first one to get one. Today, they are more dependent than me".* She has long since used the mobile phone for keeping in touch with friends and family, setting up social engagements but it has never played a role in her job. Whilst nowadays she sometimes gives her number out, that remains rare. Besides voice, she uses text messaging, the camera and the agenda to keep track of birthdays and to store messages, *"It's my memory but I am not dependent on it and not as much as my husband. I turn it off at night and if my husband is with me I just leave it at home. If someone needs to talk to me they can just call my husband".* Using their husband's phones as a proxy for their own in fact proves a behavior common among women that are mothers. Because they use the mobile phone essentially to communicate with family and close friends and to keep track of their kids, when the family is together, on weekends for example, they simply forgo the use of the mobile phone. Nevertheless, Sara also admits that she feels calmer when she has the mobile phone with her and she never regarded it as an intruder.

If Sara could choose she would have a Blackberry© or an iPhone©, *"I would definitely choose one with a good camera and, if I had no financial restrictions, I would have one with Internet access and would use MMS more. I would also want a device where I could listen to music".* Because she has traded her technology uses for the family budget, she bought one of the cheapest options in the loyalty rewards catalogue of her carrier. With a low-end device, she also does not personalize it as she used to do in the past, for example by buying ringtones.

The mobile phone also carries an emotional affordance for Sara: *"lots of exchanged text messages. It is also a way of solving a question or a problem when we are away from each other. And it's private so I can walk away from my colleagues when I am in the middle of an argument".* She also reports how mobile phones are more personal and informal and landlines more professional and formal: *"If it's professional and formal, I prefer to call the landline even if I have someone's mobile phone. But, if it is personal, I will call their mobile, for example, the parents of my son's colleagues. I think it is less formal to call them on the mobile than to call them home".*

Ana D. does not have to make all the trade-offs Sara is forced to make but she is struggling with the need to sacrifice personal time for a clean and organized home. Ana is 39 years old and a mother of two, an adopted nine year-old boy and a four year-old girl. She is a commercial manager who manages her own business and her husband is a designer. She describes having a comfortable financial situation although some investments at a time of economic crisis have taken a toll on their level of financial comfort.

For her, the main turning points in her life were their two children, being able to adopt the first one and giving birth to the second. And the main changes in her life were the sense that they could no longer think of only both of them: *"that moment when you get home and you want to do nothing, is no longer possible. I miss having moments of our own but at the same time we can no longer live without the kids. If they don't sleep at home, we need to have a program because otherwise we can't stand the silence. But I definitely miss having my schedules, now I live on their schedules, school, swimming lessons, dance lessons, football".* Although responsible for several business initiatives, Ana is the main caregiver for her family and so she wakes up very early and works for a few hours before waking up the rest of the family. After taking the kids to school, she comes to the office and then it is also her that picks them up and takes them to their activities. She then gets home, makes dinner and gets them ready for bed. After that, she tries to watch some TV: *"After half past nine they all know that the remote is mine. Until that time they, including their father, can watch whatever they want but after that I decide. We have a TV in our bedroom but we don't watch it much because I immediately fall asleep"*. On weekends the family tries to go out and see other relatives but, in her daily routine, Ana cannot count on her husband's help and she recently lost the professional help she had around the house: *"All the tasks are mine. He only helps with the kids*

like giving them a bath. Even basic things like putting the clothes in the hamper he does not do. I am not happy about it. I used to have a person coming four days a week that kept everything clean but we had a disagreement and it's hard to replace someone like that. I was also hoping that this might prove an opportunity to educate my husband and my kids but it's been six months and I don't seen any improvements. He simply does not perform the tasks he commits to doing and I end up having to do everything". So, once again for Ana the main need in her life is more time to be with the kids and for herself, *"to be able to read a book or watch more TV without falling asleep".*

From Ana's point of view, technology enables her to be more productive and to coordinate everything at a distance. The computer and the mobile phone fit that role in her life. She also likes to watch TV and listen to the radio. She used to play videogames but now *"I gave it up for the kids. I lost interest in it".* As for the mobile phone, she is an early adopter has had one since 1997 that she bought for professional reasons. Now, she has an iPhone© that her husband picked for her, *"At first, I did not want it but now I am pretty happy. It has a large screen and I can use it as a calculator so I don't have to carry one with me."* The features she uses most are voice and text messages and the Facebook app. She also values the aesthetic: *"I think mobile phones represent a person's personality, for example I have a friend that simply had to have a Dolce and Gabbanna© golden phone"*. She also uses the camera to take pictures of anything she wants to show someone or to personalize her device.

Although Ana is a heavy user, she describes herself as not dependent: *"On the weekends, I make myself forget about it. If the battery runs out on a Friday, I don't charge it until Monday. I think people use it too much especially the younger and the older – every call is an emergency but in fact in most cases it's not".* Nevertheless, she does recognize the mobile phone as providing safety and enabling a better coordination of daily life.

Mothers, like those we introduced here, are time-starved, stressed and unhappy with their daily routines so they are looking for solutions that will better enable them to manage the complexities of their lives, lessen both their stress and their workload and give them more time to focus on what they identify as really important: generally time with their kids. The mobile phone satisfies some of these needs by allowing for multitasking and reducing their anxiety levels but mobile phone companies still have a long way to go in serving this customer segment with these women reporting they do not use any service or content.

2.2.5. Sole caregivers: Cecilia, holding the world on her shoulders;

Single mothers are even more time and financially constrained and hence seek no frills and no time consuming technology. For this group, the mobile phone represents a blend between remote mothering and social networking. They need to keep track not only of their own children but also often elderly members of the family while also striving to keep track of their social networks of friends. Cecilia proves one example of this duality.

Cecilia is a 46 year-old divorced woman, a mother of a 14 year-old son who spends half the week at her house and the other house at his father's. She's a woman devoted to her career and her professional development and continually attending courses to improve her skills as a human resource manager. As most mothers, one of her main turning points was bearing a child and then the divorce that brought about an increased sense of responsibility and huge impacted on how she managed her time and her priorities: *"I needed to devote my full attention to my son when he was with me even if I was studying. I had to rebuild the way my life was organized, how I managed my house. I had to stop some professional activities as I had to be able to be there for my son".*

Cecilia's routines are now divided between the days she has her son with her and the days she does not. When she does, the day revolves around his schedules and, when he is not around, she has time to date. For seven years, she has been dating a divorced partner who has a daughter and with both deciding to keep separate houses. As for technology and media habits, she spends a lot of time on the computer keeping track of her social networks and maintaining contacts with friends and colleagues. She watches TV with her son and listens to radio in the car.

Besides her son, and as with most women her age, Cecilia also has to take care of her parents. Her mother recently passed away after a long illness process that was very demanding on Cecilia's time whilst she now still feels the need to always be available for both her son and her father and this is where the mobile phone plays its main role. She no longer recalls the time when she first got a mobile phone. It began outside of professional usage but has now also became an important tool in her job: *"I would actually have more difficulty in giving up my mobile phone than my computer. It's where I have everything, my contact list, birthdays and it's the easiest way to reach me. I give out my*

mobile phone number to everyone. I give support to people that are sick at home and its easier for them to have a direct line to me and while all my colleagues have my mobile phone but they do not all have my e-mail". Because accessibility is her main concern, the features Cecília values the most are ease of use, access to the Internet and the agenda. As regards radio, music and camera, she would rather use other devices that perform better. She also does not personalize her device but does consider it a highly personal device: *"I would never touch someone else's mobile phone, let alone my boyfriends or my son's. It's his space, a personal object".*

Cecilia is heavily dependent on her mobile: *"It's always with me. I never turn it off. I used to turn it off during the night but when my mother got sick I stopped doing so. I am afraid someone might need me. I had to spend a day without it and it was a bit hard, not being able to keep track of my son. When I am on vacation, I don't like to be disturbed by phone calls but I can't turn it off either".* Regardless of her ambivalent feelings, she describes the mobile phone as being a fundamental tool in her life that helps her keep track of both her private and professional daily routines and to keep in touch with her friends and family.

This connection to the world outside of home proves the most important factor for mature independents such as Carla P. and Ana.

2.2.6. Mature Independent: Carla P. and Ana, back or still in the game;

What we call mature independent women are those women who live alone, never married or are now single whether through divorce, separation or because they became widows and have no children. We chose to present two examples displaying an extreme difference age: Carla P. is a 30 year-old woman that ended an eight year cohabiting relationship and Ana is a 56 year-old woman that has never married nor had a long term stable cohabiting relationship. We could not find national statistics but international data points towards single women displaying a greater interest in technology. According to the "Targeting the Single Female Consumer" report,[15] single women were much more likely to affirm they would like to buy a home computer than married women

[15] Source: Business Insights.

and they were also more open to innovation. These characteristics come out in the interviews with both Carla P. and Ana. The mobile phone caters to their solo lifestyles by providing a social networking tool and also the safety to sustain their independence and freedom of movements.

Carla P. is a 30-year-old woman, now single and living alone. She is rebuilding her life after a broken eight year relationship that led her to live outside of Portugal. In this stage of her life, what is most important is making new friends and rebuilding her networks that she either lost or are now scattered between Portugal and Germany, where she lived. She described herself as a technology lover and admits to having "gadget" as a nickname although bluntly admitting that this is not common for women. She in fact describes herself as a tomboy when young and finding her femininity later in life. Her fascination for technology came from her father who always thought that access to the latest technologies was a source of knowledge and learning and because of that he always ensured his daughters had all the technologies they needed or wanted. Nowadays, Carla buys and chooses her own technology but she feels that that is not particularly common given the reaction of staff in technology stores. She owns a copycat iPhone© that she ordered from China but wants a Blackberry© for its e-mail access. She has a very functional but also emotional relationship with technology and, while choosing mobile phones based on their features, she cannot bring herself to delete some of the messages she receives. She does not like sharing her technology with other people, especially the mobile phone because, and contrary to the computer, she cannot protect the personal information on it.

With a highly demanding job, Carla does not get much leisure time but tries to get her household chores out of the way during the morning to ensure her own availability for unexpected social programs with her friends: *"If someone invites me to go out for dinner or shopping, I usually accept and I like to be available for that sort of thing. Living alone can be pretty lonely and I had to make new friends and relate to new people which is not always easy"*. When she does not have a social program, she tries to go to the gym and at home she watches some TV and goes on Facebook. She uses the Internet on a daily basis and she spends the whole time at work in front of the computer.

Carla's house, as her nickname suggests, is full of gadgets; she has an automatic vacuum cleaner, a Blu-Ray reader, all sorts of game consoles, a digital camera, an iPod© and a GPS. These devices she chose and bought by herself,

an attitude that she feels people do not find common: *"When I am browsing for something I feel people in stores think I do not know much about technology because I am a woman. When I ask for something more complex, they usually feel the need to confirm that is exactly what I am looking for. Sometimes they think I am mistaken so I try to go straight to what I want without asking and I do my research at home"*.

As for her mobile phone, she describes it as being the most private technology she has. She got her first phone at the age of 17 as a gift from her father with safety concerns involved: *"I felt like a grown-up because I had a mobile phone which at the time was something only grown-ups had but pretty fast everybody started getting one and mobiles became mundane".* She is very self-conscious of being dependent on it and so tries to control its usage such as immediately reaching for it in a supermarket or mall when you cannot find the person you went with. Her ideal phone is a Blackberry with a dual sim card because she feels the need to separate her professional number from the private one. She opts for a Blackberry because she finds it sophisticated and enables easy access to e-mails alongside constant availability. She never turns her mobile phone off and carries the charger with her in case of running out of battery.

Displaying a strong bond with the technology, she owns she personalizes the objects she can such as the computer, the mobile phone and the GPS. On the mobile, she uses photos of her friends and accessories like cases or colored headphones. The main features she uses are voice and text that she finds practical. As for music, she would rather use the iPhone but does also use the camera on the phone for something unexpected. The bond is also emotional; as she describes in not being able to erase the messages she receives. The mobile phone also constitutes a safety and avoidance tool for Carla: *"Sometimes I pretend that I am talking to someone. It's useful for avoiding people because they feel intimidated and don't take the initiative of walking up to us".*

Years apart in age but the mobile phone holds the very same meaning for Ana D. a 56 year-old woman who lives alone with her cat. Ana is a very hard-working woman who holds two jobs to uphold her independent lifestyle: *"I would like to have a person to share my life with but I don't sacrifice myself for that"*. She has a high level of media usage that ranges from the TV to daily usage of the computer, reading books and going to the cinema. Because of her workload, she finds herself pressed for time: *"I wanted to be able to give up*

my second job as a translator to be able to go to the beach more, spend more time with friends, go to concerts and museums". She also plays games on the computer and she does not like sharing either her computer or her mobile phone, *"I have too many personal messages there".*

Safety was the trigger for getting a mobile phone: *"Once I got stuck on the highway and I could not contact anyone. I also felt I had to get something to talk with my dad. Before that, I felt that no one needed to know my whereabouts but we can also lie with the mobile phone"*. Today, she has two, a job-phone and a personal one. The personal one she chose because it took good pictures and because it was a clamshell model, *"I am very distracted and I kept making calls by mistake".* She uses the camera to take pictures of her cat but the main purpose of the mobile is to keep her company and as an emotional reassurance tool: *"I keep all my messages and notes in there".* If she could choose, she would have an iPhone© because she confesses to enjoying technology and would value having Internet and e-mail access.

For Ana, it would be hard to get by without her mobile, *"without noticing we pour our memory into it"* and she feels calmer when she has it with her. Emotional reassurance and freedom of movements are the main benefits for her. These also represent important benefits for empty nesters such as the women we introduce next.

2.2.7. Empty Nests: Fátima and Maria, nests not so empty after all

Empty nesters are finding out that their nests are not so empty after all and that they may be just as time constrained as they were before when in full time employment. For them, the mobile phone means safety and a connection with the outside world. They show high usage and leisure uses and even when combined with low Internet usage or a lack of Internet skills.

In quantitative studies, ownership and usage drop for older women but we must understand that this is a nuanced reality. We are going to tell the story of two friends, Fátima and Maria, to illustrate the importance of interpreting mobile phone usage in articulation with the user's media ecology. Fátima, with low Internet skills, is strongly dependent on her mobile phone: "*I feel naked without it (…) it's always in my pocket and goes with me everywhere (…) It is how I keep*

in touch and it's safety, now even more", but Maria says she would rather use the computer. Companies often underestimate the interest of older women in mobile technology (Kurniawan, 2006), however, our interviews show that they are keen to understand, enthusiastic to learn, and actually use some advanced features of mobile phones such as MMS (multimedia messaging services).

Maria is a 60 year-old retired school teacher who was obliged to take full time care of two of her three grandchildren, a nine year old-boy and a three year-old girl. She also looks after another granddaughter. Because of that she says she *"wakes up running and sleeps running against time. Now that I am retired, it's even worse than when I was working and my husband only helps with the car pools because I don't drive, which is actually my main regret"*. The daily routine of taking care of three children leaves little space for leisure activities such as the radio or the TV. However, she does use the Internet on a daily basis for everything from paying the bills to searching for child related health topics.

Time constraints also inhibit a closer relationship with friends whom she describes as experiencing the same issues. To keep in touch, she would rather uses the landline phone because from her point of view it is simply cheaper than the mobile. She has had one for over eight years but she says she did not want one originally and still does not use it much. However, with increasingly complex school schedules, she has now started to value the mobile phone: "I went to pick up the kids from school but it started to rain and I had no way to call my husband. I am starting to recognize that it comes in hand."

Although she considers herself very proficient in using the computer, on the mobile phone she uses only voice and reads text messages and neglects all other features including personalization. Her friend Fátima stands on the opposite pole.

Fátima is a 56 year-old retired insurance professional who also takes care of one grandson. She also does embroidery as a hobby and makes a small business out of it. During the week, her life revolves around the television which is always turned on, *"I have five TV sets, one for each room and as I go around the house I always have one turned on and sometimes they all are".* However, Fátima has never used either the computer or the Internet with her husband performing all online activities. However, it is a completely different story with the mobile phone, she has had one over many years and uses voice and text messages to keep in touch with friends and family and to coordinate daily activities. She even uses it for her small handicraft business: "*it keeps me company*

and it is also a way of feeling safer. I once had a flat tire in the middle of nowhere and I then truly regretted not having a mobile phone". Fátima also valued having a camera feature and the taking of pictures of her grandchild whether to send to his mother or keep as souvenirs.

Fátima never turns her mobile phone off and carries it everywhere and, in fact, proving one of the very few women that kept her mobile phone on the table throughout the entire interview. Fátima is a good example of how the mobile phone provides a communication channel for those women that have no Internet skills; it provides them with a means of keeping in touch by sending text messages and conducting their casual conversations.

Portugal certainly displays the characteristics that make for an interesting case study on the gendering of the mobile phone. Besides having a high mobile phone penetration rate, it also has one of the highest employment rates for women. Nevertheless, Portuguese society also proves replete with contradictions as regards gender equality with motherhood seemingly failing to hinder women's commitment to working outside the home even while also failing to translate into a more equal gender division of labor. Portuguese women end up bearing the burden of the pressures of a double shift given their commonly ascribed role as the primary caregivers whether for children or the elderly with time constraints thus amongst their main hurdles.

National and international quantitative studies trace a classic innovation adoption curve with younger and more educated women displaying a greater propensity to new practices and older, less educated women correspondingly portrayed as laggards. But this leaves many questions unanswered by quantitative analysis and interviews based on a life-stage approach and not on sociodemographics returns a better understanding of the underlying reasons for certain choices made by women.

These interviews effectively identified that mature independent women also engaged in similar behaviors to those of young women and students. Mature independent women, whether because they do not have a stable relationship, are divorced or widowed experience the need to reach out beyond the immediate household and use family and friends as their support network and thus undertaking similar practices to those of younger people. One example of such proximity comes from Vanda; she is now living in companionship but when she was dating and living with a divorced friend and his 14 year old daughter, she trusted and confided in the teenager: "it was a very funny phase because my

friend's 14 year old daughter was my companion, she was the one who asked me if the guy had sent me a text message or told me to instead send him a text. It was an adolescent period of my life" (Vanda, 36 year-old, training technician, nesting).

The women interviewed reported a diverse range in their degree of mobile phone usage as well as in the social contexts of their usage. Some perceive the mobile phone as a "tool" and deploy it only "instrumentally" even while for others, this relationship extends further and the mobile phone becomes part of the way they think about both themselves and other people. In such cases, the mobile phone always constitutes their most private and personal technology, that one thing they physically closest to, that one thing they always carry along even while commonly experiencing a low level of personal choice. Women's phones suffer from the "wife-phone" and "job-phone" effect meaning they either get them from their husbands, sometimes much like a used car, or their mobile belongs to the company they work for. The effects sometimes lead to low levels of personalization. However, this lack of personalization does not mean they do not value the mobile phone. Women value it not for the device in itself but rather for the role it plays in their lives and reporting a high degree of dependency across all life-stages even while the underlying reasons fluctuate. For mothers, this is about safety and control of their children; for young dependents, autonomy; for mature independents, accessibility; for single mothers, a blend of accessibility and control and for empty nests a blend of autonomy and safety.

The different roles mobile phones play depend on women's turning point location and hence stemming far more from the role women actually play than about mere socioeconomics. Thus, contrary to the images projected by statistics, interviews reveal a life trajectory for the mobile that is anything but linear.

III Part Constructing and Deconstructing Gender in Mobile Communication

It is the pervading law of all things organic and inorganic,
Of all things physical and metaphysical,
Of all things human and all things super-human,
Of all true manifestations of the head,
Of the heart, of the soul,
That the life is recognizable in its expression,
That form ever follows function. This is the law.

(Louis Sullivan, 1896)

Mobile phones have been integrated into our daily lives mainly as a personal device that places emphasis on our individual identities. Mobile technologies are not new but what is new in the mobile phone stems from the scope of directly reaching a person and not a place and thus the mobile phone gets regarded as a highly personal object and an expression of user identities. Nevertheless, despite being personal, mobile phones also serve as collaborative and creative tools. They allow their users to create and share their personal contents: whether pictures, videos, music or games. They are affective technologies, objects of mediation for feelings and emotions. This emotional connection has translated into personalization practices that include wallpapers and ringtones. They are also multifunctional and multidimensional objects that induce profound changes into our contexts: new uses of time and space, new ways of interacting with others and the end of barriers between the professional and private, leisure and work, family and school.

The following chapters begin by addressing the mobile phone as a "social stage" (Caronia & Caron, 2004; Goffman, 1959; Oksman & Turtiainen, 2004), a site where gender performativity takes place and inquire about just what

presentations of self do women produce in mobile communications and what kind of framework does mobile phone communication enable? The cultural meanings attributed to the device form part of the social stage on which women construct meanings of themselves and others and this occurs through the choices they make over the device. What symbolic meanings do they attribute it? What is their gendered nature?

The fact that women use their own mobile phone is significant not only in terms of self-expression but also as an instrument defining their personal space and inhabited by technology that they alone control.

Two of the most important human perceptions are space and time. We define ourselves as human beings within a certain time and space context. These dimensions are now undergoing transformation as our experience is mediated by mobile technologies. But just how is this transformation actually occurring in women's lives? Are women conquering new spaces that were once traditionally hostile to them? Do they gain any greater scope for the management of their own time?

Finally, the book then provides an analysis of the relationship between women and mobile phones through the lenses of "fragility". The stereotype prevailing dictates that women are neither interested nor capable in technological issues. We want to propose the mobile phone as a location where the fragility of gender stereotypes does become apparent. We also want to propose "fragility" as an analytical tool incorporating contradiction and agency in women's appropriation of the mobile phone.

1. The Performativity of Mobile Phones

The future must no longer be determined by the past. I do not deny that the effects
of the past are still with us. But I refuse to strengthen them by repeating them,
to confer upon them an irremovability the equivalent of destiny,
to confuse the biological and the cultural. Anticipation is imperative.

Hélène Cixous (1980: 245).

In the scope of understanding gender as a cultural construction (Beauvoir, 1989; Butler, 2004a; Haraway, 1991a; Wajcman, 2004a), gender can also be understood as performative (Butler, 1990, 1993, 1997, 2004a, 2004c), as a "doing" (Candace West & Don H. Zimmerman, 1987) or as a "display" (Goffman, 1976a).

The work by Goffman on gender and his contribution to feminism often gets neglected even while proving seminal to later theories of gender performativity, namely Butler's work (Smith, 2009). He specifically approaches gender difference in two of his works: *Gender Advertisements* (1976a) and *The Arrangements between the Sexes (1977).*

In *Gender Advertisements,* Goffman posits that human behaviors, alike animals, can be regarded as "displays" with an "informing function" that allows every culture to establish their own respective terms for their social contracts. In this context, he defines gender displays as the "conventionalized portrayals of the culturally established correlates of sex" (Goffman, 1976b, p. 1). Goffman stresses that these displays incorporate ideas about what men and women are, or should be, within any specific culturally and historically bounded context and not displays of any natural essence:

> So our concern as students ought not to be in uncovering real, natural expressions, whatever they might be. One should not appeal to the doctrine of natural expression in an attempt to account for natural expression, for that (as is said) would conclude the analysis before it had begun. These acts and appearances are likely to be anything but natural indexical signs, except insofar as they provide indications of the actor's interest in conducting himself effectively under conditions of being treated in accordance with the doctrine of natural expression. And insofar as natural expressions of gender are – in the sense here employed – natural and expressive, what they naturally express is the capacity and inclination of individuals to portray a version of themselves and their relationships at strategic moments (Goffman, 1976b: 7).

Goffman thus offers the view of gender relations as a social and cultural construction that we learn through the various institutions of socialization with gender serving as one label for our place in the world:

> What the human nature of male and females really consists of, then, is a capacity to learn to provide and to read depictions of masculinity and femininity and a willingness to adhere to a schedule for presenting this pictures (…) One might just

> as well say there is no gender identity. There is only a schedule for the portrayal of gender (Goffman, 1976b: 8).

To illustrate his theory, Goffman analyzed printed ad advertisements arguing that "actual gender expressions are artful poses too" (Goffman, 1976b, p. 84) and thus choreographed ads susceptible to exemplifying the ideal conceptions of femininity and masculinity. Advertising applies the codes of gender display to communicate quickly and deeply with the potential consumer and, in this way, advertising tells us a story about ourselves, about what we consider as normal, about what constitutes masculine or feminine.

From analyzing the ads, Goffman concluded that gender displays have a binary structure, which downplays the similarities between the sexes in favor of differences and also neglects the variability within each sex – with only one "normal" way to be a woman or a man. The same limitation has gained acknowledgement by other feminist thinkers such as Teresa de Lauretis:

> The first limit of 'sexual difference(s)' then, is that it constrains feminist critical thought within the conceptual frame of a universal sex opposition (woman as the difference from man, both universalized, or woman as difference *tout court,* and hence equally universalized), which makes it very difficult, if not impossible, to articulate the differences among women or, perhaps more exactly, the differences *within women*. For example, the differences among women who wear the veil, women who "wear the mask" (in the words of Paul Laurence Dunbar often quoted by black American women writers) and women who "masquerade" (the word is Joan Riviere's) cannot be understood as sexual differences. From that point of view, they would not be differences at all, and all women would but render either different embodiments of some archetypal essence of woman, or more or less sophisticated impersonations of a metaphysical-discursive femininity (Lauretis, 1987: 2).

Goffman identifies six main forms of gender display: relative size; the feminine touch; function ranking; family gender depictions; the ritualization of subordination and licensed withdrawal. Although Goffman presents the displays of femininity, masculinity becomes easily apprehended as in any binary system the masculine gets defined as the opposite of the feminine. Thus, men contrary to women display power, are always prepared, are adults and always maintain emotional control, so they are displayed standing upright, folding their arms,

as independent, gazing directly outward or relaxed and calm, grounded and active in their surroundings (Jhally, 2009).

In such a binary system, any deviation from displaying gender normality poses a challenge, in particular androgynous presentations. Below, we shall argue that the mobile phone presents itself as an androgynous technology challenging the system. As neither masculine nor feminine, companies advertising mobile phones and promoting mobile services are left without any quick or deep form of communication and hence no longer able to rely on the codes of normality that renders the technology fragile.

Re-evaluating Goffman's theory in light of our current developments, we are able to identify the birth of new codes, specifically men as objects of desire and thus presented within the scope of typical feminine displays and women as in control (Jhally, 2009). However, in both cases, the audience still needs reassuring that the old codes have not been completely shattered. Thus, women moving into masculine fields are commonly presented or present themselves through ritualized codes of femininity and heterosexuality to prove simultaneously that they are in fact both real women and not lesbians.

Goffman also suggests that gender displays can be "lifted from their original context and reframed as mockery, teasing and the like" (Smith, 2009: 168-169). Taking ritualized displays out of their contexts provokes audiences by causing strangeness and a sense of being unable to read the situation. One example from the mobile communication industry comes with the following ad from Motorola in which a woman features but presented in a non-traditional gender display: in a pose of command, wearing a dark business suit and a tie while simultaneously displaying some typical feminine traits: red lips and fingernails.

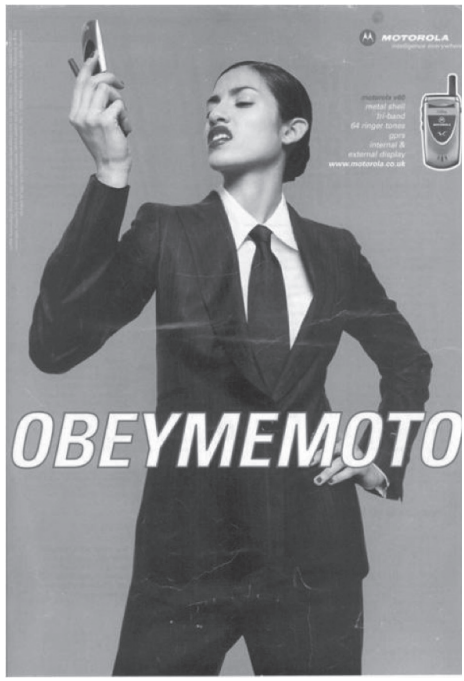

Figure 2. Motorola© Press Advertisement

In *Arrangement between the Sexes,* Goffman introduces the concepts of "gender identity" and "genderisms". He distinguishes between the individually enacted "genderisms" and the collective and institutionalized practices that constitute a process of "institutional reflexivity". Thus, Goffman reaffirms the social construction of gender differences, "which is then justified or excused in terms of notions of innate biological differences between males and females" (Smith, 2006, p. 91). Goffman provides five examples of institutional reflexivity: the gendered division of labor that encourages couple formation based on mutual dependency; siblings as socializers; the gendered division of toilet arrangements in public spaces; selective job placement and finally an identification system that marks people out according to gender. Goffman concludes his paper about sexual difference by defining the social construction of women's subordination:

> So it is apparent that men and women find themselves quite differently related to public life, its contingencies being very much greater for females than for males, and for reasons that are structurally deep-seated. This difference cuts sharply

> and cleanly along sex-class lines in spite of the fact that physical potential for assault and for self-defense is by no means so clearly divisible into non-overlapping classes. Plainly, it is for membership sorting that biology provides a neat and tidy device; the contingencies and response that seem so naturally to follow along the same lines are a consequence of social organization (Goffman, 1977: 330).

Similarly Candace West and Don Zimmerman propose gender as a "doing", a product of our interactions and not a fixed, pre-determined and static component of our identity: "a person's gender is not simply an aspect of what one is, but, more fundamentally, it is something that one *does*, and does recurrently, in interaction with others" (Candace West & Don H. Zimmerman, 1987, p. 140). In our daily activities and interactions, we rely on our self presentation (clothes, tone of voice, posture) to classify those with whom we interact – "It would be a strange world, indeed, if we had constantly to ask to see people's genitals to make sure they were who they appeared to be!" (Kimmel, 2007, p. 116) – and we rely on these cues because gender classification proves so very important, as if an anchor for social interaction without which we feel adrift and threatened:

> When our gender identities are threatened, we will often retreat to displays of exaggerated masculinity or exaggerated femininity. And when our sense of others' gender identity is disrupted or dislodged, we can become anxious, even violent (…) Understanding how we do gender then requires that we make visible the performative elements of identity and also the audience for those performances. It also opens up unimaginable possibilities for social change (Kimmel, 2007: 120).

West and Zimmerman acknowledge Goffman's theory of "gender displays" but argue that it displays certain limitations, especially its position as somehow optional: "While it is possible to contend that gender displays – construed as conventionalized expressions – are optional, it does not seem plausible to say that we have the option of being seen by others as female or male" (1987, p. 130). They argue that doing gender is unavoidable because such defines our place in the world, the space we are allowed to occupy, the power we have and is subject to both constant evaluation and self-evaluation. The doing of gender is also a hierarchical arrangement in which men dominate and women are dominated. The *doing* is a mechanism of social control and "social change, then, must be pursued both at the institutional and cultural level of sex category

and at the interactional level of gender" (Candace West & Don H. Zimmerman, 1987: 147). This doing may therefore also be dismantled or undone and opening up the scope for change that sometimes gets neglected in readings of the West and Zimmerman proposal of "doing gender":

> Whereas socialization theories assume that individuals internalize the gendered norms that were salient when they were growing up, the doing gender model assumes that people respond to changing contemporary norms. To change gender relations does not mean to wait for another generation to be socialized differently. Women today who grew up in the 1950s can lead radically different lives than their mothers. Gender construction points to the possibility of revolutionary change within a much shorter time span than implied by socialization approaches (Deutsch, 2007: 107).

The pessimistic view of the concept of doing gender, as regards change, stems from certain theoretical aspects that would seem incompatible with agency or change, specifically that the doing applies whether the act is of conformity or of resistance because both type of acts get judged against the norms prevailing and the system will always lead to inequality. Within this scope, some authors like Deutsch propose the "'undoing of gender' to refer to social interactions that reduce gender differences" (2007: 122).

The same question concerning agency and the scope for transformation is posed in Butler's work. Judith Butler introduces the notions of "gender acts" and "performativity". "Gender acts" are conditioned by history, cultural patterns and stereotypes. "Body becomes its gender through a series of acts which are renewed, revised, and consolidated through time" (Butler, 2004a). Gender is played *In-the-World*[16]*.* And history keeps on repeating as new technologies come into the world – For decades, the industry ignored the telephone as an object of socialization and even came to consider this facet as undesirable,

[16] Martin Heidegger (1862-1927) understands Being-in-the-World as a unitary phenomenon. The "Being" and "the World" must be understood together and not as separate identities. Objects and technologies are part of that world to be used and form part of what we are. We become what we are in a background without which we would not be what we are: "we take up tools as relevant 'tools' within a range of cultural practices that already reveal it as such or such a possibility to act. (...) As we and our tools interpenetrate each other we become each other's possibility to be what we are (Introna, 2007, p. 130). The subject cannot be taken into account without reference to its world and the things and other people that are part of that world.

expressing fears of less appropriate contact between men and women belonging to different social classes (S. Fischer, 1992) with the same pattern again repeated throughout the introduction of the mobile phone that first targeted professional uses and men (Lasen, 2005). Because there are punitive consequences for non-conformity to cultural and historical patterns – "those who fail to do their gender right are regularly punished" (Butler, 2004a: 157) – we still tend to encounter traditional gendered usages even in new technological artefacts such as the mobile phone.

In much the same way as the "doing of gender", Butler's theory has been subject to criticism both for not taking into account agency and for being incompatible with any theory of transformation or resistance. However, when agreeing that gender is constituted through a repetition of acts, this also opens up the scope for gender transformation through a different series of repetitions. If gender is constituted, it can also be constituted in different ways. Gender acts "are not expressive of a reality; they constitute reality through their performance" (Bial, 2004), opening up the possibility of gender transformation and of constituting different realities. In her most recent work on gender, *Undoing Gender (2004c),* Butler stresses the possibility of transformation: "if I have any agency, it is opened up by the fact that I am constituted by a social world I never chose. That my agency is riven with paradox does not mean it is impossible. It means only that paradox is the condition of its possibility" (p. 3).

Throughout her work from *Gender Trouble* to *Undoing Gender,* Butler reiterates subversion, especially in the form of parody even while rendering clear how that subversion proves a painful and difficult process. Within this process, technology plays an important role. Teresa de Lauretis proposes gender as a product of various social technologies including among which media such as mobile phones (1987). Butler describes technology as "a site of power in which the human is produced and reproduced" (2004c, p. 12).

The mobile phone has become a cultural artifact and correspondingly contains symbolic facets to different cultures and groups and closely interrelates with aesthetics and fashion. The meaning of the mobile phone is thus not just utilitarian and instrumental but also emotional and expressive. The mobile phone is referred to by many authors as an affection technology (Lasen, 2004; Sadie Plant, 2001) and therefore as an object of mediation, demonstration and communication of feelings and emotions.

As a cultural object, the mobile phone is susceptible to analysis as a place of performance, of ritualized codes and as a gender technology (Lauretis, 1987). The work of Erving Goffman has thus been used to analyze the context of mobile communications by many authors (Fortunati, 2005; Hoflich & Hartmann, 2006; Hoflich, Kircher, Linke, & Schlote, 2010; J. E. Katz & Sugiyama, 2006; Rettie, 2005; A. Taylor & Harper, 2001; Weilenmann, 2003), and especially Rich Ling (Ling, 2002, 2008a, 2008b, 2009). Rich Ling notes that although Goffman had not been a contemporary of the mobile phone he had approached usages of the telephone. One of the situations he noted that duly transfers to gender relations involves how the job of answering the phone got assigned to lower status individuals (Goffman, 1959) and consequently that job was frequently ascribed to women. His analysis generates many insights into ritualized mobile interactions.

The mobile phone, contrary to telephones or other technologies, is considered a personal object and an effective extension of the body (Lasen, 2002). The device also holds an increasing amount of personal information that renders it extremely private. The mobile phone as a personal and intimate object gets well conveyed in the research of Mizuko Ito (2003) in which Japanese mobile phone users stated how they would never answer a call on a mobile phone that was not their own or even look at a phone without being invited to do so. Those behaviors were simply considered socially unacceptable.

The women interviewed in this project were also unanimous in considering the mobile phone as one of their most private and personal technologies:

> *I know some people that snoop around their partner's messages but I think the mobile phone is very personal and private. I would never touch another person's mobile phone, let alone my boyfriend's. I don't let anyone use mine. I also don't use my son's. It's his space, a personal object.* (Cecília, 46 years old, human resource technician, divorced, mother of a teenager, sole care giver)

This "personalization of networking", as Barry Wellman termed it, began with the Internet and has now peaked with the mobile phone: "The mobile phone could be our personal miniature representative" (J. Katz, 2006, p. 51). This personal connection – which is greatly physical – makes its users want their mobiles to be a reflection of them, an expression of their identity. The mobile phone has become a close part of us with many comparing its loss to that of a limb. We in fact thereby lose our connections to our friends, contents,

knowledge, comfort and not to mention security. This emotional connection translates into the personalization of devices through logos, images, ringtones and MMS services, ring-back ringtones and other services.

Technology can serve as a means of self-expression and for men that very much proves the case. Cars and gadgets in general are a natural extension of men's masculinity while women don't seem to identify technology as a form of expressing their identity and resort to other apparatus such as clothes and jewelry: "Women use technology much less as a means of symbolic self-expression. Clothes and cosmetics are the traditional means of expressing femininity and an association with anything technological is definitely unfeminine" (Benston, 1988, p. 21).

Some studies seem to point to a change in that relationship with some women attributing mobile phones a more expressive and personal use than men (Gustavo Cardoso, Maria do Carmos Gomes, et al., 2007; M. Castells, et al., 2004; Hans Geser, 2006; Kerckhove, 1997; Skog, 2002): "While men developed an eminently instrumental relation with this technology, women appropriate mobile phones as a fashion item and as a way of maintaining their social networks […]." (Gustavo Cardoso, Maria do Carmos Gomes, et al., 2007, p. 5). A recent study by Larissa Hjorth (2009b) reported that "female respondents tended to be more decisive and opinionated about their selections, often downloading different screensavers and ringtones rather than using the generic" (p. 59).

These practices also came out in our interviews. However, women also described a low level of personalization of their mobile phones, with very few reporting either having used personalization services or buying personalized contents. One explanation for this absence of personalization may be the job-phone effect, with many women primarily using their company mobile phone and which inherently inhibits a high level of personalization. These mobile phones sometimes have their access to personalization services restricted and are regularly replaced in any case and thereby further curbing any recourse to personalization services:

> *Yes I do some personalization. I organized the items on the screen. I used some pictures of my mother's backyard and I chose one of the ringtones from those that came with the phone. I tried to personalize it with a song that I like but I could not do it. I think we must have some kind of restriction because it's a*

> *company phone. If I could, I would use that music* (Estela, 36 years old, communications manager, divorced, mature independent).

Another finding was that while many studies center on the personalization practices of teenagers, the group of women that was most enthusiastic about personalization in the interviews were the empty nesters, which might reinforce the job-phone effect theory. Empty nesters are generally retired and thus not only have personal phones but also a greater degree of freedom for personalization.

> *I have three mobile phones, one for each provider. I like to play games, take pictures and use text messages. I use the pictures I take to personalize it and I have a ring-back tone service in two of them. I don't have it for all three because it becomes too expensive but I like to know that when people are calling they hear music that I chose.* (Manuela, 56 year-old, pre-retired saleswoman, divorced in a new relationship, empty nester)

Regarding the mobile phone as a fashion accessory, and as with other studies (J. E. Katz & Sugiyama, 2006), the women interviewed also showed a "third-person effect". They describe their choices as mostly instrumental but when asked to match mobile phone models to potential owners, they acknowledged that others did choose their mobile phones as a status symbol, an accessory or because of its design. Expressive uses were also not accounted for as a reason to acquire or use a mobile phone, although that facet was once again acknowledged in others as expressed by some of the opinions and remarks given about the various models.

> *This one* [Vodafone 360 – Samsung H1 Black] is for those who are pretentious but who cannot afford an iPhone© and thus they buy something that looks like an iPhone. And this one [Vodafone 360 – Samsung M1 – Pink] *might belong to a socialite that values her image* (Ana, 56 years old, assistant, single, mature independent).

> *The Samsung in Black* [Vodafone 360 – Samsung H1 Black] *is for someone who buys the mobile phones with reward points because it is not very cute. If I had to choose, from this selection, I would pick the Blackberry* [Blackberry Curve – Black] *because it seems more functional, and best suited to my needs as an extension of my office* (Sandra A., 35 years old, environment engineer, nesting).

Although there is a low level of personalization, whether using third-party providers or personal content, that does not mean that a process of customization and self-expression is not occurring. Choosing not to customize also amounts to a form of representation and other more subtle and less visible forms of expression and personalization are in place, such as the expressive use of text messages or even the way they use the device, the length of conversations, the tone employed and other more subtle clues to a person's identity, what Ling and Yttry (Ling, 2004; Ling & Yttry, 1999; Ling & Yttry, 2002) designate as relational expressions and duly acknowledged by one of the women interviewed:

> *I think the mobile phone reflects the personality of the person who owns it even if sometimes they were not the ones who chose it. The ringtones people choose or even if they are or are not constantly on the phone reveals a bit of their personality* (Ana A., 34 years old, web content producer, married, mother of an infant).

Expressive usages of the mobile phone become visible in the choices and uses of color, sound and image and both in the handset and the communication styles.

1.1. Color: Much More than Pink

What are little boys made of?
What are little boys made of?
Frogs and snails
And puppy-dogs' tails,
That's what little boys are made of.

What are little girls made of?
What are little girls made of?
Sugar and spice
And all that's nice,
That's what little girls are made of.

Nineteenth century nursery rhyme

Identity can be expressed through color and colors have been the object of a gendering process that strongly associates pink with femininity. This association is fairly recent and, although unclear, might reach back to the nineteenth century (Peril, 2002): "But color-coding babies pink and blue according to their gender didn't become widespread until the post-World War II baby boom" (p. 4). In any case, this association proves far more than some arbitrary color attribution as it also conveys a system of values or prescriptions for being a woman, what Lynn Peril calls "pink think":

> Pink think assumes there is a standard of behavior to which all women, no matter their age, race, or body type, must aspire. "Femininity" is sometimes used as a code word for this mythical standard, which suggests that women and girls are always gentle, soft, delicate, nurturing beings. But pink think is more than a stereotyped vision of girls and women as poor drivers who are afraid of mice and snakes, adore babies and small dogs, talk incessantly on the phone, and are incapable of keeping secrets. Integral to pink think is the belief that one's success as a woman is grounded in one's allegiance to such behavior (Peril, 2002, pp. 7-8).

Mobile companies are increasingly targeting women, especially young women, and in trying to appeal to the female consumer everything seems to end up pink and soft: "The mobile phone companies seem to design phones to match the traditional female and male cultures" (Skog, 2002). Today, women represent one of the largest market opportunities. Women control household spending in most consumer product categories, form a source of innovation and diversity as well as a growing percentage of the labor force and identifiable as a potential leverage in hopefully recovering from the present economic crisis. Companies are eager to tap into this promising market but, in the vast majority of cases, only ever adopt misguided strategies based on traditional gender scripting:

> Globally, they control about $20 trillion in annual consumer spending, and that figure could climb to as high as $28 trillion in the next five years. Their $13 trillion in total yearly earnings could reach $18 trillion in the same period. In aggregate, women represent a growth market bigger than China and India combined—more than twice as big, in fact. Given those numbers, it would be foolish to ignore or underestimate the female consumer. And yet many companies do just that, even ones that are confident they have a winning strategy when it comes to women (Silverstein & Sayre, 2009a).

Without any deep understanding of the female consumer, companies resort to pre conceived ideas about femininity and female interests. They treat the female consumer as a homogenous segment and thus do not set out any differentiating strategies. They approach women with a single condescending attitude as if all have little or no interest in technology or any technological competency. It really is not enough to turn the device pink even if some marketing managers think so: At the release of the SonyÓ PSP Pink Edition, in 2006, the brand manager stated that it was a way for Sony to empower girls and women to play videogames: "The Pink PSP launch is much more than just launching a new color. It is about a confident and powerful attitude for young women"[17].

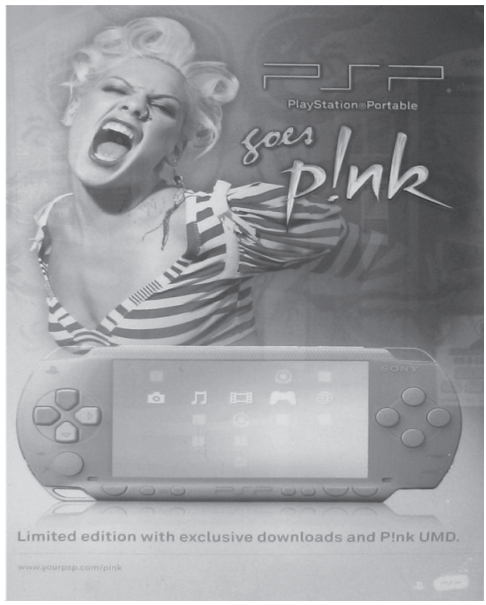

Figure 3. Playstation© Portable Pink Edition Press Ad

As a result, women generally feel patronized and that their real needs go unmet. In fact, in a recent Saatchi & Saatchi consumer survey, only 9% of respondents attribute importance to their gadgets looking feminine (Parmar, 2007). The majority of women interviewed across all life stages reacted similarly to pink mobile phones although their rejection proved especially strong

[17] Source: http://www.gamingbits.com/sony-playstation-portable-psp-news-bits/sony-psp-goes-pink-in-europe-limited-ed-starting-october-27/

amongst the first life stages in which women are looking for social and professional affirmation:

> *I think that a black mobile phone gives you a more serious look and a pink one. I've had a pink mobile phone but I knew it would not last me long and that the day I got a job and responsibilities I would not use a pink mobile phone even if I could choose to have one* (Constança, 23 years old, student, single, dependent).

> *I personally would never want such a mobile phone because it draws too much attention. The mobile phone is something practical that should not stand out. I like black or grey models and what I value most is lightness* (Patrícia, 33 year-old, economist, nesting).

> *I would choose a neutral color. It's what I like. I think that maybe pink is the anti technology color. When I see something in pink, it reminds me of toys. It looks like the Barbie phone. I know that it must be a misconception and certainly many models are exactly the same except for their color but it's enough to change from pink to metal grey to immediately look something more serious* (Estela, 36 years old, communications manager, divorced, mature independent).

Whilst women do not want something just because it looks feminine, they also do not seek exactly the same products as sold to men either. They want a functional interface, less unnecessary features and more substance than men (Parmar, 2007). Technology has to play a clear role in women's lives. Some industries, such as the auto and the health insurance sectors, have learned to target women according to their real needs and based on their real consumption trends rather than stereotyped notions of what women want. Companies such as Nike provide good examples by providing products that were designed according to women's features and not the notion that women are smaller men or that have fewer abilities (Silverstein & Sayre, 2009b). Mobile communication companies have a long road ahead in both understanding women and the differences between women.

The "gender script"[18] of turning it pink to appeal to women has become second nature as a connection between pink and womanliness (Peril, 2002),

[18] The concept of a technology having a script stems from semiotic analysis of their users, "as imagined by the designers of the technology" (Rommes, Oost, & Oudshoorn, 1999, p. 478). Those scripts become "gender scripts" when gendered characteristics or representations are in place. The concept of gender script has proven to be a useful tool in analyzing the under-representation

a social norm to which we conform to avoid punishment and being shamed. Nevertheless, we may also add that pink wrapping persists because women keep buying pink wrapped products, in particular to self-perform in an otherwise grey masculine context. When choosing pink mobile phones to highlight their presence, embodying the nature of their positions as a form of subversion, women are also "articulating within strictly defined boundaries" (Puwar, 2004, p. 151). They are expressing their right to mobile technology while stating their gender through gender stereotypes because being overly subversive would mean not being accepted. There is a pressure on women to highlight their differences to men through exaggerated forms of femininity and as a masque to protect them from retaliation or to hide their intentions, their real power (Puwar, 2004; Riviere, 1929). The other option is to mimic the hegemonic culture of a male dominated black, grey and silver technological aesthetics. This forms a trap for women that then risk not being able to alter the masculine norm.

1.2. Mobile Soundscapes

Contemporary consumer culture is a sound consuming culture in which daily life is increasingly mediated by a multitude of mechanically reproduced sounds.
Michael Bull (2005, p. 169)

Sound is a way of creating our own space or experiencing space according to our desires and aesthetic interests. Today, mobile phones are commonly deployed as conveyers of those sounds by integrating MP3 players and radio receivers. They also have their own music – ringtones[19] that have evolved dra-

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of women as technological imagined users (Akrich, 1992; Oudshoorn, 2003; Oudshoorn & Pinch, 2003; Oudshoorn, et al., 2002). As developers and innovators embed technology with their preferences and because women do not usually take part in the development process "technological objects become attuned to the interests and skills of young, middle-class men, rather than women or other groups underrepresented in the world of technology" (Rommes, et al., 1999, p. 479).

[19] Ringtones are personalized in multiple ways that range in the skills necessary to do this. For free of charge usage, they can be created using specific applications; they can be downloaded or exchanged via Bluetooth. As a paid service, many content provider companies and the mobile providers themselves sell ringtones.

matically over the last few years with the increased sophistication of devices and have gone from monophonic to hi-fi. Mobile phones also convey the sound of people's voices and thus establish an intimate connection to those people. The co-existence of all these different sounds in one device translates the different affordances[20] of mobile sound: intimacy and proximity through people's

[20] The concept of affordance is currently applied in several fields but originates in James Jerome Gibson's work on ecological psychology and his seminal article The Theory of Affordances (1977) and his following book The Ecological Approach to Visual Perception (1979) where he defined affordance as any actionable property between the world and an actor (a person or an animal).The concept was then used by Donald Norman (1988) as "perceived affordances" within the context of human-machine interactions and interaction design to refer to the scope of actions perceived by an actor in the system and that involves not only physical capabilities but also values, beliefs and past experiences. These sets of characteristics are brought into the evaluation of new affordances. The emphasis on perceived stems from the perspective taken – that of the designer. What is important for the designer is what the user perceives or does not perceive and not the real possibilities. Norman also makes the distinction between affordances and conventions: "Affordances reflect the possible relationships among actors and objects: they are properties of the world. Conventions, on the other hand, are arbitrary, artificial and learned. Once learned, they help us master the intricacies of daily life, whether they be conventions for courtesy, for writing style, or for operating a word processor. Designers can invent new real and perceived affordances, but they cannot so readily change established social conventions" (Norman, 1999). Both Gibson's and Norman's conceptions of affordances have been subject to critique from the perspective of activity theory for not taking into account the development of an artifact and for taking user and object as separate fields, instead "artifacts, technologies, and their knowledgeable users are seen in their actual interdependency and co-existence in processes of activity, ultimately as abstract moments in societal forms of praxis" (Baerentsen & Trettvik, 2002, p. 59). In the context of Computer-Supported Collaborative Work (CSCW), the concept also evolved to incorporate social dimensions. Bradner defines social affordance as "the relationship between the properties of an object and the social characteristics of a given group that enable particular kinds of interaction among members of that group" (2001, p. 132). Bradner also distinguishes between compelling and supporting or enabling. Social affordances compel certain interactions, so the different technologies can enable or support the same activity but each compels specific affordances, "for example, in a comparison of calling people and texting people, both technologies *support* and *enable* communication, but texting might *afford* "keeping in touch" better than calling by not disturbing the other party because it is an unobtrusive communication mode." (Sun, 2004, p. 54). Bradner's concept of social affordance is constrained by the fact that it only approaches small groups and not interactions on a more general level. From social constructivism, Hutchby (2001, 2003) provides the notion of "communicative affordances" by exploring technology-mediated conversations with the methodology of conversation analysis and thereby providing a middle-ground theory between radical constructivism and technological determinism. Finally, Baerentsen and Trettvik (2002) provide a cultural-historical angle, asserting that "[a]ffordances are not properties of objects in isolation, but of objects related to subjects in (possible) activities" (2002, p. 59). The concept of affordance used throughout this research aligns most closely with the Bradner and the Baerentsen and Trettvik concepts of affordance.

voices, expression and the creation of a personal space through ringtones and ringbacktones and privacy through the possibility of listening to our music or favorite radio show, a practice of cocooning to "shelter from engagement with the physical location and co-present others – a private territory" (Mizuko Ito, Okabe, & Anderson, 2008).

> It is the mobile phone itself which has really changed the sonic world. The warbles, beeps and tunes of the mobile have become so common that their calls have begun to constitute a new kind of electronic bird song, changing the soundtrack of the cities and altering the background noise in regions as varied as the forests of Finland and the deserts of Dubai (S. Plant, 2001, p. 30).

Katz suggests that "there is song" (2006, p. 56) to the social dynamics of interaction via mobile phones The tone and loudness are interpreted as signals of how others should behave. Robert Hopper (1981) suggests that what defines the mobile phone conversation is an asymmetrical power relation between the caller and the answerer that he designates "caller hegemony". The one who calls is the one who determines the beginning of the interaction and although women reported several avoidance techniques such as turning the phone off or setting it to silence that does not avoid the recriminations from those who cannot get through to them.

> *I am not dependent on the mobile phone but people around me are and that makes a difference. If, one day, I leave my mobile phone at home, it would not matter to me but for others the fact that I am not on my mobile becomes a drama.* (Ana A., 34 years old, web content producer, married, mother of an infant).

> *I think I would even like to be without my mobile. Sometimes it is such a huge obligation. People get mad when we don't answer or we don't reply. And I want to avoid that conflict. I feel the need to turn it off so that it does not interfere with my life but I don't know if I could actually do it. I feel pressure not to do it. People demand your constant availability. Even me: if my boyfriend is driving in his car and if I call, and he does not answer, I go crazy. Sometimes when it rings I stand there looking at it and I don't feel like answering but I know I cannot ignore it* (Constança, 23 years old, student, single, dependent).

Women seem especially sensitive to this caller hegemony. This had proven much the case for the landline telephone where women were usually attributed responsibility for answering the house phone and almost as an extension of

their roles as switchboard operators or secretaries. With the mobile phone, although a personal object that they may choose whether or not to answer, they feel a heightened responsibility over being reachable because of their responsibilities as coordinators for the home and family life.

> *Until recently, I did not feel I was dependent on the mobile phone but now I am. I need to be constantly connected, especially with the kids. The first kid was when things began to change* (Margarida, 33 years old, engineer, married, mother of two infants).

Sometimes, when those techniques of avoidance such as screening your calls are deployed, they generate anxiety and guilt about being off the grid associated with the constant feeling that something might happen, that someone might need them and that they were not available.

Ringtones may also be regarded as a "performative manifestation and display of (sub) cultural identities in the public sphere" (Elferen & Vries, 2007). Ringtones are "outer performances", that is performances for those that geographically surround the caller and the answerer. They are what Sadie Plant calls ""stage-phoning" (2001), a unique opportunity to put something of the answerer on display", conveying cultural meanings:

> Musical ringtones are then a resource for distinguishing oneself by making one's tastes visible in the public sphere, usually in relation with some form of collective and recognizable identity claim, either with respect to an actual peer group (friends) or an imaginary one (everyone who likes a particular type of music) (Licoppe, 2008, p. 146).

With the increasing sophistication of mobile phones, the display of caller and answerer can also rely on more than sound. Images, through the proliferation of mobile camera phones and increased screen displays, are becoming an important dimension of mobile communications.

1.3. Image: Pictures of Home

To each their own bubble

Jean Baudrillard (1988, p. 39)

Mobile camera phones have been hugely successful[21]. The mobile camera feature is a case where the mobile phone shows the best of its Swiss-army knife nature enabling users to have a ready to hand option for taking pictures. It is a non-intrusive and discrete functionality that allows for impulse in picture practices. If the mobile phone surely owes its massive adoption to its untethered nature, satisfying one of the most obvious human needs – communicating on the move, its incorporation of the camera, seems only natural given the mobile nature of photography itself. Media archaeologist Errki Huhtamo (2004) has claimed that the first mobile medium was amateur photography. Now, mobile phones provide amateur photographers with the opportunity to capture the mundane and everyday life through a device that is always at hand:

> Mobile phones offer a dynamic method of carrying and accessing our personal histories and promoting the visiting and revisiting of treasured memories in the form of images, videos, and SMS messages. Like an old friend, the mobile phone is always with us, ever ready to capture our future memories, providing an immediate sense of belonging, comfort, and connection to our past (Keep, 2009, p. 70).

[21] Mobile camera phones were only recently introduced but soon became very popular, especially in Asia and in countries such as Japan. The first mobile phone equipped with a camera was manufactured by Kyocera and introduced in 1999. Nokia launched its first camera phone, the 7650, in 2001 and in 2004 "became the largest digital camera manufacturer in the world, selling approximately 60-70 million camera phones (Koskinen, 2007, p. 3). Besides picture taking, the visual dimension of mobile phones also translates into video calls, mobile Internet and television. Mobile Internet is also becoming increasingly popular in the last few years. According to Anacom, at the end of the 1st trimester of 2010, there were 2.15 million users with mobile broadband. This number accounts for mobile access but not necessarily mobile phone access. Mobile television it is still in its infancy and facing uncertainty regarding business models and user acceptance. As for video calls, they seem condemned to science fiction movies. They are the eternally postponed future of mobile communication (Ganito, 2010). Another intersection between image and mobile devices comes with location, through GPS services which have also been very popular and that translate into other applications such as games that use location tracking or mobile commerce. Because other uses than picture taking are still marginal, this analysis focuses on how mobile camera phones are being domesticated by women.

Compared to other photographic devices, mobile camera phones provide new affordances inherently intertwined with the mobile phone itself: "Changes to the ways in which we capture, store and disseminate personal photographs through the use of devices like camera phones will have important repercussions for how we understand who we are and how we remember our past" (Gye, 2007, p. 279). One of the most significant of those affordances is the enhanced valuation given to daily life. Being a mundane technology, the mobile phone enables its user to register daily activities and happenings. The picture no longer serves only for the exceptional but also for the mundane (Goggin, 2006). Mobile pictures also play an important role as objects of personalization that transform the device into a conveyor of identity and self-expression and a source of reassurance. These pictures become "a key to our emotional understanding of ourselves and the world" (Gibbons, 2007, p. 4).

The proliferation of mobile camera phones brought with it an enhanced fragmentation that works according to a double logic. In a first instance, they multiply the options for capturing pictures and, in a second instance, they also fragment the archiving practices.

> Throughout the past 150 years, we have had a rapidly increasing number of means by which we can document and record every facet of life. The means of aural and visual capture have increased exponentially since the invention of photography in the 19th century (…) Where once an individual or family's memories were restricted to limited numbers of photographs and documents now we can acquire vast repositories of mediated memories to send into the future (Gye, 2004).

Although the mobile phone entails a huge potential for collective sharing and public display, what is in fact happening is that the story stops being shared, public and on display to become fragmented, individual and even more private than before (Gye, 2007; Okabe & Ito, 2006). Due to its business model, the mobile phone also adds some financial constraints to sharing. After taking a picture, the user faces two options: download the pictures to the computer or spend some money on a MMS[22] or on Internet usage to upload it to a social

[22] MMS is an acronym for Multimedia Messaging Service and reflects a standard wireless protocol that allows users to send and receive messages with multimedia content: sound, images, text, and video. MMS has not proven as popular as text messaging probably due to the financial cost and increased complexity. The rapid increase in social networking sites and the simultaneous

networking site or send it through an e-mail account. The story stops being shared, public and on display to become fragmented, individual and private (Gye, 2007; Okabe & Ito, 2006):

> The social function of the camera phone differs from the social function of the camera in some important ways. In comparison to the traditional camera, most of the images taken by camera phone are short-lived and ephemeral. The camera phone is a more ubiquitous and lightweight presence, and is used for more personal, less objectified viewpoint and sharing among intimates (…) The camera phone tends to be used more frequently as a kind of archive of a personal trajectory or viewpoint on the world, a collection of fragments of everyday life (Okabe & Ito, 2006).

Mobile phones are also changing the practice of creating a family photo album. The family album is a frame that stresses "chronology, continuity, and repetition within and across generations (…) predictable framings and messages" (Hirsch, 1997, p. 214). This frame has been disturbed by the introduction of digital photos that provided ground for the mundane and now with mobile phones that register the unexpected, the unpredictable, the unplanned, the true Kodak moment has become a Nokia moment. Pictures are set into a different frame, one of impulse, fragmentation and fragility.

According to Bourdieu (1991), the viewing of the album is a tribal ritual with a magic ceremony. Sontag also defines the taking of pictures as a "rite of family life" (1977). But mobile phones are now changing that ritual and arguably removing some of the magic as flipping through the pages of a photo album does not prove quite the same experience either to clicking the mouse to view pictures on a computer screen or to flipping through picture galleries on someone else's mobile phone. Even the physical act became harder as most people regard their mobile as highly private devices and thus rendering it hard to pass them around for picture sharing:

> Mobile camera phones suffer from similar problems to digital cameras – the very immaterial nature of the technology works against our usual ways of working with personal photographs (…) Creating the same kinds of interaction with digital images on mobile devices is made even more difficult by their location in a

increase in web-enabled mobile phones allow users to share their contents at a fraction of the cost and also reaching a larger group of people.

> highly personalizes device. While we may show photos to people on our mobile devices, we are usually reluctant to hand the device over to someone who may not understand the interface and so we keep them at a distance from the images under examination (Gye, 2007).

These social practices are also gendered. Furthermore, this gendering process stretches right back to the camera's inception when Kodak advertised in the early 20th century that "anyone could be a photographer – even women and children" (Gye, 2005) and as seen in figure 3. Women were pulled into the role of guardian of the family pictures. Compiling and sharing a photo album soon became a feminine activity, a tradition passed on from mother to daughter. The following Kodak advertisement (figure 4) for a book on how to take family pictures conveys one example of Kodak©'s strategy of targeting women that turns out to be a constant in Kodak©'s communication (figures 5)

Figure 4. Kodak© Ad, 1910

Figure 5. Kodak© Ad, 1924.

Figure 6. Example of Kodak©'s1940s-50s Magazine Ads.

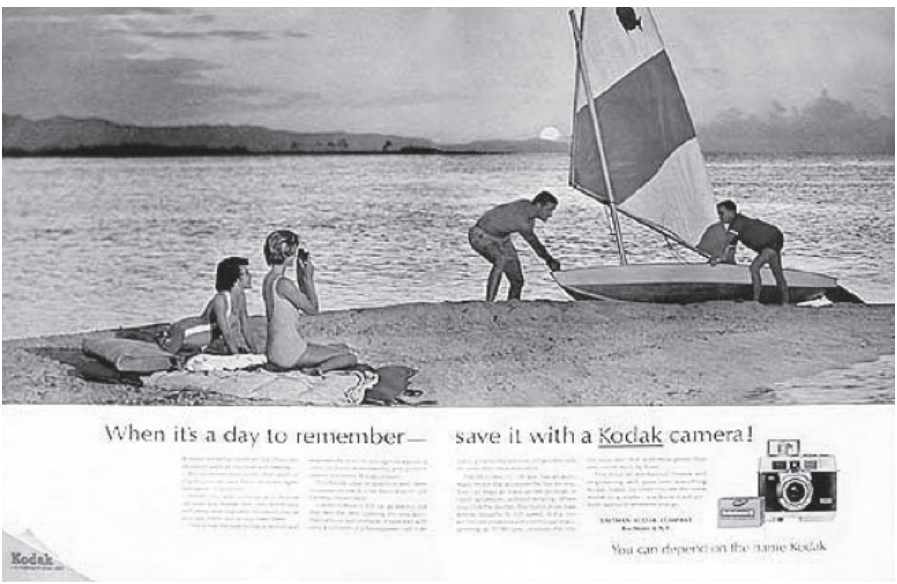

Figure 7. Example of Kodak©'s 1960s Magazine Ads.

These Kodak ads stand in sharp contrast to the gendering of mobile camera phone advertising where women are not targeted as mobile camera users. Figure 7 provides an example of how mobile phone providers handle the feminine market.

Figure 8. Sony Ericsson© mobile camera phone advertisement

After voice and texting, cameras proved the most interesting mobile phone feature among the women interviewed[23]. The reasons differed across life stages. In the first life stages, women valued the camera for keeping up with their social life. Mobile phone cameras became useful to their last minute social programs.

When women become mothers, camera phones become important for family photos and this extends to empty nesters when taking care of grandchildren.

[23] The national survey of mobile phone usage in Portugal points in the same direction. Picture taking comes in third place in the ranking of the most used mobile phone features with 37.1% of Portuguese users having cameras on their mobile phones (Araújo, Cardoso, & Espanha, 2009). Camera phone usage is only surpassed by SMS and voice calls. In this ranking, we also have to consider that an unknown percentage of users do not have a camera in their mobile and hence this percentage might even be of greater significance.

As for the photo album, "the photographic album and the mother are often linked" (Langford, 2001, p. 27).

> *Now that I am a mother, I use MMS a lot. I also used it while I was pregnant to show my growing belly. The mobile phone is only when I want to send pictures. I use the digital camera to register programmed moments but even then I take a picture with the mobile phone to send and then I will use the digital camera. But I do not organize the pictures on the mobile phone (Carla D., mother).*

Even when their men were taking the pictures, women were responsible for telling the story, for keeping records, for organizing a coherent and chronological account of the family history.

> *I take a lot of pictures. In the past, I used to make albums before I had a digital camera. Now, I only do this for special reasons – a Christmas gift or anniversaries. When I lived with my parents, I was the one that organized the albums. Before me, my mother took the pictures and organized them but only when I was little. Sergio [husband] loves to take pictures but I never saw him printing them or organizing them. All the picture frames we have, it was me that chose them (Sandra, nester).*

With pictures now archived in computers, pen drives, hard disks, women have lost their social role as picture organizers and as story tellers, as performers of an oral history: "the showing and telling of an album is a performance (…) Viewing the album in company must be considered the normal spectatorial experience" (Langford, 2001, p. 5).

> *I keep the pictures on the mobile phone and on the computer. I usually see them on the computer but showing them to other people is not usual (Ana C. mother).*

Mobile phones were also a last resort when no better solution was available, whether for unpredictable events or mundane and ordinary situations or as a personal diary of everyday life.

> *I use the mobile phone for spontaneous programs when I do not have the camera with me. I usually prefer the camera but when I do not have it, I resort to the mobile phone (Carla A., mature independent).*

Because the price of MMS is perceived as high and most women had only low Internet usage, picture sharing was very restricted. Most sharing would be done in co-presence, much like wallet picture showing or as a way of remembrance. Women also reported that they had no intention or did not knew how to download their pictures from the mobile phone and rarely or never printed them out and thus reinforcing the dying practice of compiling a photo album that started with digital photography.

> *On the previous phone, I had lovely pictures of my grandson, one in particular of him crying on his first day of school. I kept asking my children to copy it to the computer but they never did and one day the mobile phone got dropped and a car ran over it and I lost all my photos (Fatima, empty nester).*

Mobile pictures are thus transversally contingent and temporary (Reading, 2008) Nevertheless, mobile camera phones are enabling women's self expression as in the case of young South Korean women described by Lee (2005):

> These women are not the mere owners of camera phones, but performers who create various cultural meanings. They develop a more intimate relationship with technology, challenge the convention of gaze, give meaning to what is taken, and circulate their own expressions (p. 12).

These women appropriate the camera phone for cultural production despite the prevalence of advertising that shows men snapping pictures of women. Through features like cameras, Portuguese women are also building a more intimate relationship with technology and simultaneously learning to accept new media, becoming producers and performing new cultural meanings.

Mobile phones are "machines that become us" (J. E. Katz, 2007), machines or devices that represent us and present us to others. Color, sound and image are important aspects of performance as communication (Caron & Caronia, 2007) and performance as the construction of meaning. Thus, mobile acts are also moving acts, that is, they change according to the cultural context of appropriation. The mobile phone provides a new frame for the performance to occur and a frame of both privatization and personalization. The mobile phone has become one of the most private things we own and we feel correspondingly entitled to make it our own and express our identity within that process.

Although there is a notion that women resort to personalization more than men, this did not seem to represent a common practice among the women interviewed, particular due to the job-phone effect. With the high percentage of women working, they are commonly entitled to a company phone. Not being the actual owner of the phone inhibits women from a higher degree of personalization. However, that does not mean that teenagers are the only ones resorting to personalization to present their identity, empty nesters were also highly enthusiastic about personalization.

The choice of color constitutes one of the first examples of the moving nature of mobile acts. Choosing pink phones provides the option to conform to the masculine norm that states that "pink is for women" and thus abiding by "gender scripts"; a form of using femininity as a masque against retaliation or of disguising power uses of technology that would confront men; or a self-expression on an otherwise black and grey stage.

As with color, other personalization contents such as music or images are also subject to gender scripting with brands and companies missing out on the huge potential for marketing and selling personalization contents to women – contents that do not abide by the stereotype that women are only interested in "cute" pictures and "soft" music.

Mobile camera phones have also provided new affordances. Although we have argued that the mobile camera phone provided another step towards ending the traditional role for women of keeping a family album and its corresponding ritual of archiving and presenting an individual and collective memory, that does not mean we approach this as an erosion of tradition or of a cohesive ritual. Instead, the mobile phone rather offers up another site to "capture, share and archive the digital representations of experiences (…) new modes of engagement with cultural traditional and ritual pertaining to the act of remembrance" (Keep, 2009, p. 61). Nevertheless, the promises of unbounded sharing have yet to be fulfilled. Contrary to some beliefs (Keep, 2009), remembrance is still very much bound by constraints of time, place and gender.

2. Gender, Space, Place and Control

Geography...has meant different things
to different people at different times and
in different places

(Livingstone, 1992, p. 7).

The centrality that space has gained in social theory led to a so called "spatial turn" in various fields from sociology to cultural studies. This has led to a new understanding of space no longer as a neutral set of coordinates but rather as a product of social and cultural relations that changes over time. As for the distinction between place and space they do sometimes get applied as synonyms whilst on other occasions they are subject to great dispute and "they remain relatively diffuse, ill-defined and inchoate concepts" (Hubbard, Kitchin, & Valentine, 2004, p. 6). Postmodern and poststructuralist theories have emphasised the cultural construction of both space and place. A growing debate also surrounds the impact of technology on that construction of space and place: Cairncross (1997) talks about the "death of distance" whilst Giddens (1990) discusses the increase in "time-space distanciation".

The mobile phone has led to what Hayles (1999) characterizes as the "denaturalization" of space. Mobile technologies annul natural characteristics by allowing a unique, individual experience of a specific space.

> The pre-electronic locality was characterized by its physical and experiential boundedness. Situations were defined by where and when they took place and by who was physically present – as well as by where and when they were not taking place and by who was not physically at particular events. Now such boundedness requires some effort: Turn off the mobile phones, PDAs, and laptops; banish radio and television. Schools and churches continue this struggle to make "a space apart" (Meyrowitz, 2005, p. 28).

McLuhan (2002-1964), regarding the telephone had already stated that it was "an irresistible intruder in time and space" and described the change in human perception introduced by electricity.

> Electronic speed tends to abolish time and space form human perception. There is no distance between the effects of an event over another. The electric

> extension of the nervous system creates a unified field of organic interrelated structures to which we call Information Age (McLuhan, 2002-1964).

The effects of digital communication networks amplified this phenomenon. In the case of the mobile telephone, its ring seems to supersede any other activity with people feeling compelled to act upon it regardless of their activities or surroundings. Such a behavior that McLuhan had long since noted regarding the telephone (McLuhan, 1964).

Communication technologies change the space and time frontiers to human interaction and thus demanding new ways of organizing relations (Carey, 1992). According to Manuel Castells, with the advent of digital communication and of the Internet, the frontiers and geographic landmarks transform themselves into "spaces of flows" and time seems to disappear:

> There is a new spatial form characteristic of social practices that dominate and shape the network society: the space of flows. The space of flows is the material organization of time-sharing social practices that work through flows. By flows I understand purposeful, repetitive, programmable sequences of exchange and interaction between physically disjointed positions held by social actors in the economic, political, and symbolic structures of society. Dominant social practices are those, which are embedded, in dominant social structures. By dominant structures I understand those arrangements of organizations and institutions whose internal logic plays a strategic role in shaping social practices and social consciousness for society at large (Manuel Castells, 1996, p. 412).

But this space of flows is not placeless according to Castells. Places, defined as a "locale whose form, function and meaning are self-contained within the boundaries of physical contiguity" (1996, p. 423), still play an important role in people's lives. Location is a form of mental positioning and thus the usual question we all make when on our mobile phones – "Where are you?", Ferraris (2005) observes how we changed from asking "Who is it?" when answering the telephone to "Where are you?" with mobile calls given we have lost our geographical reference to a house, "we no longer ring a location and attempt to reach a person, but ring a person and attempt to locate them" (Light, 2009). We also say: "I will be on my mobile phone", that is the place where we can be found and thus suggesting what Sherry Turkle describes as a "tethered self"

(2008). The importance of location also becomes visible in the success of location based services (LBS)[24].

Castells also proposes that "space organizes time in the network society" (1996, p. 376) to the extent that time is specific to a certain context. The hierarchy of spaces is no longer subdued to geography but to the variable geometry of information flows:

> The dominant trend in our society displays the historical revenge of space, structuring temporality in different, even contradictory logics according to spatial dynamics. The space of flows dissolves time by disordering the sequence of events and making them simultaneous, thus installing society in eternal ephemerality. The multiple space of places, scattered, fragmented, and disconnected, displays diverse temporalities, from the most primitive domination of natural rhythms to the strictest tyranny of clock time. Selected functions and individuals transcend time, while downgraded activities and subordinate people endure life as time goes by (Manuel Castells, 1996, p. 467).

This is even more of a reality with the mobile phone. The mobile phone has accentuated these characteristics of the "Network Society" as a society of variable centres and margins. With the mobile phone, we cease to have activities structured according to place to having activities that define place. Trains and aeroplanes become offices, a restaurant a game arcade, the bus can now be an office and the office a playground – uses surpass context. The mobile phone is blurring several frontiers: not only between leisure and work but also between private and public life and private and public space.

We apply technologies to flee time constraints and to free ourselves from physical contexts. With mobile technologies, we rearrange public spaces and build barriers where they do not physically exist but we also tear them down. The hybridization of public and private spaces stands out as one of the main characteristics of the mobile communication system (Feldmann, 2005; Ling, 1999). The mobile phone brought an end to the physical barriers between space/time for work and space/time for leisure, private affairs and family. We have simply ceased to organize our life in space compartments.

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[24] Location based services are technical services able to pinpoint and report locations in real-time.

The mobile phone enables an easier organization of time and space (Lasen, 2002), especially with the integration of computing that allows us to be constantly connected to the Internet. The mobile phone has become our permanent connection to information and our social network. It is constantly on and with us, becoming a kind of place where we can be found (Lasen, 2002) and our mobile phone number a "fixed address" (Arnold, 2003).

We carry the mobile phone with us everywhere we go and we now live in a culture of "perpetual contact" (J. Katz, 2005) where every corner of our lives has been invaded by this small object: our bedrooms, our workplaces, and even our churches and classrooms.

We have also to take into account the bodily display of mobile phones because they are "located with our body" (Ilharco, 2007). Thus, mobile phones become fashion statements that convey a visual sense of identity. Additionally, mobile conversations become social performances because, contrary to landline telephones, there is an audience (Caron & Caronia, 2007): A corollary aspect of public phone performance is that sometimes the dynamics of mobile phone use is largely (or even exclusively) for those present (pp. 60-61).

The public performance of mobile communications is no longer contained as happened with the telephone that had a phone booth as container. The mobile phone is an extension of its user, but also a virtual presence, an extension of our social network. We "do not take up tools for their own sake. Rather to do something as part of being somebody in particular" (Introna, 2007, p. 130).

Katz (2006) makes an analogy between the physical performance of public communication and dance because of the implications for the way others in the environment behave: "In part, the use of mobile phones in public by one party often requires that the user's co-present partner adjust themselves in space and pace (…) they must engage in a bit of a choreography" (p. 58). The author grounds this analogy to choreography in Edward's Hall concept of being "in sync". In the new mobile context, people "need to move in sync".

The mobile phone is also used to obtain a sense of security and provides freedom of movement by also ensuring we always feel supported: "mobile communication is not about mobility but about autonomy. The possibility to reach any one at any time anywhere provides this safe autonomy pattern that characterizes the daily life of millions" (Manuel Castells, 2008: 448).

This autonomy provided by mobility, this ability to move around across different spaces closely relates to power relationships (Cresswell, 2006; Urry,

2000, 2007). Different groups have very different experiences of mobility that are regulated by relationships of power regarding space: "some are more in charge of it than others; some initiate flows and movements; some are more on the receiving end of it than others; some are effectively imprisoned by it" (1993, p. 63).

2.1. Women on the Move – Gendering Mobile Space

Gender shapes access to resources, notably time, money, skills and technology.
Access to each of these resources will influence the experience and social meaning of mobility

(Law, R., 1999).

Spaces and places are very much part of gendered identities and they did not escape the binary approach: "The mapping of a place or location onto gender identities has been a key part of the establishment and maintenance of women's position and is reflected in both the materiality and the symbolic representation of women's lives" (McDowell, 2003, p. 13).

Within the scope of the gendered binary distinctions about place, the place of men was in the public arena, outside the home, in the streets and work-places, out in the public and involved in production. A woman´s place was the private sphere, the home, the family and involved in consumption. This separation of spheres and places has been eroding for some time with mobile technologies striking another blow.

> Victorians emphasized how the public, male realm of rational accomplishments and brutal competitions was very different from the private, female sphere of home, intuition, and emotion. Now, electronic media pull the public realm into the home and push intimate topics, images, and sounds into the public sphere (Meyrowitz, 2005: 29).

Nevertheless, this does not mean that location lost its relevance from a feminist standpoint. On the contrary, authors such as Rosi Braidotti (1994) and Donna Haraway (1988) draw attention to the significance of context and "situated knowledges". We now address some of the most significant places at the

intersection of mobile technology, space and gender: homes, the streets, the offices, communities and neighbourhoods.

The mobile phone enables women to keep in touch despite space constraints. It becomes an especially useful tool when they find their mobility reduced in certain stages of their lives such as when they have small children or become older.

> *This stage in my life is when I value being available the most and being in touch with people and also doing things with my grandchildren. I don't drive so I am always dependent on my husband picking me up and the mobile is helpful to coordinate things* (Maria, 60 years old, married empty-nester).
> *I think I use the mobile phone now that I am home. I use it to send pictures of my baby and I am always thinking that something might happen. Now, leaving home with my baby without the mobile phone could be complicated. I no longer think only about my safety. Nothing can happen because my baby is there. I feel more reassured when I have it, especially now that I am home and I have a baby* (Carla, 34 years old, unemployed marketing manager, mother of a small baby).

The device allows them to extend to outer spaces a function that was valued so much in the landline telephone – keeping in touch with those that are emotionally important in what Klára Sándor calls "mental safety in your pocket" (Sándor, 2005a).

> *It would be extremely complicated to be without the mobile phone. I would be a nervous wreck. If I forget my mobile phone, it seems that I am lost and that I need exactly all that I have on my mobile phone. I did not feel this before but now it seems that the mobile phone is part of us. I rarely forget it at home because the first thing I do in the morning is put it in my handbag. I feel much more reassured when I have it and now it is turned on so I do not switch it off when I go to bed. Someone might need my help* (Fernanda F., 52 years old, married, computer manager, empty nester).

But some contexts remain resistant to change. Some places are still very hostile to women and even in 21st century western cities such as Lisbon, women feel out of place and that might range from social discomfort such as that felt in restaurants when having to have dinner alone to feeling out of touch with a male working culture:

> A sobering counter to the emphasis on displacement and mobility in recent theoretical work as well as in empirical studies lies in realizing that most women in the world remain trapped or fixed in place. Their everyday lives and social relations are confined within often tight spatial boundaries, constructed through power relations and material inequalities. The opportunities but also the constraints of the locality continue to structure many women's, indeed most people's, lives, when the material costs of overcoming the friction of distance are beyond their means. However, the new technologies that compress distance and reduce friction for capitalist enterprises also open up increasing possibilities for interaction between imagined communities – communities of interest (McDowell, 2003, p. 28).

2.1.1. Embodiment and Disembodiment

All experience is local. Everything we hear, touch, smell, and tastes experienced through our bodies. And unless one believes in out-of-body experiences, one accepts that we and our bodies are permanently fused. We are always in place, and place is always with us.

Joshua Meyrowitz (2005: 21)

The body is the "place of the individual" (McDowell, 1999) and, in the search for individualization, this has constituted an important site for feminist struggles[25] (Pilcher & Whelehan, 2004). Women have been subject to such space constraints that many sites gets described as "bodies out of place" (Puwar, 2004):

[25] There is an extensive feminist literature on the body. Although the research is not specifically concerned with the meaning of the body, for feminist thinking some references should be taken into account regarding the feminist approaches that range from defending the necessity to annul natural body characteristics to praising those characteristics and the specificities of women´s bodies. Jane Pilcher (2004) offers a short but clear overview of three different perspectives on the body: "body as nature", "body as socially constructed" and "embodiment". The latter being the perspective applied in this research and where the body is regarded simultaneously as natural and culturally constructed. Key feminist thinkers of the embodiment perspective include Elizabeth Grosz (1994, 1995) who presents a theory of "corporal feminism" and Anne Balsamo (1996) who proposes a view on technological embodiment.

> Social spaces are not blank and open for any body to occupy. There is a connection between bodies and space, which is built, repeated and contested over time. While all can, in theory, enter, it is certain types of bodies that are tacitly designated as being the 'natural' occupants of specific positions. Some bodies are deemed as having the right to belong, while others are marked out as trespassers, who are, in accordance with how both spaces and bodies are imagined (politically, historically and conceptually), circumscribed as being 'out of place'. Not being the somatic norm, they are space invaders. The coupling of particular spaces with specific types of bodies is no doubt subject to change; this usually, however, is not without consequence as it often breaks with how bodies have been placed (Puwar, 2004, p. 8).

Pierre Bourdieu characterized the imbalance in the gendering of space as that of "presence" versus "insignificance":

> One's relationship to the social world and to one's proper place in it is never more clearly expressed than in the space and time one feels entitled to take from others; more precisely, in the space one claims with one's body in physical space, through a bearing and gestures that are self-assured or reserved, expansive or constricted ('presence' or 'insignificance') (Bourdieu, 1984, p. 474).

Bourdieu puts forward the binary relations of power in sexual differences. However, authors like Butler have argued that the binary distinction is in itself a social construction and that the body is produced by performative acts. The body is thus open to deconstruction and subversion and to different performances on different sites as will be detailed in the examples of the home, the office and the streets. Once again, most studies focus on the differences between women's and men's occupation of space while little gets said about the differences between women´s bodies in relation to space.

In the intersection with the mobile phone, two main questions arise one stems from the bodily display of the device itself with the second arising out of the mobile communication characteristics of disembodiment. In the change from the telephone to the mobile phone, there was also a change from the collective to the individual and, in this change, the device moved progressively closer to the body. Mobile phones were first car phones while now having become prosthetic devices with the use of Bluetooth earpieces. They have thereby become a "second skin and can become an important part of the physical self by extending the body" (Campbell, 2008).

> *The mobile is always with me. If I have to go into another room in the house it goes with me. If I am using the vacuum cleaner, I put it inside my pocket to feel it vibrate and I do the same for every task that it is loud and there's a risk of not hearing it ring. I feel naked without it* (Fátima, 56 years old, married, retired insurance professional, empty nester).

The bodily display or wearability of mobile phones is far less noted in women than in men because women generally carry their mobiles in their bags or purses. Despite their invisibility when not in use, there are some gendered practices when being used or otherwise put on display.

> *I never saw the mobile phone as a fashion accessory. I carry it inside my purse so as long as I can hear it and it is reliable, that is fine by me* (Carla B. 35 years old, single, economist, Young Independent).

Studying class distinction, Pierre Bourdieu advanced the concept of "hexis" that describes how social order is inscribed in the body: "social distinctions and practices are embedded in the most automatic gestures or the apparently most insignificant techniques of the body – ways of walking, of eating and talking" (Bourdieu, 1984, p. 466). The same may be argued about gender distinctions and distinctions within gender.

The way we deploy a certain device and our gestures when using it both translate a gendered nature. An example are clam shell phones. Women's preference for clam shell devices led to their rapid connotation as more feminine devices. Women's preference seems rooted not in the shape itself that progressively became inscribed with gender stereotypes, and thus rounded and softer, but with the practicality of being able to carry them in a bag or a purse without them being turned on when bumping into other objects and initiating unwanted phone calls or text messages with the consequent resulting embarrassment and financial impact. Soon, the gesture of opening a clam shell mobile phone became a feminine gesture like that of opening up a vanity mirror.

> *I have three mobile phones, one for each provider and one of them is a clam shell and two are slide because all of them block when I close them. I used to have different models but sometimes I forgot to close and they kept making calls inside my purse and I ended up spending unnecessary money* (Deolinda, 51 years old, widow, owns a beauty salon, empty nester).

> *I chose my mobile phone because it was pretty, it took good pictures and you can close it. It does not have that problem with the keys. I am very distracted and I used to make a lot of calls without wanting to make them* (Ana D1, 56 years old, single, management assistant, mature independent).

The embodiment characteristics of the mobile phone device, its nature of "perpetual contact" also gives way to the user's own disembodiment[26] that takes its most radical form in text messages where not even the traces of the body conveyed by the voice are present. Much like the telephone, the mobile phone offers women new opportunities for disembodiment that enable them to occupy spaces that are otherwise scary or hostile to them or to be "communicatively present while being physically absent" (Wajcman, Bittman, & Brown, 2008a). This also enables them to manage difficult relationships and avoid hostility as conveyed by one of the women interviewed that found the mobile phone text message service very useful for managing the relationship with her recent ex-husband:

> *When I dated my now ex-husband, we did not have a mobile phone so I never used it to date but, now that we are divorced and there is conflict, I use e-mail and text messages to talk to him because it is very hard to talk face-to-face. It helps a lot because I end up not getting as nervous as I would if we were physically together. I don't have to see his reactions to what I am saying. It helps to avoid stress and anxiety. And it was also something I had to get used to using because of work. My boss sends text messages a lot* (Carmen, 40 years old, recently divorced, mother of two, sole care giver).

[26] The characteristics of disembodiment of mediated communication have long been debated and have ranged from criticism to celebration. The debate started as early as the criticism of the written word by Socrates in Plato's *Phaedrus* (370 B.C). Socrates dismissed the written word for its lack of interactivity, because it did not allow for a dialogue. New communication technologies such as the Internet and e-mail have also been accused of lacking presence and intimacy. On the opposite side, they have also been praised for the opportunities they generate for breaching political and physical constraints.

2.1.2. The Street – the High-tech *Flanêuse*

> *Everywhere you shut me in. Always you assign a place to me. Even outside the frame that I form with you....You set limits even to events that could happen with others....You mark out boundaries, draw lines, surround, enclose. Excising, cutting out. What is your fear? That you might lose your property. What remains is an empty frame. You cling to it, dead*
>
> Luce Irigaray (Irigaray, 1992, pp. 24-25).

Public places have long proven hostile environments for women, especially for those that either had to or wanted to move alone: "In the 10th and early 20th century, the presence of a woman on the street without a man indicated the woman was a public good or prostitute" (Steenson, 2006). Women may have had the freedom to walk around but had to be constantly concerned over their safety and respectability.

> The street is the setting for much intimidation of women, from low-level harassment like wolf-whistling to physical manhandling and rape. In many parts of the city women rarely walk, especially after dark. The street then is a zone of occupation by men (Connel, 1987, pp. 132-133).

The outside, the street where many leisure activities were located did not welcome women with the exception of shopping outlets. Consumption became a leisure activity and a "partial liberation" for women (McDowell, 1999).

In modern cities, a gendered etiquette for mobile usage still seems to prevail in public and in the "dance" that occurs between caller and receiver. Through these bodily attitudes, the mobile phone partially creates borders in the sense of what Goffman terms "symbolic fences" (1971) and Ling designates as "fictive curtains" (Ling, 2004). In these interactional rituals, women display more discrete behaviors, are more self-conscious and exert a specific choice of tone (Hjorth, 2005a). The women interviewed affirmed how very self-conscious they were of their conversations in public and all stated that they sought out quiet places to answer their calls, lowered their voices and tried to keep the conversation short:

> *I prefer to be alone to answer the phone and it also bothers me having to listen to other people's conversations unless the other person on the phone is someone I know and then it becomes a three way conversation.* (Raquel, 20 years old, single, student).

> *I think people cross the line when they expose their private life in public Sometimes I end up having to hear those kind of conversations on public transport. I would never do that and I do not like seeing it happen. Sometimes it looks like an exhibition but perhaps they just lose the notion od where they are. And ringtones should also be chosen not to disturb* (Cecília, 46 years old, divorced, mother of one, sole care giver).

> *When I ride public transport or even on the beach, I feel that people lack respect because they talk very loud. My husband even does the same thing. I personally do not like to answer the mobile in the street. I would rather use the mobile phone at home* (Paula, 59 years old, married, retired, empty-nester).

The pervasive notion of public space as a hostile space for women might justify why women also turn to the mobile phone to build and convey a sense of safety and security (Steenson, 2006) and to shield themselves against unwanted attentions. Plant (2001) describes this act:

> It was also observed that 60 per cent of lone women had a mobile phone on show – a far higher percentage than that of lone men (47 per cent), men together, or men together with women. Many women saw this reflecting their own experience of the mobile as a valuable means of keeping unwanted attentions at bay. A mobile projects an image of self-containment, and can legitimise solitude: I'm not alone, I'm with my mobile phone (p. 41).

Security proves one of the main reasons women either decided to buy a mobile phone or had one given to them:

> *My first mobile phone was a present from my father that he gave me because I was going to college and I was starting to travel and he preferred I was always in reach* (Carla A., 30 years old, tourism agent, single, mature independent).

> *I have had one since 1998 when I started working. I had to travel a lot and the road was kind of dangerous and my idea was to feel more supported and safe* (Susana, 36 years old, single, civil engineer, mature independent).

> *When I got my mobile phone, I was already working and it was a gift from my parents. I was a bit resistant to having one but when I got a flat tire I changed my mind* (Ana A., 34 years old, married, web content producer, mother of one infant).

As illustrated in figure 8, women are thus creating new actors, the "absent-present"[27] (Gergen, 2002) and "new social events" (Caron & Caronia, 2007). Mobile phones serve as shields or technological body-guards. Goffman's (1959, 1963, 1971) work on behavior in public spaces is particularly relevant to understanding this social interaction. According to Goffman, the "Singles", people who are alone in public spaces, are subject to more scrutiny and feel more vulnerable than the "Withs", people who are with other people. Thus, "Singles" experience a need to guard themselves against being approached and to legitimize their presence in a public space and do so frequently by using props that project a certain image, of being busy for example: "Singles, more than those who are accompanied, make an effort to externalize a legitimate purpose and character, that is, render proper facts about themselves easily readable through what can be gleaned by looking at them" (Goffman, 1963, p. 21).

That proves especially true for women and hence their need to resort to this kind of gimmick to feel comfortable in public places. Now, the mobile phone provides the best solution given it is always with us and allows us not only to project an image of being busy but also of being connected and thereby becoming virtual "Withs", we summon the presence of others to show the co-present that in fact we are not alone as described by Sándor and encapsulated in the cartoon[28] in figure 8:

> In the middle of a room full of strangers in a depressing or simply dull situation, we can (virtually) be with those whom we are in a close relationship. We can instantly share our experience with them, we can ask them for help in solving a problem, we can get some comfort from them – or we can simply escape from the situation we are physically in to a mentally safer virtual environment (Sándor, 2005b, pp. 20-21).

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[27] As proposed by Kenneth J. Gergen, the concept of "absent presence" means that people are both in a place and not in a place simultaneously.

[28] The cartoon was shown in the interviews. Women were asked to comment on it: whether they recognized the situation, whether they recognized themselves in the situation and what they thought caused such behavior.

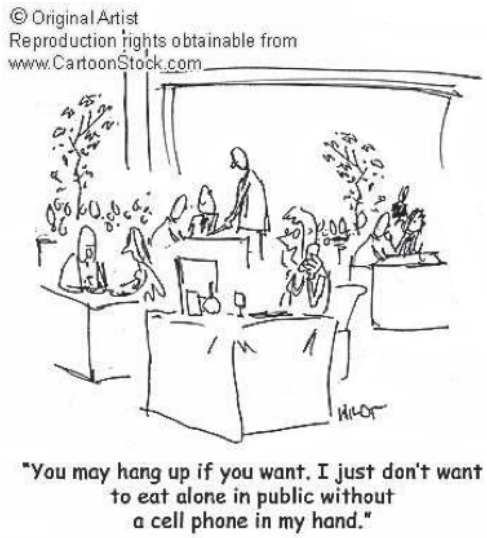

Figure 9. Cartoon portraying a woman using a mobile phone in a restaurant

When confronted with the cartoon, all the women interviewed recognized the situation with most acknowledging that they have used the mobile phone for similar or identical purposes:

> *Oh yes, that happens to me. If I am in a place with a small amount of people, I don't mind being alone but, if the place is crowded, I feel the need to hold on to something and the mobile phone is the most obvious thing* (Constança, 23 years old, single, student, dependent).

> *Yes, that has happen to me many times. I have just changed jobs and I have to lunch alone plenty of times and the first thing I do is pick up the mobile phone and call someone so that I do not feel alone. It's ready at hand. And it's not only when I am having a meal alone, in other situations when I am waiting for something or someone, I immediately pick up the phone and call or text someone to occupy time* (Ana A. 34 years old, married, web content producer, mother of an infant).

> *It's funny because when I have to eat alone, I immediately take that time to clean up the mobile phone and make all the calls I need. It's good company when a person is alone* (Patrícia D., 36 years old, in a relationship, marketing manager, nesting).

> *I have resorted to the mobile phone when I feel unsecure. Sometimes, I pretend I am talking to avoid certain people. It's a very useful tool in that sense. They feel intimidated and do not initiate conversation if I am on the mobile.* (Carla A. 30 years old, tourism agent, single, mature independent).

Through recourse to mobile phones, women establish cocoons that are "micro-places built through private, individually controlled infrastructures, temporarily appropriating public space for personal use" (Mizuko Ito, et al., 2008, p. 74).

Very much as the trope of the "flâneuse"[29], the mobile phone may also serve to subvert dominant cultural paradigms such as in Japan where young girls deploy the mobile phone to challenge masculine culture in public places: "Through their tactics of play, colorful dress, and mobile phone usage, they fight the hegemony of older men on subways, and in doing so produce space for themselves" (Steenson, 2006). They build new geographies of gendered identity and claiming their right to position themselves in a place that formerly was not theirs in doing so.

Additionally on the transgression side, we should note the study of camera phone usages among young South Korean women (D. Lee, 2005). Lee describes how young South Korean women appropriate the camera phone for cultural production despite the prevalence of advertising that shows men snapping pictures of women. In this context, women are applying mobile phones to perform new meanings:

> These women are not the mere owners of camera phones, but performers who create various cultural meanings. They develop a more intimate relationship with technology, challenge the convention of gaze, give meaning to what is taken, and circulate their own expressions (D. Lee, 2005, p. 12).

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[29] The *flanêur* is a male figure of the nineteenth century that roamed the cities as an observer. In an essay, "The painter of modern life" (1864), Baudelaire presented the *flanêur* as the symbol of the modern city, an anonymous figure that could gaze and walk the streets in invisibility. The *flâneur* was a figure restricted to men; women had no place in the urban landscape and were thus outsiders. The female outsiders according to Baudelaire were lesbians, old women and widows and prostitutes or whores. Authors such as Elisabeth Wilson (1992) disagree with the impossibility of a female *flâneur* – a *flâneuse* and that women in nineteen century cities had their own experience of modernity and displacement. Furthermore, many authors have since argued that the city is an important site of challenge to gender divisions.

From a culture where the gender divides have become more relaxed, the Portuguese women interviewed did not account for the clear transgression practices such as those described in Japan or Korea. Most did report recourse to the mobile phone as a means of reassurance when feeling out of place or under scrutiny and hence meaning there are still places where women feel as though they are trespassers in addition to concerns over safety and security while walking the streets at night or driving the car – the fear of being alone on the road was commonly raised as one of the main motivations both for owning a mobile phone and for keeping it charged.

2.1.3. The Home and the Office – Juggling Spheres

> *I find a woman's intrusion into the House of Commons as embarrassing as if she burst into my bathroom when I had nothing with which to defend myself, not even a sponge.*
> Winston Churchill, cited in Vallance, *Women in the House*

Home and domesticity have always been imprinted into women's identities and it brings with it multiple and layered affordances: a site of production, consumption, reproduction, inequality in unpaid labor, pleasure in reassurance and security and insecurity due to domestic violence:

> Housework and childcare in particular were seen as women's 'sacred' duty, they and the 'master' of the house being protected in this sphere from the harsh competitive world of capitalism. The home became an idealized centre for emotional life; where feelings that might be disguised elsewhere were allowed full rein. Thus the home was constructed as the locus of love, emotion and empathy, and the burdens of nurturing and caring for others were placed on the shoulders of women, who were, however, constructed as 'angels' rather than workers (McDowell, 2003, pp. 75-76).

The naturalized association of domestic work with women as described by McDowell remains firmly entrenched in our societies as even the younger generation of women still accepts an uneven division of household work and especially of childcare as described in Part II of the book and still very much the situation prevailing in contemporary Portugal even for the younger generations:

> *Now that I am unemployed, I end up doing more things. He has some tasks like taking care of the backyard but I think it is much harder on a woman who has more tasks to be worried about on a daily basis. He can take care of the backyard every other week but I can't cook every other week. I think it is something imposed by society. A man immediately thinks he is not going to clean up the bathroom. They immediately think it's something for a woman to do* (Carla, 34 years old, unemployed marketing manager, mother of a small baby).

Indeed, we still see a traditionally gendered domestic division of labor[30] where women are both the main family caregivers and responsible for the household chores. Even when they get external help with heavy duty tasks, they still have the need to organize those activities:

> *I notice more things that have to be done around the house. I have to remind him of the things that have to be done but there are things that he says he doesn't like doing. In the beginning, it was very complicated and we even argued but I am lucky because he is very tidy and I know how other men are* (Catarina, 31 years old, married, teacher, nesting).

Nevertheless, it is also a fact that the physical walls of the house and the metaphorical walls of the home have been breached by technology. In Part I chapter 2, we have already discussed how the telephone changed the domestic environment with the mobile phone now further enabling the enactment of multiple affordances such as that of mothers and breadwinners.

Offices and other professional spaces are public spaces and thus subject to the dichotomy that associates the private with women and the public with men.

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[30] The concept of the domestic division of labor refers to the division of tasks that have to be performed in a home between members of a family. The traditional gendered division is that in which men were responsible for earning money outside the home and women were responsible for the tasks in the home that did not get regarded as work proper and were instead unpaid tasks, labors of love. The focus on this issue began in the 1970s with Marxist feminism. With women going out to work outside the home, this division lingered and gave way to what some authors call the "double shift" in which women perform their jobs outside the home and then come back home to do their traditional tasks. Thus, although women have conquered different spaces they have not conquered time, especially leisure time. Men come back to their homes to relax and spend their free time and women come back to take care of their children and their homes and thereby leaving no time for leisure activities.

The mobile phone's precursor, the telephone, opened up workplaces for women outside the home. Nevertheless even as these workplaces opened up to women, "their concentration in feminized occupations has remained a dominant feature of their employment pattern" (McDowell, 1999, p. 124). This justifies why women still today feel they have to prove themselves to their male counterparts:

> *I noted that the same functions were paid and understood in different ways depending on if you were a man or a woman, not as regards credibility but in terms of your recognition. I feel we always have to give more than men. That even happens in my field, where women are in a majority, because I work in a company with a male culture. I have to surpass myself for them to see that I manage to do my work well* (Patricia, 36 years old marketing manager, nesting).

Thus, workspaces get constructed as gendered spaces with such spaces embodying gendered attributes and thus certain bodies, male or female, might feel out of place or in need to fight for their place. Technology does provide a tool for conquering a place and signaling that we belong.

> *I have a black Blackberry Curve that was a gift from my parents. I would not buy a pink one but I would buy white if they had it in white. This question of color was even an issue when I bought my notebook pc. I could choose between a pink, a white and a black one and my sister promptly said not to choose a pink one because no one would take me seriously. And, in fact, while I like pink stuff, it is kind of a childish color and because it is associated with a more feminine culture, it's not well regarded in professional settings. So, I ended up buying the white one because it's more feminine than the black but still a professional and technological color. But the truth be told, if I could choose I would choose the pink one, I have a lot of pink things but not technological devices* (Inês R., 25 years old, single, marketing manager, young independent).

The behavior described by Inês R. is common in women striving to assert their professional abilities. Sensing that work is ruled by male cultures, women aim at projecting a professional image by abiding by that male culture. "People perform their sense of their own gender, not only by words and gestures, but also in material ways: by wearing baseball caps or skirts, ties or jewelry; by tinkering with cars or baking cookies; by shaving with particular colors of razors" (Lerman, Oldenziel, & Mohun, 2003a, p. 4). In such cases, this is less about the performance of their gender and more about a masque for their gender. By

choosing black or a more acceptable color for professional settings, women abide by stereotypical rules. They can trespass on male culture but they have to pay a price along the way and in this case their own femininity. This is particularly relevant in the first life-stages of women's lives when seeking to project independent and professional images.

Notably, the mobile phone seems to perform rather than function in women's lives. First promoted as a professional tool, mobile phone ownership by women also conveys a signal that they mean business and thus legitimate their occupation of male spaces: "In the case of the Mother the mobile phone might well mediate the performance of a traditional maternal role, but it also mediates her performance in the role of contemporary breadwinner" (Arnold, 2003, p. 250). So, the mobile phone correspondingly enables women to juggle spheres.

> *I never turn off my mobile phone because it's my connection to the world, with my parents that are becoming old and with my kids that are loose out there. And professionally I have to be available 24 hours a day. I only accept turning it off if I am with my kids but even then I always feel something could happen* (Sofia S., 47 years old, human resource manager, divorced, and mother of two pre-teen and teenage boys, sole care giver).

In their study of suburban women in Chicago, Rakow and Navarro (1993) conclude that the mobile phone "let women practice remote mothering" and "work parallel shifts" (p. 153) meaning that women who did not work, much like former usage of the telephone, may perform "their expected responsibilities and prove the correctness of the social definition of being a woman" (p. 146) while women working outside the home could "exist in their domestic and work worlds simultaneously" (p. 153).

The concept of "parallel shift" extends the concept of "double shift" because, with mobile phones, women no longer need to get back home to fulfil some of their household chores. Rakow and Navarro consider the mobile phone as reinforcing traditional roles for women while also unquestionably also endowing them with autonomy and control over their space and time that they formerly did not have. Women who were bounded by geography and by the need to work close to home now gain more freedom of movement and choice because they are always connected to those who need them:

> *I bought a mobile phone for my ten year-old son because I get worried about being on this side of the river. If something happens, I take too long to get to him. In this regard, mobile phones were a great invention. When you have children they are very useful* (Carmen, 40 years old, divorced, secretary, sole care-giver).

Similar to Rakow and Navarro's study, the women interviewed here reported heavy usage of their mobile phones for personal or domestic responsibilities. The same results came out of a study on how the mobile phone shapes the permeability of boundaries between home and work in Australia (Wajcman, Bittman et al., 2008a), where the results "demonstrate that the mobile phone is not primarily a work extension device" (p. 648) When asked what sphere would be most impacted on if they were to spend a fortnight without their mobile phones, our respondents assertively answered that the private sphere would be most affected:

> *If I had to give up the mobile phone, it would be complicated. Until recently, it was not like that but now, with the kids, I feel the need to be in touch. My first son was the landmark. Work related it would be positive because it would dismiss some contacts but in my private life it would be extremely complicated because nowadays I am very much dependent on the mobile phone to coordinate daily activities* (Margarida, 33 years old, married, safety engineer, mother of two infants).

In their study of the hybridization of home and work spaces, Wajcman et al propose the concept of "connected presence" to explain these social practices:

> Mobile phone owners maintain contro1 over what passes through the boundary separating work and personal life, choosing when to switch off their phone, when to allow messages to accumulate in message banks and whether to leave the phone behind. In relation to the control of the flow of communication, respondents are most careful not to disturb strangers (for example, in the cinema and restaurants) or colleagues at work meetings. However, they are more relaxed about communicating at times reserved for family solidarity. Perhaps this is because the phone is so closely associated with a deepening of connections with significant others that there is less need to control the flow over these temporal boundaries. Indeed, it may be that people positively welcome the softening of the boundary between home and work afforded by new communication devices because, rather than fearing work intrusion, they are seeking deeper contact with family and friends (Wajcman, Bittman et al., 2008a, p. 649).

This concept of "connected presence" or "families without borders" is well expressed by the women interviewed:

> *The mobile phone is always with me. I never turn it off. I used to do so but since my mother became sick and I have always left it on. And even after she died, I kept on doing so because I am afraid someone might need me. And my father is becoming old as well and I feel more reassured this way. I once spent a day without it and it was hard. It is an anguish not to be able to provide for my kid at a distance. I would be anxious about not being able to speak to my son* (Cecília, 46 years old, divorced, mother of a pre-adolescent son, sole care giver).

Although the concepts of space and place have been the object of a long, controversial debate, there is a growing acceptance and recognition as to their cultural articulation. New technologies have brought new affordances to gendered places by allowing the building of unique and individual experiences.

In an increasingly mobile society, the mobile phone has become a place for many of us – the place where we can be found and the place where we can hide. The hybridization of the public and private, of the personal and professional, of leisure and work encapsulates one of the most relevant facets to the mobile phone.

We are living in a culture of "perpetual contact" where the mobile phone invades even the smallest and most sacred places of our lives, into churches and into our classrooms, into our beds when placed under the pillow by a teenage girl so that no message gets missed and into our office bathrooms so that no phone call gets left unanswered.

The need to always be in touch also addresses the wearability of mobile phones. They are carried closer to our bodies; they become an extension of our senses, a prosthetic device for our voice, our eyes and our ears. And, within this process, they are the object of embodiment and disembodiment practices.

As embodied objects, they form part of power relationships interrelated with the presence or invisibility of certain places such as our streets, our homes and our offices. Hence, space negotiations represent one of the examples of the moving nature of mobile acts. Women's choices may derive from the option to conform to the masculine norm, of abiding by "gender scripts"; a form of using femininity as a masque against retaliation or disguising power uses of technology that would confront men; or as a self-expression of women's individual personalities. Once again, the mobile phone serves multiple purposes: whether

as a defence mechanism, to legitimate women's public presence or to subvert traditional meanings.

In some contexts, women present themselves as "space invaders" (Puwar, 2004), they are conquering spaces that were traditionally hostile to them. Women are "nomadic subjects" (Braidotti, 1994) crossing and invading boundaries and patriarchal heritages. In this, the mobile phone provides a tool to challenge the norm.

These space negotiations also have different meanings according to women's life stages. For the women interviewed who were still dependent and living in their family environment, their mobile phone was mainly a social networking device that allowed them to summon their network of friends, to keep them at hand even in spaces that could not otherwise be physically shared. For the young independent category, the struggle mainly involves establishing their own places in the world, initiating a career and still maintaining a strong social activity. They are strongly confronted by the separation between places of leisure and of work and apply the mobile phone to float between the two. For nesting women, the challenge incorporates the sharing of a common space, the negotiation of distance with family and friends and the mobile phone enables them to manage the multiplicity of spheres in their lives. As for mothers or sole caregivers, the mobile phone becomes a "remote mothering" and "parallel shift" device allowing them to perform multiple roles in spite of their physical locations. They might be in the office while still keeping track of their kid's homework or transport arrangement or be at home and setting up meetings or taking conference calls with office colleagues. For mature independents, the mobile phone becomes a tool for maintaining a sense of security in their mobility. For empty nesters, the mobile phones breach their isolation and enable them to keep an independent and connected life.

Keeping in touch across space barriers and building their own senses of space are common to all stages of women's lives. Women may remain physically more restricted to a certain place in certain life stages but deploy mobile phones to cross those borders and thereby stretch their presences.

3. Gendered Time

We are embodied time.

(Manuel Castells, 1996, p. 429)

Today, we find ourselves expected to be available in any place and at any time. The time we knew as linear, irreversible and measurable is undergoing transformation[31]. Castells terms this new conception of time as "timeless time" in order to reflect the breach in the sequentiality of social actions, be it by the compression of time or by the random ordering of moments. All the ordering of moments has lost its chronological rhythm and instead now organized in temporal sequences conditioned by its social use or purpose:

> I propose the idea that timeless time, as I have labelled the dominant temporality of our society, occurs when the characteristics of a given context, namely, the informational paradigm and the network society, induce systemic perturbation in the sequential order of phenomena performed in that context. This perturbation may take the form of compressing the occurrence of phenomena, aiming at instantaneity, or else by introducing random discontinuity in the sequence. Elimination of sequencing creates undifferentiated time, which is tantamount to eternity (Manuel Castells, 1996, p. 464).

Timeless time translates into instantaneity or the speeding up of events with desequencing encapsulating a "perpetual present" which may in turn be grasped in the breaking down of "rhythmicity" through the technological transformations of the life cycle that dictates the end of biological reasoning. Biology no longer dictates when we become parents or old. Time, as we knew it as an ordering of things or events or spaces, has been dissolved by the space of

[31] Time has been the subject of numerous analytical and theoretical debates. Although this chapter cannot accommodate an extensive discussion on the concept of time, it is worth referencing some theorists and particularly the seminal work of Harold Innis (1950, 1951, 1952), Giddens works on modernity (1981, 1984, 1990), Lash (1990) and Scott and Lash (1994) on the articulation of time and space. The acceleration of time and the compression of time-space are constant themes across the fields of sociology, philosophy and geography. Empirical work on the speeding up of time also abounds (Frederick, 1995; Gershuny, 2000; Linder, 1970; Robinson & Godbey, 1997). The acceleration of time is also pointed out as a paradox in the face of the acceleration of technology (Rosa, 2003). The discussion about time scarcity has also centered on the balance between work and family.

flows. However, this trend does not prevail worldwide and is also the object of resistance:

> While the emerging logic of the new social structure aims at the relentless supersession of time as an ordered sequence of events, most of society, in a globally interdependent system, remains on the edge of the new universe. Timelessness sails in an ocean surrounded by time-bound shores, from where still can be heard the laments of time-chained creatures. Furthermore, the logic of timelessness is not displayed without resistance in society. As places and localities aim at regaining control over the social interests embedded in the space of flows, so time conscious social actors try to bring under control the ahistorical domination of timelessness (Manuel Castells, 1996, p. 467).

The mere fact that one is able to communicate with what one might call "the absent others" (Giddens 1990) and thus reach beyond the need to coordinate actions beforehand, endows the mobile phone with a strong, central role in the restructuring of time. This is what Anthony Giddens calls the "disembedding" of social interaction that constitutes the central issue to this matter. A fundamental change in the notion of time happens whenever we may exist in a communication-sphere regardless of spatial boundaries. The coordinating aspects of clock-time come under pressure from the ever present and dynamic restructuring and renegotiation aspects of the mobile phone. The linear time – as in clock-time – is not changed but what has changed is how linear time becomes filled with actions (Johnsen, 2001, p. 63). We are available wherever we are and we can even resuscitate time such as that spent on transportation or in waiting lines. The practice of using the mobile phone to build a personal cocoon enables people to "transform 'dead time' in incidental locations into time that is personally productive or enriching" (Mizuko Ito et al., 2008, p. 74).

Time is also gendered and, in a time-constrained society, women are perceived to be amongst the poorest. The popular question, what do women want, most commonly gets answered by "more time" (Silverstein & Sayre, 2009b). According to Diane Negra, there is a "feminization of the temporal crisis" (Negra, 2009, p. 48), which is a hallmark of postmodern culture and postfeminism. Female philosophers such as Kristeva (1981) and Grosz (1994, 1995, 2004, 1999) propose a female notion of time bounded both by women's corporal experiences and by the unexpected. According to Kristeva, the concrete experiences of women's bodies are not compatible with the masculine

linear and industrial conception of time even while women are still forced into timetables. Elizabeth Grosz speaks of the female desire for something new. But beyond the corporal and the biological, women and men are also socialized into different time cultures where women's time is defined as relational, that is, directed towards the care of others (Nowotny, 1989/2005), thus "women often feel alienated from their 'own' time" (Huijer, 2010, p. 78). Barbara Adams (1995) speaks of women's need of for "open-ended-time" because most of the activities performed by women such as caring, loving, educating and household management are unpredictable. Nowotny (1989/2005) also describes how women have less scope for structuring their time and how their life courses are less unified and coherent than men's. Diane Negra notes the punitive discourse around women's time pressures with "temporal problems that may frequently be resolved through minimization of their ambition and reversion to a more essential femininity" (Negra, 2009, p. 48).

In Portugal, which registers one of the highest employment rates for women, women's time constraints are high. According to the national survey on the uses of time (INE, 2000): The combined duration of professional work, household and family care average is 6.96 hours for the employed male population and 8.67 hours for its female equivalent with the greatest discrepancy deriving from how household chores account for only 20 minutes in the male population but 3 hours in the female population. Leisure time is also lower for women with the average being 2.30 and 1.42 for the male and female populations respectively. These numbers even manage to yawn still further in the unemployed population where men devote only 2.08 hours to household chores and family care versus 5.58 hours for women with the retired population returning very similar numbers: 2.08 for men and 5.19 for women. These time differences are absorbed by leisure time to which retired men devote 5.26 hours versus 3.24 hours for women Thus, even in these advanced life stages, the constraints on women's time do not experienced any untightening. This portrait of time constraints for retired women gets well described by one of the empty nesters interviewed:

> *I wake up in a hurry and I sleep in a hurry. Now that I am retired, it's even worse than when I was working. In the morning, I have to dress two kids, get them ready and take them to school. I come back to pick up my other granddaughter. Then, I make lunch for her and my husband and I clean up the house. I give lunch to my granddaughter and at half past three I have to pick the kids up from*

> *school. We get home and it's time for a bath and getting my youngest granddaughter ready for her mother to pick her up and, as my daughter is doing her master's degree, so lately she has frequently ended up sleeping over and instead of two grandchildren in my care I end up with three. It's time to get them into bed and then I go to sleep in a hurry so the show can start all over again the next morning. My husband, who is also retired, only helps with the car pools. He sometimes only makes everything worse because he likes to see everything tidied up but only actually does something when it is strictly necessary or I ask him to do it. With all this, I end up having little or no time for television or a book. I have never had as little time as now. When I worked, I had more time. At weekends, it's time for heavy duty cleaning and sometime we go down to our house in the country where I also end up doing the cleaning* (Maria, 60 years old, retired teacher, married, grandmother of three, empty nester).

Additionally, according to the time uses in Portugal survey, the feeling of being rushed and time pressured is also higher for women and it starts at a younger age with 41% of young women, aged between 15 and 24 years old, stating that they feel rushed versus 29% of their male peers. The statistics prove fairly similar in other European countries[32] (Aliaga, 2006; *Comparable time use statistics*, 2005; *The life of women and men in Europe. A statistical portrait*, 2008).

3.1. Time Bind

> *It is ironic that in a culture so committed to saving time we feel increasingly deprived of the very thing we value*
> *(Rifkin, 1987, p. 19).*

Time is certainly one of the main concerns to the women interviewed. Across all life-stages but especially for women who are mothers or sole caregivers, time poverty and the paucity of leisure or of personal time represents one of the main obstacles in everyday life and more time is the most commonly stated need:

[32] No direct comparison can be established as Portugal has not collected data on the uses of time for the Eurostat surveys.

> *I feel that life is a bit monotonous. I don't have time for myself, leisure time: to do a massage, lie down on the sofa or to go and have a coffee when I feel like it. I feel lucky for having a child but I don't feel 100% fulfilled. I need to have a job and time for leisure. I need to go out, meet friends without my daughter or my husband (Carla D., 34 years old, unemployed marketing manager, married, mother of a toddler).*

> *I feel a need to get some help around the house. I'm trying to postpone getting help because I am trying to educate my husband and my children but I end up thinking that it is a drag to go home at the end of the day and still having the housework to do and other things that I never enjoy doing. And now there are four of us. With that help, I would gain quality of time, to be more around the kids. I would not use it to work. Most of the time, I wake up earlier to get the house chores done and in that way I could watch more TV at the end of the day or read a book without falling asleep because I would not have to wake up so early* (Ana D., 39 years old, business owner, married, mother of two children).

With a great deal of evidence, that we in fact have more time than in the past, social scientists have been looking for explanations for our perceptions of time poverty. One such explanation identifies the redistribution of paid work between the sexes and the rise of dual household earners (Bittman, Rice, & Wajcman, 2004; Bittman & Wajcman, 2000). Feminist literature also accounts for women's time constraints on the basis of the "double burden": women have to work outside the home whilst still maintaining their responsibilities for the household chores and "time use data does indeed show that time poverty is a particularly widespread experience among working mothers who juggle work, family and leisure" (Wajcman, 2008, p. 64). Portugal reports one of the highest rates of women working outside the home in Europe but nevertheless men's participation in domestic chores remains very low and always inferior to female participation levels: "female emancipation and participation in the job market brings a high cost that translates into the daily 'gymnastics' of women seeking to multiply the time they have for the multiple tasks that are traditionally their responsibility" (Perista, 1999, p. 236). When questioned about their daily activities, the women interviewed, across all life-stages, reported being burdened with household responsibilities:

> *I am getting divorced but the routines are the same because I used to do everything and I still do. We did not share the household chores. He would*

handle the taxes and I did everything else: organize family life, worry about the kids, supermarket, pharmacy, paying the bills, social security, shopping for the kids (Sofia, 47 years old, human resource manager, divorced, mother of two teenagers, sole caregiver).

Except for cooking, which is generally my husband's task, I do everything else. But even the cooking, he is not doing much nowadays. But I understand and I give him some slack. He also helps with the kids. I do my shopping online but he does not clean at all, even basic things like putting clothes in the washing bin. All the bureaucracies are also my responsibility. I am not happy about this. We used to have house help four times a week but we got into an argument and she left and it's not easy to find someone else. I also thought it would be good not to have help so that the kids and the husband could learn some simple rules but it's been six months and there's been no changes in their behaviors. I would like to go back in time. I think it is impossible to share my tasks with my husband because he simply does not perform his assigned tasks. The time I waste telling him what to do over and over and thinking or worrying if the tasks were done or not, I simply do them myself (Ana D., 39 years old, business owner, married, mother of two children).
All the household chores are my responsibility. My husband is a very good man but he does not do a thing around the house. I have help with the clothes and with the heavy-duty chores. My husband only handles the bills and the paper work (Fernanda F., 52 years old, computer manager, married, empty nester).

Men can help but the woman is always the woman and the mental part, the organization has to be ours. They (the men) are not proactive. We have to plan and then they can execute – some more than others. My husband goes shopping but he has to ask first what we need around the house. After our son was born, I had less time so now he does the bills but it is still me that organizes everything (Sílvia, 29 years old, nurse, married, mother of an infant).

The felt need to have more time is also rooted in the fact that women have to perform multiple tasks across the different spheres of their lives. Multitasking would seem a trademark for women.

3.2. Multitasking

Manuel Castells designates multitasking as the "blurring of time and space" (2008) and identifies how the mobile phone has become the tool of choice for multitasking by enabling the hybridization of spaces and the blurring of sequences in time. Southerton and Tomlinson (Southerton, 2006; Southerton & Tomlinson, 2005) designate this pattern of allocation of tasks as "temporal density which together with "temporal dis-organization" and volume constitutes the basis for the sense of always being running out of time.

Multitasking is also commonly associated to women who are believed to be better at the practice than men. The data does support the fact that women perform more tasks simultaneously. In a recent study about media multitasking, 31.4% of women talked on the phone or on the mobile while they were watching TV compared as do 30.1% of men (Araújo, 2009). The women interviewed also generally acknowledged that they did a lot of multitasking and not always as a choice with such many times causing stress:

> *I feel very stressed out. I have to do a lot of things in little time and I have to do them all and because of that I am always running. For me, multitasking is a necessity and I would do it differently if I could. Women are experts at having a lot of things to do at the same time. Women's time is always more constrained although that is beginning to change. Women have been raised to take on several tasks and responsibilities: family, home, and work. Especially in Portugal, where women work a lot outside the house, women have a lot of things on their minds. While my husband walked calmly to his job, I had to worry about everything else. And I think that happens with most women* (Sofia, 47 years old, human resource manager, divorced, mother of two teenage boys, sole caregiver).

> *I feel stressed because I do a lot of things at the same time. I learned to work and study at the same time. I wake up very early and go to bed very late. And, at the same time, I try to fit in lunches with friends. I try to have a balanced life and keep up with all my tasks. Yet, I think women have a more stressful life. We are multitasking more and we do more things. We are more connected to household management but we have to our jobs at the same time, we go shopping and we like to look out for our looks and all this is hard work. Managing everything on a daily basis takes up a lot of time* (Inês, 25 years old, marketing manager, single, young independent).

Multitasking seems especially to affect the quality of time and the perception resulting of having or not having leisure time. Although mostly no average difference is reported, the qualitative experience may prove quite different as pointed out by Wajcman:

> While there is no significant gender difference in the aggregate time men and women spend in leisure, we argue that the *quality* of leisure differs in two important respects (…) we show that men enjoy more leisure time that is uninterrupted. Women's leisure by contrast, tends to be conducted more in the presence of children and subject to punctuation by activities of unpaid work. In addition, the average maximum duration of episodes (blocks of time) of pure leisure is longer for men. It seems reasonable to assume then that women's leisure time may be less restorative than men's (Wajcman, 2008, p. 65).

3.4. Moving Time

The role technology plays in this process of time poverty and in the perception that time gets saved or lost has become very controversial. A co-construction perspective renders it easy to understand that their impact would never be straightforward because "technologies change the nature and meaning of tasks and work activities, as well as creating new material and cultural practices" (Wajcman, 2008, p. 66). Acknowledging the agency of users, in our case women, allows us to grasp and identify innovative usages of technologies such as the mobile phone in order to take control of time.

Most of the women interviewed have indeed referenced the mobile phone as a tool for saving time namely by minimizing "temporal dis-organization" (Southerton, 2006; Southerton & Tomlinson, 2005) through micro coordination and control:

> The control the mobile phone brings to our lives seems intuitive. In allowing for a more unplanned daily activity, it would appear to diminish the control over the activities in which we are involved. Yet, it is because the mobile has made them controllable that unplanned patterns of activity are able to thrive (Ilharco, 2007, p. 70).

With the mobile phone, especially with web-enabled phones, we are in "perpetual contact" (J. Katz & Aakhus, 2002) and in a state of "constant availability"

(Chayko, 2008). This constitutes a paradox for the women interviewed as while on the one hand this helps not only in coping with anxiety, especially for mothers and sole caregivers that have children or relatives depending on them but also for feeling more connected to their networks and thus emotionally rewarded, on the other hand, this also leverages their multitasking and further burdens their daily life with tasks related to their caring labors and unpaid work, in particular household management:

> *The mobile phone allows me to manage my personal and family life in a more effective way but I feel free when I am able to turn my mobile phone off, especially if I go out without one* (Sara, 35 years old, social worker, married, mother of two children).

> *I use the mobile phone a lot and I feel that if I leave home without it, I will miss it. There's a lot of stuff I get around on my way to work. We are doing multiple things at the same time and that is an advantage. On the other hand, if I could spend two weeks without it, it would be great. I would have a less stressful life and I could take advantage of things that I can't now. I end up not looking at the scenery or just being in silence. But, once again, I know I would be more anxious. Even if I don't need to use it, it's always there and that is reassuring* (Inês, 25 years old, marketing manager, single, young independent).

This widespread need has generated a social expectation that everyone should be available and when people choose to be out of touch or end up being out of touch by accident, this triggers criticism and sometime even self-criticism or remorse for having chosen to be out of reach:

> *Sometimes I turn it off (laughs) when I don't want to be disturbed. If I only put it in silent mode I would still see when someone calls me or sends me a message and I would start thinking about it. It's pretty common to turn it off and not have a connection with the outside world. But then, when I turn it on, I get anxious and start thinking that something might have happened. And sometimes I have a lot of messages and missed calls and then I just have to return them all* (Catarina, 31 years old, teacher, nesting).

One of the most noted reasons for wanting and needing this constant availability to others, and of others, is an emergency. This represented one of the most common justifications given by the women interviewed for purchasing a mobile phone and also commonly referred to in other empirical studies as

a "life-line" (M. Castells, et al., 2004; Chayko, 2008; J. Katz & Aakhus, 2002; Ling, 2004). Even for those few women not attributing any great value to the mobile phone, they recognize its usefulness in emergencies:

> *I had some resistance to using a mobile phone until I one day got stuck in the road with a flat tire and then I changed my mind* (Ana A., 34 years old, web content producer, married, mother of an infant).

Some of this resistance arises out of the perceived notion regarding the loss of privacy: "There is an increasing tendency to slip between private and public modes of interaction, as a result of the new forms of fluid connectivity enabled by mobile communications" (Sheller & Urry, 2003, p. 39). This perception leads women to engage in creative forms of avoidance and also justifies the preference for asynchronous forms of communication, especially text messages. In a recent article in *Wired* magazine, Clive Thomson wrote about the "death of the phone call" (Thompson, 2010). He refers both to the shrinking number of phone calls and also to their shorter durations. With more options for perpetual contact emerging from new in mobile phone features, users are opting for asynchronous forms of conversation or tools that enable them to display status information that allows for a better management of privacy and availability. The author also notes how people now coordinate important calls in advance through e-mail, text messages or chat and ensuring not only that those calls become more effective but also enabling control over social interactions[33]:

[33] In a context that according to Bolter and Grusin (1999) is increasingly characterized by immediacy and transparency, users need to regain control. Some mobile phone features seem to serve that purpose better than others. Text messages seem to be in tune with the control needs of everyday life while video calls are constantly being refused by consumers (Ganito, 2010). The mobile phone embodies the double logic of "remediation": It is a heavy contributor to the hypermediated world we live in but, at the same time, it perfectly translates the denial of the mediated character of digital technology. We seek the disappearance of the medium: we get angry when we do not get proper reception, or when the battery goes down and we are not able to make the phone call we wanted. Also, in a context where we have already remediated the past, where we are constantly remediating the present, we now turn to the future. The goal now is to always be prepared, to avoid trauma or shock. In premediation (Grusin, 2004), the aim is to provide an affective experience of what might happen so we adopt several protocols of avoidance, anticipation and control. The mobile phone embodies this need for premediation and the features that best translate it are those that get accepted, while others only provide losses that are not offset by the benefits: "The survival of the fittest media means the survival of media that most fit our needs" (Levinson, 2004, p. 12). The mobile phone allows us to live in a constant movie trailer context. We can seduce, prepare, avoid and create lower or higher expectations. This is the general nature of

> *I would rather use text messages when I don't want to talk as a way to save time and patience* (Cecília, 46 years old, human resource technician, divorced, mother of a teenager, sole caregiver).
>
> *I don't like to speak on the phone so I tend to send an email or a text message rather than make a voice call. Only when something is very important do I use voice because I think it is better that way* (Sónia, 27 years old, pharmacist, nesting).

The "always on" nature of mobile phones has also led to a extensive discussion on the role they play on the hybridization of time, especially on the balancing of family and work life.

3.5. Balancing the triple challenge of time: work, family, and personal time

With mobile phones first introduced as professional tools, they have commonly been regarded as a facilitator intruding into family time but "the same technologies can mean very different things to different groups of people (…)

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the mobile phone but some features, such as text messaging, translate it better than others. Today, text messaging is one of the most successful features, besides voice. We can argue that it owes its success, above all else, to its non-intrusive nature. As we never know where we are going to find the ones we call, a text message ensures minimum disturbance: "the silence of text is probably its biggest social asset" (Levinson, 2004, p. 112). It also proves a better way of conveying specific or complex information and to control it. With text, we can decide when to answer and have time to think through what to answer. Voice is impulse and text is to ponder. Finally, text allows the user to control the length of the interaction and the context. In text, there is no background noise and no specific tone so it allows for a higher degree of privacy. In the scope of McLuhan's tetrad of media effects, texting would be in the quadrant of reversal. McLuhan said that, when pushed to extremes and as a reaction to its unintended consequences, the medium reverses to a previous form. In the face of total access, we voluntary constrain our freedom of communication, at least the oral dimension. And we could say that the constant introduction of features and dimensions is that which pushed the mobile phone to its limits. Contrary to text messages, that was mainly an accident, an unintended use; the concept of video calls has been around for a long time but the lack of control over presentation has led people away from mass adoption. Nevertheless, video conferencing has been quite successful in professional contexts where indeed you are able to control your performance. Video calls are considered highly intrusive and have never got past the toy phase of technology. You might try it a couple of times or use it in exceptional circumstances but you would not accept it into your daily routine. Although camera phones are hugely successful, most uses are for reporting (asynchronous) and not live conversations. With live calls, the phone no longer serves as a shield, as a gatekeeper and thus would lose its usefulness as a tool of "premediation".

rather than simply reading them as adding to time pressure and accelerating the pace of life, mobile modalities may be creating novel time practices and transforming the quality of communication" (Wajcman, 2008, p. 70). Like the landline phone that was diverted from a business tool into an easy way of contacting relatives and friends, so has the mobile phone been domesticated as a social networking tool. In fact, although most of the women interviewed acknowledge the mobile phone as an important working tool, they mostly rely on it for managing their personal lives. When asked what sphere would be disturbed most were they deprived of their mobile phones, women across different life-stages, but once again especially mothers and sole caregivers, the life-stages where time bind is most critical, were almost unanimous in identifying their personal lives as the sphere they would have greatest trouble managing:

> *If I had to be without my mobile phone, it would be better work wise but my personal life would be worse. I find myself very dependent on it for coordinating little things, the daily life tasks. I have a landline phone but it's not practical. I don't even know the number anymore* (Margarida, 33 years old, engineer, married, mother of two infants)

Additionally, none of them seemed to feel their family time had been affected by the presence of the mobile phone. This conclusion is consistent with a study of cell phone and time scarcity in Australia[34] (Bittman et al., 2009a; M. Bittman, J. E. Brown, & J. Wajcman, 2009b; Wajcman, Bittman et al., 2008a; Wajcman, Bittman, Johnstone, Brown, & Jones, 2008): "it may be that, with 'seamless connectivity', the separation of home and work that we take for granted in modern societies is in the process of reformulation" (Wajcman, 2008, p. 74),

[34] This research set out to analyze the relationship between cell phones and time pressures in Australian workers. The study used a questionnaire, a phone log and a time-diary. Three hypotheses were tested: that mobile phones led to an uncomfortable acceleration of the pace of life; that it extended employment beyond location and temporal boundaries and finally that it intensified the pace of work. The acceleration hypothesis was not supported: "While the elimination of 'dead time' might sound like an escalation of the pace of events, making calls during these times might also relieve stress. In particular, this could be achieved through 'time-shifting', so that activities are no longer tied to a particular place and therefore can be conducted at times that were previously characterized by enforced idleness" (M. Bittman, J. Brown, & J. Wajcman, 2009a, p. 680). The findings are also not consistent with the proposition of the mobile phone as a work extension technology as calls and text messages, in any given time of day, are vastly directed towards family and friends. But the mobile phone does indeed seem to intensify work pressures. Nevertheless, this last finding could only be supported for male workers as the sample did not include enough female workers.

providing women with flexibility to manage their schedules and "perhaps this is because the phone is so closely associated with a deepening of connections with significant others that there is less need to control the flow over temporal boundaries (…) creating families without borders" (Wajcman, Bittman, et al., 2008a, p. 649). This welcoming of "boundary permeability" gets expressed by Vanda, a trainee technician who recently became more mobile in her job related activities with many meetings outside the office. Formerly, she relied on the landline for most of her contacts but now she has welcomed the mobile phone as a tool for micro-coordination and recognizes that it allows for a greater degree of freedom:

> *In vacations, it is good not to have the mobile phone with us but on a daily basis, that is very complicated. It's my contact with my friends and my family. Without doubt, the personal sphere would be the one most hurt if I did not have a mobile phone. Only recently did I start using it more on a professional basis. Now I sometimes give my phone number for professional contacts and I even think that doing this gives me more freedom because I can be reached wherever I am and not only in the office* (Vanda, 36 years old, training technician, nesting).

Not only is the mobile phone not intruding into family time but it may also be all entirely the other way around. Some studies have reported that only women felt that family related calls spilled over into their working schedules (Chesley, 2005). This reinforces the traditional gendering of time where family management seems to burden only women. This feeling of not being able to disconnect from family worries was reported by the women interviewed and even became clear during the interviews themselves as, in many cases, they were conducted during working hours but nevertheless constantly interrupted by calls from family members.

Women are also pressured in their leisure time with men having "many more hours of pure leisure uncontaminated by any combination with unpaid work [also] men's leisure is less likely to be interrupted than women's" (Bittman & Wajcman, 2000, p. 185). There is a lack of a right to be entitled to play, to have fun or to simply relax and as described by these two mothers:

> *I feel completely stressed and the sources for that stress are my routines. I have very tight schedules and it seems that I have to be a step ahead of everything. All my tasks are tightly programmed. Every day between 8 o'clock and 8:05 my kids are sitting down for breakfast and at 20:00 they are having dinner, and it*

> *does not matter if I get home at seven or half past seven. And sometimes this becomes very heavy on me. I get home, I lay down my jacket and I get to work instead of relaxing. Now that I am 35 years old is when I am learning that it is ok to be more flexible. Their age also allows for this flexibility because when they were little I was so worried if they were happy and about their rhythms – that was my priority then. Technology is great with all this, for example, I have a laptop and I bring it home during the weekend and I am able to answer e-mails which saves me time and the mobile phone also allows me to manage my family life more effectively* (Sara, 35 years old, social worker, married, mother of two children)

> *I wake up at half past seven and it's time to take care of my son and go to work. I have a long lunch hour, which allows me to go shopping. I get out of work at half past five and it's time for my son. I feel I should have more time for myself, to do sports. At the weekends and before I had a son, we did not usually have pre-scheduled programs but now my biggest worry is to think of activities for my son. Sometimes, while he is asleep, I go up to the computer but it's been a long time since we have gone out to see a movie. Sometimes I use the computer to reach people because, when we have kids, there is not much time to be with people. The mobile phone is also good to reach people* (Sílvia, 29 years old, nurse, married, mother of an infant).

This pattern also impacts on women's use of mobile entertainment services and other content. With less time to play and a lower sense of entitlement, women rarely make recourse to use entertainment services such as music or games. In the interviews, women only reported these uses in the initial life stages, dependents and young independents, and again by women in advanced life stages such as mature independents and empty nesters without any responsibilities for taking care of grandchildren.

The mobile phone perfectly embodies "life in the fast lane" (Wajcman, Bittman, & Brown, 2008b) and life certainly speeds fast for women. Women's time is constrained by gendered domestic divisions of labor where women are still perceived as bearing the sole or main responsibility for household work and family care giving and management. This trait especially burdens mothers in dual earning households but also extends into the later life stages such as empty nesters with grandchildren to take care of. Women's time simply does not belong to them, their rhythms are dictated by others, by the needs of others. The labors of love consume so much time that women are left with no time to play and sense how they do not own their own time and this only adds to the

unpredictability. Women recall never knowing when they might be summoned to solve a family problem, big or small and the sense of anxiety that this brings into their lives. Thus, it is not unexpected to find that women crave more time, especially more time for themselves, for their personal development, for leisure, "to be able to read a book without falling fast asleep" as expressed by a mother of two small children who wakes up earlier than the rest of the family to get the housework done.

In this context of "temporal crisis", many address the mobile phone as a tool of acceleration that increases pressure in an already stressful environment. Nevertheless, what the interviews have once again shown is that the actual nature of a technology or an artefact only becomes understandable within the co-construction of user and context. Women have shown clear agency in their usages of mobile phones. Experiences vary across life stages in accordance with different time needs but what they shae in common stems from how the mobile phone got incorporated into their lives as a tool for the management of their interactions with family and friends and for the micro-coordination of their everyday lives. The first time constraints begin emerging in the young independent phase when young women start working and experiencing the pressures resulting from having their days packed with work related tasks. The pressures at this stage mostly come from the need for continuity in the connection with their network of friends and also to keep up with the expectations implicit to being a young woman. At this stage, women are confronted by the fact that it is "not easy being a princess" as explained by a young marketing manager when she talks about how hard it sometimes proves to take care of your looks, keep up with the hard work to progress in your career and then still have time for friends and family. For these women, the mobile phone is a tool for social management, for keeping up with friend's lives, a connection to the outside world. When women progress to the nesting life stage, the division of domestic labor starts to encroach on women's time. Even in young couples, there is still a traditional gendered pattern in housework division. Women also become the social and family life managers of the couple. At this stage, the mobile phone steps in as a useful micro-coordination tool. This trend only accentuates when women become mothers. For mothers, the mobile phone also form an electronic leash for their children and, with decreased opportunities for personal contact, their own umbilical cord to the world outside their job or home. This role of the mobile phone may extend into the empty nest stage,

especially when women have to take care of their grandchildren. Time pressures afflict sole caregivers even more acutely. As for mature independents, the pattern of usage seems closer to the young independent, with the exception when taking on increased responsibility for elderly members of the family, such as aging parents or sick relatives.

The mobile phone, instead of either adding more pressure or intruding into personal and family time, rather seems to enable women to better control their lives, to reduce anxiety over the unpredictable by enabling them to always be in reach whilst providing them with flexibility.

4. Engendering Techno-Fragility

Au contraire de la fragilité, la fermeté, l'assurance, la maîtrise, l'indépendance, la liberté, la force, toutes valeurs que l'on estime viriles (la fragilité étant femme, selon nos valeurs traditionnelles), et que l'on peut attribuer à l'homme moderne. (…) Dans ce contexte, toute fragilité devient une faiblesse. Il y a une façon de sortir de ce piège : c'est de ne pas confondre faiblesse et fragilité. De la fragilité, on peut dire qu'elle consiste à se défaire de son armure, à prendre le risqué d'ôter des protections, pourtant nécessaires, pour accepter d'être sensible ; accepter d'être atteint par autrui comme par les différents événements de la vie, voire à être défait pour un temps.(…) Notre fragilité fait notre force

(Liaudet, 2007).

The ability to create and engage with technologies is a trait that defines us as human beings. There is nothing inherently new in the technological revolution we are experiencing beyond the growing speed of change that renders new technologies both more visible and more widespread (Ganito, 2007a). The time to reflect and ponder on their consequences is scarce and that drives a sense of insecurity and loss of control, even of vulnerability. However, if we take fragility as presented by Liaudet, as an acceptance of change, of our own condition, of our own difference, this would foster both a deeper understanding of our relationships with the material world and perceptions as to the "fragile dimension of hegemonic and permanent theoretical frameworks" (I. C. Gil, 2009).

One of the frameworks guiding our understanding of gender are stereotypes. Can women, through the mobile phone, build a more intimate relationship with technology and thereby subverting traditional gender-roles stereotypes?

Mobile phones are a privileged site to disclose change and the fragility of gender based frameworks. The mobile phone is both a fragile product and producer of social fragility because we constantly redefine and are ourselves redefined by the technology we create. McLuhan designates this phenomenon as "feedforward" (McLuhan, 1964).

4.1. Stereotypes old and new

Relationships are made of talk – and talk is for girls and women

(Deborah Tannen).

The concept of stereotypes was introduced to the social sciences by Walter Lippman in 1922 who applied it to describe the typical image that comes to mind when we conceive of a specific social group. This amounts to a cognitive process of simplification, a category for framing reality and processing information. Stereotypes are necessary ways of making sense of the world: "The real environment is too big, too complex and too mutable to have a direct knowledge. We have to reconstruct it in a model that is simpler so that we can manage it. To cross the world, men need maps" (Lippman, 1922, p. 81). Besides their cognitive and social dimensions, stereotypes also take on a political function and are not neutral. Khan uses the concept 'sex stereotypes', which she defines as "a cognitive structure of inferential relations that link personal attributes, behaviors and beliefs to the social categories male and female" (Khan 1996; 6). Chang and Hitchon propose the idea of 'gender schemas' to refer to the conceptual cognitive structure people use to understand "traits, activities and behaviors traditionally associated with men or women" (Chang and Hitchon 1997, p. 35). However, the development of gender stereotypes owes much to the feminist movements and becoming the target of growing interest in the 1960s. There was an idea of an essentialist identity, typically distorted by the media that transmitted "false" stereotypes of women. According to the American social psychology movement, gender stereotypes are a structured set of beliefs about the attributes of men and women (Ashmore & del Boca,

1979) and contain a cognitive function. For Social Identity Theory (Tajfel, 1981), gender stereotypes play a social function as idealizations of the behaviors and actions of two social groups, men and women, that translate into a socially shared and subjective representation of an order of relations between those groups and also an asymmetric order in which the masculine stereotype is associated to instrumentality, dynamism, dominance, autonomy and more social desirability while the feminine stereotype gets correspondingly associated with passivity, submission, dependency and the expression of emotions and feelings towards others:

> Patriarchy is responsible for constructing a social system, which ascribes a particular sexual status, role and temperament for each gender, hence ensuring the sex/gender hierarchy. As a result, "masculine" traits are attributed to dominant social roles while "feminine" is associated with submission and dependence (Jenainati & Groves, 2007, p. 118).

This conception of the feminine can be translated into the construct of a fragile gender. Media are the traditional vehicles of this image of fragility. Gaye Tuchman (1978) analyzed media representations of American women and found that women were stereotyped as sexful objects, housewives or in domestic or caring jobs. She connected the notion of stereotype with the notion of the "symbolic annihilation of women", meaning that cultural productions and media representations ignored, excluded, marginalized and trivialized women and their interests. Tuchman took the concept further and did not limit the concept of stereotype to a false image or a distortion of reality; she tried to understand the whole process of representation as definitely marked by gender stereotypes that represent one of our very starting points for understanding the world. According to Stuart Hall (1997), representation is a process of constructing meaning that is both historically and socially constituted. Technology is increasingly a crucial part of this process.

The traditional representation of women's use of technology is that they are neither interested nor capable in the field of technology:

> Technical ignorance as a form of worldly ignorance was a virtue of "good" women, as they invariably were in the professional literature (...) Unlike men, women in the stories related by professional journals rarely learned from their mistakes in using technology, or corrected their misconceptions. They were sheltered from all such practical demands by an old and sturdy code of chivalry that required

> the protection of their ignorance by men. Beneath this habit of indulgence was the more important and even insistent point that women's use of men's technology would come to no good end (Marvin, 1998, p. 23).

Hence, appealing to such women means those technologies specifically addressing them being defined as non-technological or embedded with codes of femininity that would make them non-threatening in the eyes of the female consumer. This process is what Ellen van Oost designates as "Gender Scripts"[35]. Mobile phone companies also seem to design phones to match these traditional female and male cultures (Skog, 2002). However, building on the social shaping of technology theory, when technologies change or emerge "we can expect contest over social categories such as gender" (Lerman, Oldenziel, & Mohun, 2003b). The mobile phone also creates new meanings and may be used to subvert dominant cultural paradigms such as in Japan where young girls apply mobile phones to challenge masculine culture in public places: "Through their tactics of play, colorful dress, and mobile phone usage, they fight the hegemony of older men on subways, and in doing so produce space for themselves" (Steenson, 2006). Gender boundaries are not only crossed but also blurred – mobile phones convey a fragile technology that makes gender stereotypes fragile. Through the mobile phone, women are building a more intimate relationship with technology and learning to accept new media in doing so and thus becoming producers and performing new cultural meanings. Being a hybrid, between the public and the private, this attenuates women's resistance to building closer relationships with technology.

The degendering of society, and the consequent ending of gender stereotypes, has been advocated by authors such as Judith Lorber (Lorber, 2005). She has argued that degendering would reduce gender inequality by eliminating differences. The problem resulting is that without any such differences, we would have to be the same and this would undoubtedly mean the imposition of some hegemonic truth. Accentuating differences not only between men and women but also between women, as we are doing in this research, in turn allows for a better understanding of different needs and how to address them

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[35] "Gender Scripts" is an analytical tool that adds the gender dimension to the concept of "Script" (Akrich, 1992, 1995). It is grounded on the conception that the user and its context are embedded by designers in technological objects. The concept does not imply a deterministic stand, nevertheless gender scripts "act invitingly and / or inhibitantly" (Oost, 2003:196).

because "just as we know that sameness doesn't automatically lead to equality, so, too, is difference not necessarily incompatible with it" (Kimmel, 2007, p. 340).

Androgyny has also been argued as a solution for inequality in the very same sense as degendering. When adopting attitudes and behaviors considered inherent to the opposite gender, men and women become post-colonial entities whose behavior only mimics the colonialist discourse[36]. Whilst such mimicry may be deemed as subversive, this also poses the danger of reinforcing hegemonic discourse and thereby leaving no space for different identities to emerge. Homi Bhabha and Luce Irigaray see in mimesis a force of resistance but "in mimicking the language of the dominant, how can we guarantee that mimicry is *understood* as ironic – as civil disobedience, camp, or feminist difference rather than as merely derivative?" (Showalter, 1997, p. 230). Instead, embracing differences and change means that "the pace of that change might accelerate if we continue to degender traits and not people [thus] we will still be women and men, equal yet capable of appreciating our differences, different yet unwilling to use those differences as the basis for discrimination" (Kimmel, 2007, p. 342). The women interviewed showed many differences in their lives and in their approaches to technology and the mobile phone. Sometimes, the mobile phone provides the site where that fragility is located while on other occasions becoming a tool to surpass or transform the fragilities of women's lives. Not acknowledging these differences would equal accepting women's passivity and a full acceptance of the dominant gender stereotypes in much the same way as the first wave of feminist media studies established a direct link between media representations and gender inequality on the assumption that audiences were passive. However, the "effects of new technologies are not direct, but negotiated through people's construction and use of them" (Humphreys, 2005, p. 811). Instead, we argue that meanings can either be negotiated or refused and that women do both display and deploy "agency"[37].

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[36] We draw a relationship between women and gender and colonization and apply the concept of mimicry within the scope of Homi Bhabha (2004) for whom "mimicry is the sign of double articulation; a complex strategy of reform, regulation, and discipline, which "appropriates" the Other as it visualizes power. Mimicry is also the sign of the inappropriate, however, a difference or recalcitrance which coheres the dominant strategic function of colonial power, intensifies surveillance, and poses an imminent threat to both 'normalized' knowledges and disciplinary powers" (p. 280).

[37] Agency is a central and controversial term in feminist theory. The founding vision of women

4.2. Mobile Fragilities

(…) Rien de défini chez l'homme. C'est un être incomplet, une ébauche d'être vivant bien constitué. C'est cette incomplétude qui fait sa chance.
Parce que nous ne sommes pas équipés pour vivre dans un milieu particulier, nous sommes capables de nous adapter à tous. Dépourvus de schémas de
comportements prémontés, nous sommes voués à être libres et à devoir apprendre. Démunis des outils naturels que sont les crocs et les griffes, associés
aux comportements instinctuels, il nous a fallu développer des prothèses pour pouvoir survivre

(Liaudet, 2007, pp. 17-18).

Although cybernetic studies talk of a post-human era, we cannot forget that the creation and incorporation of technology have always been characteristics of our species. Thus, we argue that the current transformations experienced in our daily lives amount to no more than the consequences of the co-construction of society and technology even though its core nature might be described as revolutionary. Mobile phones are the most recent example of these transformations; they are places of acting, of transgression and of transformation. They present themselves as new human prosthetics, extensions of our identities, of our [gendered] bodies (Ganito, 2007a), tools to overcome our fragile human condition.

In the first two life-stages, young dependent and young independent, women are still looking for their place in the world as adults and independent people, striving to get their careers off the ground and to gain or consolidate their

as victims has led to a denial of agency. Recently, the concept has been articulated with the concept of "difference". Lata Mani comments: "The discourse of woman as victim has been invaluable to feminism in pointing to the systematic character of gender domination. But if not employed with care, or in conjunction with a dynamic concept of agency, it leaves us with reductive representations of women as primarily beings who are passive and acted upon (...) structures of domination are best understood if we can grasp how we remain agents in the moments in which we are being intimately, viciously oppressed" (Mani, 1992). Articulating agency and difference also implies the end of a dualism or dichotomous thinking about gender, which is the root of gender stereotypes.

full independence. So, we might then argue that their identity is their fragility. Technology, and mobile phones in particular, because they are highly personal objects, are able to perform that function. However, their fragility also stems from their search for a place in the workforce and corresponding tendency to mimic hegemonic discourse by adopting technology through a degendering process and not according to their personal tastes but instead conforming to the aesthetics of the male standard.

When women enter the nesting phase, traditional gender roles start to settle in and these also apply to technology. For nesting women, their main fragilities are their disregard for gender discrimination and the growing distance and isolation from their networks of friends and family. The mobile phone then becomes a personal productivity tool helping in adapting to new routines and a gender based division of labor but also as a touch point with the now "distant" family and friends. This sense of being out of touch and mobile phone usage to reduce this anxiety is put forward by Catarina: "It is the closest physical thing to me. If I had to be without it, things might happen and I would not know about them" (Catarina, 31 years old, teacher, nesting). Nesting women also lost some of their former interest in social networking but they do assume the role of social coordinators for the couple.

With motherhood, the gender-based division of labor undergoes reinforcement and thus for mothers the fragility arises out of the isolation of the early months or years of motherhood and the continued burden of responsibility as their children grow up. Women are left with little or no space for self-expression or caring for themselves. For women who are mothers, the mobile phone serves not only as an electronic leash or a replacement of their physical presence but also their own umbilical cord to the world. Among the women interviewed, Carla D. is one of the most extreme examples of this role for mobile phones as she is a very recent mother with her child still extremely dependent and has also became unemployed prior to giving birth: "Now, with the baby I cannot leave home without it. Something can happen and the mobile is my way of calling for help if necessary" (Carla D., 34 years old, unemployed marketing manager, married, mother of a toddler). The mobile phone brings reassurance and a leisured break from their routines.

The task proves even harder for sole caregivers. These women do not have a partner to share responsibilities. But their fragility, as proposed by Liadet, is also their strength as they are forced to perform the technical and technological

tasks formerly attributed to the men in their lives. The mobile phone becomes a blend between remote mothering and social networking as explained by Cecília when she talks about the role mobile phones have in her life: "I call my son all the time to know where he is and what he is doing (…) I always have to be reachable for my family and work" (Cecília, 46 years old, human resource technician, divorced, mother of a teenager, sole care giver).

Mature independent women, much like the young independent, are very career oriented. Their fragility comes from a certain level of social criticism regarding the way they chose to live their lives. For this life stage, the mobile phone is mainly a social networking tool that allows them to be available for social interaction and autonomy. One of the solo women interviewed expressed the role of the mobile phone in her life: "I cannot leave home without it. I like to be available whenever my friends decide to invite me" (Carla P. 30 years old, tourism agent, separated, mature independent).

Finally, for empty nesters, their fragility originates mainly in their own biological aging process that sometimes also leads to isolation. For this group, the mobile phone means safety and a lifeline to the outside world as well expressed in the words of Fátima: "I feel naked without it (…) it's always in my pocket and goes with me everywhere (…) It is how I keep in touch and it's safety, now even more so" (Fátima 2, 56 years old, retired insurance professional, married, and grandmother of one, empty-nester). The device also proves a source of entertainment and leisure even when combined with a low Internet usage or a lack of Internet skills.

Accepting the lenses of fragility means accepting that our tools for reading the world no longer provide accurate guidance:

> C'est pourquoi nous sacrifions au mythe de la maîtrise en tout et sur tout: il nous faut être puissants, jouissants, jeunes. Cet idéal du moi individualiste est féroce, car il méconnaît notre nature profonde, et nous oblige à jouer à contre-emploi. C'est-à-dire à arborer un faux moi, à croire et à faire croire que nous sommes ce que nous ne sommes pas (du moins pas entièrement) et à nous situer dans un porte-à-faux inconfortable et risqué (Liaudet, 2007: 9).

Our dichotomy based maps have failed us. We need new maps based on differences that are multiple and non hierarchical.

Understanding differences also means understanding women's agency, how they appropriate technology, such as the mobile phone, to overcome their

specific fragilities. Addressing women and empowering them means, from this viewpoint, providing them with tools, designs, contents and services extending far further than a re-enactment of the hegemonic discourse. We have to "position ourselves as travelers through hostile landscapes, armed with maps of our own making, following paths that are often evident only to our own eyes" (Braidotti, 1994: 172).

Throughout their respective life stages, women face different challenges and needs that are expressed through different relationships with technology. This is no linear progression but instead interrelates with their "situated knowledges" and specific locations. Each woman tells a different story, each woman has a different voice.

Conclusion: Mobilities and Immobilities in the Gendering of the Mobile Phone

Becoming entitled to mobility is a superb achievement for women

Rosi Braidotti (1994, p. 256).

Women have historically been described as immobile, as passive and dependent on others to move on their behalf. This right to move around constitutes one of the conquests made by feminist movements and women.

Women seem to deny any reading of immobility even while in fact, much, and the division of labor prevailing represents but one example, is static. Women have conquered mobility in so many different ways: they are space and time invaders, they are able to express their individuality and creativity and yet all the while still constrained by their own inability to recognize the backlash against their achievements.

This research brought women to the forefront of the discussion of the usages and affordances of the mobile phone and, building on the cultural studies concept of mobile communications (Goggin, 2008), introduced the idea of feminist cultural studies as a conceptual lens through which to focus on mobile communications.

A striking finding in our research was that the trajectory of the mobile phone across life-stages does not follow the diffusion curve expected (Christensen, 1997, 2004; Moore, 2002; Rogers, 1962). While true that young women display a higher pre-disposition towards more diversified and intense usages of the mobile phone, older women do not always correspond to the stereotype of lacking either interest or skills and, on the contrary, the mobile phone plays a very important role in many of these older women's lives.

Contrary to the theory that "gender differences tend to disappear with the increase in mobile penetration rates" (Castells et al., 2004a: 52), we found that in Portugal, a country with one of the highest penetration rates in Europe, the mobile phone has different roles and affordances throughout women's life courses and, thus rather than finding any dominant use, what we instead found is that "the effects of new technologies are not direct, but negotiated through people's construction and use of them (Humphreys, 2005: 811). Hence, for single and dependent women, the mobile phone becomes a tool for social networking and autonomy. For these women, the choice of mobile phone still remains free from professional constraints and hampered only by money limitations. Their socio-technical environments are very complex and mobile phones play an important role as part of that environment in a constant presence that enables them both to articulate their activities and to connect between media uses as clearly expressed by Raquel: "I only do not use it when I am asleep. During classes, I keep it on vibrating mode and I keep looking at it to see what is going on".

When women progress to the next life stage, that of young independent, the marker in their life is finding and succeeding at an occupation. They thus want to project an independent and professional image and that impacts on their usage and choice of mobile phones that become a blend of social networking and professional tool as explained by Inês as regards her mobile phone choice: "I chose a Blackberry Curve because I talk with my friends on the messenger […] I did not choose a pink one because I would not be taken seriously".

As women enter the nesting phase, they begin to lose their interest in social networking even while taking up the role of social coordinator for the couple and, facing new challenges to their daily lives, these factors then lead them to settle into a traditional gender-role relation with technology. Upon deciding the division of tasks, technology tends to fall on men even when women are very technologically proficient. For these women, the mobile phone becomes a personal productivity tool, a means of coping with new routines. Catarina expressed this change in her life: "It is the closest physical thing to me. If I had to be without it, things might happen and I would not know about them". The mobile phone thus functions as a surrogate for physical immediacy.

The next two life stages are those most demanding on women's time. For mothers, crushed between the responsibilities of care giving and full time jobs, craving time and balance between professional and personal life, always

feeling guilty over their absence, the mobile phone becomes an electronic leash or remote mothering tool, a replacement of their physical presence and a means of coordinating their endless list of tasks. Single mothers express the same concerns and affordances but they add a social networking component. Single mothers feel especially isolated, if divorced, in that portion of the week they have to arrive home to an empty house and hence the mobile phone also becomes their connection to the world because these women are also highly time constrained. They are looking for no frills and no time consuming technologies and thus also have low levels of media consumption. The remote mothering affordance is well described by Cecília, one of the single mothers with a pre-teen son: "I call him all the time to know where he is and what he is doing". The mature independent stage, very clearly reflects the irregular trajectory of the mobile phone. These women, some aged over 50, deploy the mobile phone in much the same way as young independents would; the mobile phone again becomes a social networking tool. Carla, one of the younger mature independents, explains this instrumental usage in terms of her resulting availability: "I cannot leave home without it. I like spontaneous social programs and I like to be available whenever my new friends decide to invite me". Finally, the empty nesters for whom the mobile phone brings along a diversified set of affordances: safety, a connection with the outside world and entertainment. These women even return high usage rates and leisure practices even when combined with low or no Internet skills. Fátima proves one of the best examples of the deep connection empty nesters may develop with their mobile phones: "I feel naked without it (…) It is always in my pocket and goes with me everywhere (…) It is how I keep in touch and it is safety and now even more so". We could not help but notice the resemblance between Fátima's and Raquel's discourses.

What is transversal to all these women centers around the mobile phone being always the most private and personal technology they use or own. They also show a high degree of dependency across life stages although, as we have seen, the underlying reasons for that dependency may vary. Although very private, there is a low level of personal choice and of customization due to the "wife-phone" and "job phone" effects, meaning that women get their mobile phones as gifts from husbands, boyfriends, parents, and sometimes either as second-hand devices or because their employment positions entitle them. Thus, while usage is private, the device itself is not experienced as private. This

is also where the specificities of the Portuguese case become striking. If, on the one hand, the high rate of full time employed women grants them easier entry into the world of mobile communications, accessing more sophisticated devices, on the other hand, it limits their gender performance and constrains their personalization and creativity.

Mobile camera phones have also provided new affordances to women and especially valued by mothers, single mothers and mature independents. The mobile phone opens up another site to "capture, share and archive the digital representations of experiences (…) new modes of engagement with cultural traditional and ritual pertaining to the act of remembrance" (Keep, 2009: 61). The camera feature of mobile phones provides women with a low skill, always at hand solution for their everyday needs. For older women, learning to work with a new camera is sometimes hard but for mothers that have to deal with a lot of unexpected situations it is an always ready technology, already there in their bags and not another item on their already overfull, checklists. However, the promises of unbound sharing, such as those ones presented in some mobile phone commercials, have yet to be fulfilled. Contrary to some beliefs (Keep, 2009), remembrance is still bound by constraints of time, place and gender thus the level of MMS usage still remains very low and dropping even lower for video calls.

As embodied objects, mobile phones form one facet to very complex power relationships related to the presence or invisibility of certain places such as our streets, our homes and our offices. When we looked into how mobile phones affected women's experience of moving in space and in place, we concluded there is no single answer: women's choices range from options to conform to the masculine norm and abiding by "gender scripts" through to forms of deploying femininity as a masque against retaliation or disguising power uses of technology that would confront men and as well as self-expressions of their individual personalities. Once again, the mobile phone serves multiple purposes: as a defense mechanism, legitimating women's public presence and subverting traditional meanings. In Portuguese society, where women seem to deny their own immobility, the subversion of traditional meanings is not as marked as in other cultures such as Korea even though some examples do exist. The population we studied, an urban sample, is also less in need of such applications for a technological tool even while women still do nevertheless recognize how the mobile phone empowers them by providing safety that and

allowing them freedom of movements whether driving through bad neighbourhoods alone or not being afraid of being stranded as well as arriving home late and walking home alone. The mobile phone is a safety line that allows them to perform tasks for which they would formerly require, or perceive as requiring, the company of a man.

The mobile phone provides women with freedom both to move around and to manage their time. Time conveys the best example of just how women have moved so far and yet, simultaneously, stand so still. Women live "in the fast lane" (Wajcman, Bittman et al., 2008b) and the accounts of the daily routines of the women interviewed provide vivid examples of competing priorities and juggling spheres due to women's professional commitments. However, women's time still gets constrained by the gendered domestic division of labor that continues to stipulate women hold the sole or main responsibility for household work and family care giving and management. This trait especially burdens mothers in dual earning households but also extends into later life stages such as empty nesters when there are grandchildren to take care off. Women's time is also never theirs alone with their rhythms dictated by others, by the needs of others. Within this context of "temporal crisis", many address the mobile phone as a tool of acceleration that increases pressure in an already stressful environment. Nevertheless, what the interviews have once again demonstrated is how the nature of a technology or an artefact only becomes understandable in the co-construction between user and context. Women have shown clear agency in their mobile phone usage. Experiences vary across life stages and in accordance with their different time needs but what they share in common is how the mobile phone was incorporated into their lives as a tool for managing their interactions with family and friends and alongside the micro-coordination of their everyday lives. The mobile phone, instead of adding more pressures or intruding into personal and family time, rather seems to enable women to better control their lives, to reduce the anxiety of the unpredictable by enabling them to always be in reach and thus providing them with greater flexibility.

Our last research question approached whether women could, by means of the mobile phone, build a more intimate relationship with technology through subverting traditional gender-role stereotypes. To answer this question, we proposed applying the lens of fragility and what we were thereby able to conclude is that our maps are failing us; they are themselves fragile constructions and no longer provide adequate guidance. However, companies still prove dependent

on those maps, on stereotypes; to define their strategies and the way they address women. Addressing women and empowering them means, from this viewpoint, providing them with tools, designs, contents and services that go further than re-enacting the hegemonic discourse. Women do in fact maintain very intimate relationships with their mobile phones and, with the convergence of so many other media in the same device, we might be verging on a huge opportunity to change the stereotype of female technological incompetence even if such requires much more than pink phones.

Implications for the industry

From a broader perspective, this study bears implications for service design and technical communication pedagogy by urging the industry to move from a functional perspective to a broader socio-cultural perspective and to correspondingly develop information products that resonate with women's lifestyles:

> Solving women's problems will take a large-scale public policy agenda that would include a proactive plan for the development of new communication technologies that would benefit women, rather than a post hoc transfer of technologies to women when certain groups of women present a lucrative market for the industry (L. Rakow & Navarro, 1993: 155).

Women have been neglected as innovators when in fact they have played an important role in the adoption and dissemination of many technologies and especially the telephone. Authors like Claude Fischer (Fischer, 1988a) and Michèle Martin (Martin, 1991, 1998) drew attention to the applications women gave the telephone; usage that was unexpected and even condemned by the industry that conceived the telephone primarily as a business instrument. However, in spite of its former mistakes, the industry repeated the same strategy for the mobile phone: "It's as if the mobile operators have forgotten the rather significant fact that half their mobile users are women that want mobile services that are not targeted towards men" (StrandConsult, 2005). The mobile industry rests on a high penetration rate but market share does equate with share of wallet: "For a technology to evolve and become better adapted to its users needs and even more important to their social and economic development, something more than mere adoption is needed" (Bar, 2007: 2). Women might

make up 50% of the customer base but they are an underserved market (Silverstein & Sayre, 2009a) .

Women do not want a product that looks stereotypically feminine but, on the other hand, they do not expect the same product as that targeted for men. Apple does seem to have found the formula for a balanced strategy with all the women interviewed finding the iPhone© the most attractive device. The iPhone© does not offer pink coloring but instead combines a user-friendly interface, a big screen for picture showing and an attractive design.

While true that women frequently seem less interested, this persists because they either do not feel they are the target of the media campaign or because they simply lack the time. Time constraints are a particularly heavy burden for women throughout their adult life course but especially on becoming mothers. Some companies claim they deploy women friendly strategies but cute and pink neither solve women's problems nor address their real needs such as saving time or enabling them to manage the conflicting priorities arising out of balancing work and family life. Companies have to tap into their female consumers and that means doing market research that reaches beyond differences between men and women as otherwise the end result will be the treating of women as a homogeneous group which could actually not be further from the truth.

Companies continue to resort to pre-conceived ideas, dismissed throughout our research, that women lack any interest in technology and technical skills. Women should therefore not be targeted with downgraded male products as if less skilled or less competent. Women want things that work, that solve their problems with less unnecessary features and more added value (Parmar, 2007a). This also means finding something more than a "one size fits all" solution. Women should be differentiated according to their real needs, uses and characteristics. For the mobile phone, this means providing solutions for women's needs throughout their life courses. Solutions centered on social networking and autonomy for young women, safety and control for mothers, accessibility for mature independents, a blend of accessibility and control for single mother and a mixture of autonomy, safety and reachability for empty nesters. Services and products should be designed based on these needs and expectations and not on outdated and misconceived marketing narratives.

Future Research

Caminante no hay camino,
se hace camino al andar...

Antonio Machado (1875-1939).

Doing research proves a path fraught with hard choices and the painful realization that to include is to exclude. The methodological option for this study was to learn about women from women, to give them voice, to gain insights from their discourse and we thus applied a dominant qualitative research design. In the absence of any accurate portrait of the relationship of women with technology, it would be interesting to provide extensive analysis through a quantitative survey based on a life-stage approach. For the industry, this would generate the tools necessary to leveraging their marketing and sales efforts. It would also be interesting to compare the life-stages and life courses of men and women and understand the differences in touch-points with technology and the differences in affordances at each life stage. This could also serve as a foundation stone for the definition of better gender politics in schools, companies and society at large.

A search for knowledge is a permanently ongoing conversation. Research is never finished and especially in the field of new media where research objects always feature fast moving, constantly changing and transforming targets. Thus, as we moved along our path, some avenues became visible as deserving future study. One such area spans the interconnection between technologies and the negotiations that take place in increasingly complex networks:

> There is ample scope for more empirical research on the gender relations of ICTs. Just as gender relations are transforming, so ICTs themselves are changing and evolving over time. This will be ever more so as computing becomes ubiquitous, with digital devices increasingly embedded into everyday things and objects, part of our taken-for-granted environment and even ourselves. A focus on studying sociotechnical networks or systems, instead of singular technologies, will then be increasingly necessary (Wajcman, 2007: 296).

As suggested by Judy Wajcman, it would be interesting to study the mobile phone as part of a specific socio-technical system, especially in its articulation with the Internet. One potential conclusion drawn from the interviews

encapsulates how mobile phones seemed more important to women who either did not know how to use computers or did not have one at hand. The best example comes with the two empty nesters, Fátima and Maria. Fátima has no Internet skills and does not use a computer regularly and hence, for her, the mobile phone is like a second skin and always carried with her even if that is not the case for Maria, who has a high usage of online Internet resources and regular computer use. For Maria, the mobile phone is not an important part of her life because she relies on other sources of entertainment, information and connection. The same phenomenon seems also to occur with the availability of other resources for communication: when women have a very stable routine, constant access to the Internet and performing their jobs in a single, constant location, their dependency on mobile phones also decreases. Furthermore with the increasing integration of mobile and Internet services, there will be a resulting need to look at mobile phone usage from the perspective of post-convergence theories.

With rapidly rising penetration rates, the mobile phone is increasingly becoming ubiquitous and, in western countries, one of the most promising segments is the aging population. Women live longer and thus specifically studying older women and their relationships with technologies at large and mobile phones in particular might not only return useful insights for the industry but also help define policies and strategies for improving their lives. We have found their usages and practices to be diversified and they report a high level of interest in learning more and in acquiring more skills even if lacking an appropriate supply of products and services.

Another avenue of transformation that deserves close scrutiny is that referred to as the "iPhone© effect" that seems to be changing the dynamics of the mobile communications industry by introducing an application based economy. The iPhone© also brings with it a special appeal to the female market because of its user-friendly interface and sleek design enabling women to look at smartphones as value added devices. As the rate of smartphones steadily increases, there is particular relevance in tracking what Thomson has called the "death of the phone call" (Thompson, 2010). He describes how the voice call is being replaced by other means of communication that enable greater degrees of control. According to Thomson, "these new forms of communication have exposed the fact that the voice call is badly designed. It deserves to

die". However, for the meanwhile, voice remains the killer app for the industry with the penetration rate of smartphones among women still low. Thus, it would be interesting to understand whether adoption rates would increase were smartphones promoted as tools for control and autonomy instead of getting promoted as gadgets.

Both Portugal and mobile phone have in the past fallen victims to the hegemony of larger countries or larger screens such as those of computers or televisions that have rendered them invisible to academic research. This study sought to lay the ground for future cross-cultural work by deploying the lenses of feminist cultural studies to study mobile communications around the world. Contrary to a theory of *apparatgeist,* this contends that future analysis should always be grounded and situated, without either obliterating differences and complexity or obscuring the smaller objects vis-à-vis their larger counterparts.

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This book seeks to provide a better understanding of the relationship between women and technology through an inquiry into the significance of mobile phones in the lives of Portuguese women. Recent theoretical developments suggest too little emphasis has been placed on differences between women themselves. The initial impetus for carrying out this research stemmed from contributing towards meeting this gap by investigating the scope of mobile phones as the basis for the increased technological intimacy of women whilst without reinstating the old binary oppositions between men and women. The study focuses on the mobile phone as a site where the nuances of women's experiences with technology become visible and on adult women as a meaningful yet underrepresented group. In choosing to conduct a case study of Portugal, I wished to contribute to the development of future cross-cultural analysis on the gendering of the mobile phone.

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