

UNIVERSITY OF DERBY

EXPLORING THE CONCEPTUAL
CONSTRUCTIONS OF THE MOBILE
PHONE WITHIN THE NEOLIBERAL
DIGITAL AGE:
A THEMATIC ANALYSIS

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Preface

I declare that this thesis is the product of my own work and has not been submitted for any other degree or examination in any other university. The processes of research and writing involved in this thesis were conducted by me supported by the direction and guidance provided by the supervisory team. All sources I have used or quoted have been indicated and acknowledged by means of complete references. Third party materials with copyright restrictions have been removed from the final published thesis. The four studies which constitute this thesis were reviewed and received ethical approval through the College of Life and Natural Sciences Research Ethics Committee or the Human Sciences Research Ethics Committee, University of Derby (Ethics References 01-1617-MSp, 02-16/17-MSp, ETH1819-0060). The research was conducted in conformity with the British Psychological Society's *Code of Ethics and Conduct*.

Abstract

This thesis is an investigation into the ways in which mobile phone users' contextualised understanding of the mobile phone may have shaped their mobile phone practices and subjectivity within the cultural narratives of the neoliberal digital age in the UK. The proliferation of research literature focused on mobile phone practices has been dominated by mainstream psychology's pathologised rationales for differences between mobile phone users' practices. However, the distinction between normal and problematic practices are not clearly defined across studies.

This thesis adopts a critical perspective to consider the socially integrated relationship between meaning, subjectivity and behaviour in order to inform the current rationales for differences between mobile phone users' practices from an underrepresented perspective on the topic. The thesis is collection of four discrete but interconnected studies which progress from exploring the culturally accessible conceptualisation of the mobile phone presented by the mass media to the culturally contextualised understanding of the mobile phone by mobile phone users. Mass media data were collected from UK national newspaper articles about the mobile phone published between 1985 (first consumer handheld mobile phones in the UK) and 2019, to provide a wide historical context, and website-based advertising of mobile phones accessible to the UK population during 2019. Data was collected from mobile phone users through participant-generated reviews of their mobile phone by 164 self-selected mobile phone users and in-depth interviews with 20 mobile phone users positioned as at-risk problem users by the psychology literature. The data collected was analysed using an inductive thematic analysis informed by social constructionism.

The analysis of the news media revealed that the conceptualisation of the mobile phone shifted from a business tool accessible by a wealthy few to a normal need of modern living for the masses which is integral to the user's identity. It was argued that current cultural conceptualisations of the mobile phone were shaped by societal powers related to neoliberalism and regulation. The conceptualisations related to the advertisements promoted a normal, essential, desirable and continually developing contemporary tool of self-improvement, empowerment, independence, control, social connection and identity development. Mobile phone users' conceptualisations related to the deep meaning that essential lifestyle enhancing activities had for them and positioned themselves as attached to their lifestyle and identity development that was accessible through their mobile phone practices which they positioned as culturally normal and essential to a modern lifestyle. For the users positioned as at-risk

problem users, the mobile phone was an emotionally complex object which was related to emotional support and emotional tensions, in conflict at times. The relationship between the mass media's conceptualisations of the mobile phone and mobile phone users' contextualised understanding showed that cultural narratives, fashioned by societal powers, shaped users' understanding and practices.

It was concluded that mobile phone users were attached to the continual development of their lifestyle, identity and knowing that they experience through their mobile phone practices rather than attached to the device. Mobile phone practices are a symptom of neoliberal digital culture rather than a problematic symptom of the user. Future research must sustain the critical perspective to build upon the findings of this thesis and explore the identities of those who actively resist using mobile phones with consideration to their contextualised personal interests in order to further inform the distinction between normal and problematic mobile phone practices.

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Chapter 1

Introduction: The Thesis in Context

The thesis is about the development of the meaning that the mobile phone has to mobile phone users, how the meaning shapes users' practices and identity, and how meaning is shaped by the wider social, historical and political context. This chapter introduces the research topic by outlining the historical development of the mobile phone, practices, the user, and the ways in which research interests in mobile phone practices have shifted over time. The chapter will continue by considering the cultural relevance of studying mobile phone practices and my reasons for pursuing this thesis. The chapter will conclude by outlining the aims and objectives of the thesis and providing an overview of the chapters.

1.1 A Brief History of the Mobile Phone and Research Interests: An Insight into My Perspective

“Hi Dad. It’s Mike” are reported to be the first words of the first mobile phone call made on a UK commercial mobile network (Linge & Sutton, 2015; Vodafone, 2014). Just after midnight on 1 January 1985, Michael Harrison called his father, Sir Ernest Harrison who was then the Chairman of Vodafone, to wish him a “Happy New Year”. Michael phoned his father from parliament square, London by using a cumbersome transportable telephone device. By the end of the year Vodafone had sold over 12,000 handheld mobile phones (Vodafone, 2014). Thirty-three years later, during 2018, an estimated 79.5 million mobile handset subscriptions were supported by 94% of UK adults (Office of Communications [Ofcom], 2019a) from a total UK population estimated to be 67.1 million (United Nations [UN], 2019).

The mobile phone is a portable device used to connect to a telecommunications network wirelessly through a cellular telephone system in order to transmit and receive voice, text, and other communication data (Linge & Sutton, 2015; Ofcom, 2016). The first-generation mobile phones in the UK were cumbersome and heavy, some weighing up to 5kg. They could only support a short talk time of 30 minutes on a single battery charge and were expensive (approximately £1500-£2000) relative to current consumer mobile phones. As well as being far from pocket-sized, having limited talk duration and being expensive, the limited mobile network availability restricted convenient use. However, the early mobile phones represented a revolution in communication efficiency and were instantly desired by the young upwardly-

mobile professionals of the time who were motivated by material objects that were symbolic of success and financial wealth (Linge & Sutton, 2015; Vodafone, 2014).

The proliferation of mobile phone take-up in the UK was attributed to the development of reliable and wide coverage digital transmission and the development of a mass-market device with increase in device battery duration and reduction in size and cost (Linge & Sutton, 2015). Also, the early liberalisation of UK telecommunications market in 1984 created fierce competition between multiple mobile network providers which achieved high penetration rates of reliable mobile services at affordable prices (International Telecoms Union [ITU], 2017). The mass-market expansion of the mobile phone was emphasised during 1999 when mobile phone ownership almost doubled from 25.4% to 46.3% of the UK population which increased to 73.7% in 2000 (Linge & Sutton, 2015, The World Bank, 2019). The mobile phone shifted from a preserve of wealth and business to a lifestyle tool for the general consumer.

The massification of the mobile phone revolutionised communication practices which exacerbated growing concerns about the effect of new social technologies on the crisis in social cohesion (e.g. Forrest & Kearns, 2001). In contrast, the notion that social technologies reinforced social relationships was also raised (e.g. DiMaggio et al., 2001). Further to the effects of new social media on society, epidemiologic researchers emphasised their concerns about links between electromagnetic radiation emitted by mobile phones near the head and cancer such as brain tumours through mobile phone use (e.g. Hardell et al., 2003; Kundi et al., 2004; Lin, 2007) which was not consistently supported (e.g. Christensen et al., 2004).

Another landmark event in the popularisation of the mobile phone was considered to be the release of the Apple iPhone during November 2007 (Elhai, Dvorak, et al., 2017; Linge & Sutton, 2015; Ofcom, 2018). The iPhone's intuitive design, finger operated touchscreen, feature rich operating system and almost full access to websites revolutionised the smartphone market and future smartphone design. The feature rich and internet connected smartphone ignited the socio-digital irruption into digital social culture. Ofcom (2019b) estimated that 79% of UK adults were using the compact and sophisticated smartphones which had become the favoured mobile device across age groups between 16 and 54 and the preferred device for accessing the internet.

While concerns about the association between mobile use and physical health, such as cancer, remained (e.g. Wang et al., 2018), the revolution in the feature rich and interactive smartphone, which is not so commonly used close to the head, shifted the dominant concerns toward an association with mental health such as addiction, dependence and problematic practices (e.g. Chóliz, 2012; Kwon et al., 2013; Merlo et al., 2013). A study by Bianchi and

Phillips (2005) was the first empirical study which investigated the association between psychological factors and problematic mobile phone use (Billieux, Maurage, et al., 2015). While this study was conducted before the feature rich smartphone was widely used, the study inspired many other studies (e.g. Beison & Rademacher, 2017; Kalhori et al., 2015; Lopez-Fernandez et al., 2014) which aimed to identify those at risk of problematic mobile phone practices and so could be targeted for interventions. Such studies added to the trend of pathologising common daily behaviours such as internet use (Young, 2009), studying (Atroszko et al., 2015), working (Andreassen et al., 2010) and shopping (Clark & Calleja, 2008). Recent studies have shifted focus toward investigating smartphone users' relationship with their phone through examining their usage types, reasons for use, attitudes and experiences related to their usage (e.g. Fullwood et al., 2017; van Deursen et al., 2015; Yang et al., 2019). Reviews of the growing body of literature and data related to mobile phone addiction brought into question the application of the addiction model to excessive use of mobile phones (e.g. Billieux, Maurage, et al., 2015; Panova & Carbonell, 2018).

The current mobile phone users in the socio-digital age are evidently engaged in their mobile phone practices. The top three most common daily activities by smartphone users involve browsing the web (75% of smartphone users) checking email (74%) and checking social media (67%; Textlocal, 2019). The Textlocal consumer behaviour report also highlighted that 21% of smartphone users participate in online activities for three hours or more per day and 71% of users use social media which emphasised that the social connection remained the dominant use of the feature rich device. Other common smartphone activities include taking photos, online shopping, listening to music, set an alarm, watch TV programmes, monitor their health. The mobile phone supports multiple aspects of the user's life such as communications, entertainment, education, time management and reminders. The personalised uses of the smartphone and the array of apps available can create uniquely personalised device beyond brand, operating system and decor. The statistics reported by Ofcom (2019b) and Textlocal (2019) indicate that adult mobile phone users in the UK are seeking personalisable mobile devices which can be tailored to conveniently manage their lifestyle experiences within their unique social world in the ever shifting neoliberal digital age.

1.2 The Global and Cultural Relevance of Studying Mobile Phone Practices

Currently, the world's consumers are immersed within a digital age that is saturated with rapidly evolving digital communication technologies (DCTs) according to international

and UK statistical studies which measured the development, progress and consumption of DCTs around the world (e.g. Groupe Speciale Mobile Association [GSMA], 2020; ITU, 2019a; Ofcom, 2019a). Such studies further indicated that the accessible array of consumable DCTs, high speed connectivity and available social networks ignited the current global explosion in the socio-digital communication revolution. Currently, the most ubiquitous DCT involved in the consumable socio-digital revolution is the mobile phone which has rapidly become an integral part of contemporary socialising in the UK as well as globally (GSMA, 2020; ITU, 2019a; Ofcom, 2019a).

During 2019, the global penetration of unique mobile subscriptions stood at approximately 67% of the world population with an estimated 5.2 billion individual mobile subscribers (GSMA, 2020) from a world population estimated to have been 7.7 billion (UN, 2019). Regional subscriber penetration ranged from 45% of the Sub-Saharan African population to 86% of European population (GSMA, 2020). During the early years of the 21st century, the growth of unique mobile subscriptions was approximately 4.4 billion between 2000 (estimated to be 0.8 billion unique mobile subscribers; GSMA, 2018) and 2019 which was significantly greater than the growth of the global population of approximately 1.6 billion (see UN, 2015; 2019). Growth of mobile subscriptions has been evident across all regions of the developing and developed world (ITU, 2019b; The World Bank, 2019).

The rapid proliferation of the mobile phone throughout the world has clearly transcended global population growth rate, cultures and social demographics. While mobile phone take-up growth rate is not equal across all cultures and social demographics, there is evidence of growth throughout (ITU, 2019b; The World Bank, 2019). This indicates that mobile phones and associated practices have infected the current global populace rather than grew with the new population or was limited to a particular culture or social group. The ubiquitous and personalisable mobile phone has become a desirable and integral part of contemporary social culture globally and in the UK (e.g. Kwon et al., 2013; Panova & Carbonell, 2018; Yang et al., 2019). The dramatic increase in mobile phone practices have clearly been influenced by the development of technology factors as previously discussed. However, the evidence declares that the uprising of mobile phone practices, their involvement in the digital social culture revolution and the impact on the lives of people is clearly worthy of psychological exploration to gain insights into the trajectory of social culture and *normal* cultural practices.

1.3 Myself in Context

This thesis adopts a qualitative methodology that involves the researchers subjective influence over the research processes and interpretation of findings which the researcher authors rather than discovers (Willig, 2013). “The way in which we theorize a problem will affect the way we examine it, and the way we explore a problem will affect the explanation we give” (Parker, 1994, p. 13). As the author of this thesis, it is important to make myself visible in the research process to inform the reader of my position, aims, interests, beliefs, experiences and social identities.

I acknowledge that I have been influenced by the dominant cultural narratives of technology and socialisation in which I am immersed. I use my mobile phone for social and productive processes such as maintaining contact with family, friends, work and university through calls, text, email and social media; calendar; news updates; seeking information; taking photos; occasionally entertainment and fill time on a journey. As a mobile phone user, I position myself as an insider within the study of mobile phone users’ practices. Being a member of the mobile phone user group offers the potential to enhance the depth and breadth of my exploration and understanding of this group which may not be accessible to an outsider (Kanuha, 2000). However, Kanuha further emphasises that similarity to the group being studied may stimulate the researcher’s personal assumptions during data collection and interpretation which can raise questions about objectivity and authenticity of the research. Within the specific study involving semi-structured interviews with mobile phone users who were positioned as at risk of being categorised as a problem user (see *Chapter 8*) I position myself as outsider. This is because my score on the *Mobile Phone Problem Use Scale* (MPPUS; Bianchi & Phillips, 2005) was 140/270 which placed me in the middle quartile of the selection phase sample and not at risk of problem use. The scores for the participants of the interview phase ranged from 172 to 244 which placed them in the 80th percentile or above and positioned them as at risk of problem use.

Ideas for this thesis originated from my independent research project during my undergraduate degree at the University of Derby (online). At that time (2012) I was inspired to study technology behaviours by the numerous news items reporting that increasing numbers of teenagers in the UK were demonstrating problematic mobile phone use. Reports generally showed teenagers happily using their mobile phones while the adult journalists explained that this behaviour restricted *normal* socialising. I found this a frustrating misinterpretation of people embracing new and exciting experiences and ways to socialise through innovative

technologies. This raised two main questions for me, what is the distinction between normal and problematic mobile use? and who is making the decision and why?

During my undergraduate research project, I used a Foucauldian inspired discourse analysis (FDA; see Willig, 2013) to show a relationship between meaning and practices for a small group of parents who commonly used their mobile phone. During this research process I developed my interest for a critical perspective informed by social constructionism which I carried forward into my Master of Research independent study project. This research disputed the generational distinction of differences in digital literacy potential and digital technology practices such that younger people (born into a world of technology) were considered to have a higher digital literacy potential than older people. However, this binary grouping potentially subjugated older people to exclusion and younger people to the burden of meeting high expectations. The study, which involved the older generation (to which I align), concluded that their digital literacy development and practices were related to their personal context and their process to build their desired lifestyle. I found the social constructionist perspective helped me to see the limitations of the positivist and essentialist focus of mainstream psychology's research in relation to the study of technology practices. Also, the mainstream's individualist perspective isolated the technology user from their social context and personal interests.

The cascade of cross-sectional correlations which aim to identify, quantify and generalise potential risk factors of problematic mobile phone practices do not appear to provide stable rationales for problematic mobile phone practices or a definitive distinct between normal and problematic practices. I am inspired by studies that challenge the notion of mobile phone addiction such as Billieux, Maurage, et al. (2015) who reviewed the validity of the behavioural addiction model when applied to problematic mobile phone use and concluded that evidence showing behavioural and neurobiological similarities between legitimate addictive behaviours and mobile phone addiction was scarce. Also, the literature review by Panova and Carbonell (2018) who proposed that the addiction framework was not suited to the study of excessive mobile phone use and recommended moving away from this model and use the term problematic use. The studies that inspire me the most are those that explore the mobile phone user's relationship with their mobile phone and consider their reasons for use. For example, the case study by Billieux, Philippot, et al. (2015) that involved a woman who was positioned as overusing her mobile phone. Billieux, Philippot, et al. considered that the concept of mobile phone addiction as an explanation of her overuse simplified her psychological functioning and offered non-relevant treatment of her symptom of mobile phone overuse. The authors suggested that interventions related to her underlying motivations would be more supportive

than non-relevant treatment of proposed mobile phone overuse. A further example is the qualitative study by Fullwood et al. (2017) who used a thematic analysis of focus groups to explore the users' experiences and attitudes and suggested that the users' were emotionally attached to the affordances the device offered rather than the device itself. There is also the study by Campbell (2006) who adopted a critical perspective to provide insights into the meaning the mobile phone had to teenage girls and the struggle they had trying to align with the narrative of idealised independence portrayed by the advertising which competed with their real world security concerns.

The studies which share my view that the mobile phone user is an emotional and relational being immersed within their social context and personal interests inspire my continued endeavour to contribute to our understanding of how mobile phone practices may be shaped by the relationship the mobile phone user has with their phone (reasons for use, benefits, emotional attachment). But further to this, I am interested in users' practices in relation to the deep meaning the mobile phone has to the user and how this meaning may be influenced by the ever present broad cultural narratives. The theoretically flexible thematic analysis informed by the social constructionist perspective offers a consistent methodology to explore these meanings of the mobile phone within the layers of context from the broad context of cultural narratives to the subjective experiential context of the mobile phone user (see Braun & Clarke, 2006). The findings from this study offer further perspectives on differences in mobile phone practices and the distinction between normal and problematic practices so that any interventions can be meaningful and beneficial to the unique person within their social context and personal interests.

1.4 Aims and Objectives of the Thesis

The thesis aims to adopt a critical perspective to explore the ways in which mobile phone user's contextualised conceptual understanding of the mobile phone may have shaped their mobile phone practices and subjectivity within the cultural narratives of the neoliberal digital age in the UK.

Objectives:

1. Justify the insights of a critical perspective by providing an evaluation of the ways in which previous psychology research, about the mobile phone user and their practices,

have rationalised the distinction between normal and problematic practices (see chapters 2 and 3).

2. Provide insights into the cultural context of mobile phone users' understanding of the mobile phone by exploring the broad and culturally available conceptualisations of the mobile phone which circulate throughout UK society via mass media (see chapters 5 and 6).

3. Provide insights into the ways in which UK mobile phone users' contextualised understanding of the mobile phone may have shaped their practices and subjectivity (see chapters 7 and 8).

4. Inform current rationales for differences in mobile phone practices by discussing the ways in which mobile phone users' conceptual understandings of the mobile phone may have shaped their mobile phone practices and subjectivity. Also discuss the ways in which the broad cultural conceptualisations of the mobile phone within UK society may have shaped mobile phone users understanding of the mobile phone (see *Chapter 9*).

1.5 Thesis Overview

To meet the aims of the thesis, a critical evaluation of psychology literature related to mobile phone practices and four qualitative studies were carried out. The studies explored the conceptualisations of the mobile phones in the UK from the perspectives of news media, advertising media, general mobile phone users and mobile phone users positioned as at risk of being categorised as problem users by psychology literature. The data included mass media generated secondary sources of text and images, participant-generated textual data through an online qualitative survey, and data generated through researcher and participant interaction during semi-structured interviews. The data was analysed using an inductive thematic analysis informed by social constructionism to work with latent themes which allowed the exploration of the layers of context from the broad cultural context to the subjective experiential context. The thesis process is presented in the following eight chapters.

Chapter two critically evaluates previous psychology literature about problematic mobile phone practices and the mobile phone user. Methodological approaches, the concept of

addiction in relation to mobile phone practices, and scales used to measure problematic mobile phone practices are evaluated. This literature review provides a rationale for the critical perspective of social constructionism adopted by this thesis

Chapter three introduces the critical perspective and argues the suitability of social constructionism to underpin a thematic analysis for fresh insights into mobile phone practices through a critique of the mainstream essentialist perspective. As a critique of mainstream's assumption of individualism, the chapter discussed the critical perspective of the self.

Chapter four reports the methodological approaches used by the four distinct but interconnected studies that inform this thesis. The relationship between the four studies from a social constructionist perspective are discussed. The chapter details the data collection processes used to collect the different types of data and the thematic analysis process used for the studies.

Chapter five is the first chapter to explore the broad cultural conceptualisations of the mobile phone presented by mass media. Three distinct thematic analyses, each representing a specific time period between 1985 and 2019, of UK national newspaper articles about the mobile phone published since 1985 (first consumer mobile phone was introduced into the UK market) explore the historical development of conceptualisations of the mobile phone in news media. The ways in which the conceptualisations positioned mobile phone practices and the user is investigated as well as the societal powers which may have shaped the conceptualisations.

Chapter six builds on the previous chapter to explore the broad cultural conceptualisations of the mobile phone presented by current advertising media. This chapter moves focus from the historical shifts in the conceptualisation of the mobile phone portrayed in a forum of trusted information (news media, chapter five) to the current conceptualisations promoted by a forum of persuasion. The thematic analysis explores conceptualisations of the mobile phone promoted by website-based advertising of mobile phones accessible during 2019 by people living in the UK. The ways in which the conceptualisations positioned mobile phone practices and the user is examined. This chapter and the previous chapter provide insights into the wide cultural context which may shape current mobile phone users' conceptual understanding of the mobile phone which are presented in the following chapters seven and eight.

Chapter seven explores the interface between the cultural and experiential contexts of conceptualisations of the mobile phone. The thematic analysis of this chapter explores the contextualised conceptual understanding of the mobile phone presented by UK mobile phone users' product reviews of their mobile phone which are an established cultural practice by consumers. The analysis investigates the ways in which the users' understanding of the mobile phone may have shaped their practices and subjectivity within the neoliberal digital age.

Chapter eight focuses on a specific group of mobile phone users positioned as at risk of being categorised as problem user in order to add weight to informing the distinction between normal and problematic practices. This thematic analysis explores the ways in which contextualised conceptual understanding of the mobile phone by this group may shape their practices and subjectivity.

Chapter nine provides a summary of the contributions made to this thesis and discusses the key findings in relation to previous literature to assess their contribution to knowledge. The limitations of the thesis and suggestions for future research directions are also discussed.

1.6 Chapter Summary

A brief history of the mobile phone and related research interests led to considering the global and cultural relevance of studying mobile phone practices. This thesis is a response to the dominance of mainstream psychology's focus on pathologising mobile phone practices in order to distinguish between normal and problematic practices and users. Inspiration has come from previous research which has focused on the relationship the mobile phone user has with their phone. Drawing on the critical perspective of social constructionism, the thesis explores the deep meaning the mobile phone has to the user and the relationship this meaning has with their practices and the ever present broad cultural narratives. The thesis has been summarised through reporting the aims and objective of the thesis and summarising the chapters.

Chapter 2

Literature Review

Interest in problematic mobile phone practices and notions of mobile phone addiction have continued since the massification of the mobile phone as a consumer product at the turn of the 21st century and the subsequent introduction of feature rich and internet connected smartphones. This literature review critically evaluates the dominant themes promoted by psychology literature about problematic mobile phone practices and the mobile phone user. This chapter opens by introducing the mobile phone revolution and interests of psychology in mobile phone practices. Next, the term *problematic mobile phone practices* is discussed in the context of this thesis highlighting the issues with framing this broad term. The review offers an evaluation of research that has focused on *who* is using the mobile phone and problematic mobile phone practices to search for risk factors which can identify people at risk of being categorised as a problematic mobile phone user. The notion of addiction and the scales used to assess levels of problematic practices are evaluated in relation to mobile phone practices. As a critique of the individualist rationale for mobile phone practices, contextual lifestyle and relational accounts of *why* people use their mobile phone are discussed to clarify that distinctions between normal and problematic practices are not clearly understood and so not generalisable across a population. It is argued that exploration of mobile phone practices from a critical perspective will offer insights into the deep meaning that the mobile phone has to the user in their socially connected world. Such insights can inform the current understanding of mobile phone practices.

2.1 The Mobile Phone Revolution

Since the first handheld portable cellular phone became commercially available between 1983 and 1984 for a wealthy few (BBC News, 2013; Motorola, 2019), the mobile phone has rapidly become an integral part of contemporary social culture globally and is the leading technology involved in the consumable socio-digital revolution (Groupe Speciale Mobile Association [GSMA], 2020; International Telecommunications Union [ITU], 2019a; Office of Communications [Ofcom], 2019a). Currently there are an estimated 5.2 billion individual mobile subscribers worldwide which represents a global penetration of approximately 67% of the world population (GSMA, 2020). During 2018, thirty-three years after the first consumer mobile phone call was made in the UK (1 January 1985; Linge &

Sutton, 2015; Vodafone, 2014), an estimated 94% of UK adults supported 79.5 million mobile handset subscriptions (Ofcom, 2019a). The feature rich smartphone has become the favoured mobile device in the UK used by estimated 79% of adults (Ofcom, 2019b).

The revolution in mobile phone practices fed into the growing moral panic about the effect of new social technologies on social relations, from the notion that social technologies represented a crisis in social cohesion (e.g. Forrest & Kearns, 2001) to the perspective that new social media reinforced social relationships (e.g. DiMaggio et al., 2001). Further to the debate on the effects of social technology on social cohesion, the mobile phone revolution raised community concerns about problematic practices (e.g. excessive use, uncontrolled repetitive use, antisocial use, risky behaviours such as use when driving) and those at risk of such behaviours who could be targeted for interventions (Bianchi & Phillips, 2005; Billieux, Maurage, et al., 2015; Panova & Carbonell, 2018). The concerns stimulated psychological research which linked problematic mobile phone practices with addictive behaviour, dependence and the problem mobile phone user (e.g. Aljomaa et al., 2016; Bian & Leung, 2014; Bianchi & Phillips, 2005; Chóliz, 2012; Demirci et al., 2015; Hawi & Samaha, 2016; Körmendi et al., 2016; Kwon et al., 2013; Leung, 2008; Lin et al., 2014; Merlo et al., 2013; Roberts et al., 2015; Salehan & Negahban, 2013; Takao et al., 2009). The studies pathologised problematic mobile phone practices and developed new concepts of mobile phone addiction, mobile phone dependence and the problem mobile phone user all of which served to distinguish between healthy and problematic practices and users. These pathological rationales for problematic mobile phone practices offered society the identification of an underlying problem which could be addressed for those at risk.

2.2 Problematic Mobile Phone Practices

“Problematic use of the mobile phone is considered as an inability to regulate one’s use of the mobile phone, which eventually involves negative consequences in daily life” (Billieux, 2012, p. 299). The negative consequences associated with problematic use can include social problems, financial problems, sleep disturbance and distress (Billieux, 2012; Billieux, Maurage, et al., 2015). However, defining *problematic mobile phone use*, as it is used within the broad range of literature on which this thesis draws, is not straight forward and needs explanation.

Billieux, Maurage, et al. (2015) literature review proposed three types of problematic mobile phone use; addictive pattern of use (e.g. loss of control, excessive use), antisocial

pattern of use (e.g. prohibited use, use in inappropriate contexts) and risky pattern of use (e.g. use when driving). Also, other literature discusses problematic mobile phone use in terms of mobile phone or smartphone addiction (e.g. Aljomaa et al., 2016; Bian & Leung, 2014; Kwon et al., 2013) and mobile phone or smartphone dependence (e.g. Chóliz, 2012; Toda et al., 2006; Lopez-Fernandez et al., 2017). The majority of studies discuss problematic mobile phone use as a behavioural addiction that is correlated with excessive use but do not consider the heterogeneity of mobile phone use.

Van Deursen et al. (2015) categorised mobile phone usage into social usage and process usage. Social usage includes phone calls, text messaging, contacting people through social media and maintaining social relationships, whereas process usage refers to productivity, information seeking, alerts, entertainment and a means to relax. The notion of different types of mobile phone usage brings to the fore the need to consider users' interests in using their mobile phone in order to distinguish between contextually appropriate frequent use and problematic use.

Further to this, Harwood et al. (2014) highlighted the cognitive and behavioural aspects of mobile phone involvement. The behavioural aspect includes using, checking and keeping the device close by, while the cognitive aspect refers to awareness of the phone's presence and thinking about a new notification. The notion of behaviour and cognitive aspects of mobile phone involvement raises another dimension to problematic mobile phone use which relates to an emotional aspect of the user's separation from their device. *Nomophobia* refers to the anxiety associated with remaining out of contact with a mobile phone and the social connections or other affordances the device provides (Argumosa-Villar et al., 2017; Arpaci et al., 2017; King et al., 2010). The emotional relationship between the user and their device (e.g. importance, convenience) that extends beyond the type and frequency of use needs to be considered when investigating problematic use.

The discussion has clearly shown that the term *problematic mobile phone use* encompasses a diverse and multi-faceted condition. Problematic use is not only shaped by different types of use and interests, but also different types of involvement and relationships between the user and their phone. With this in mind, the term *problematic mobile phone practices* will be used in this thesis to encompass the range of terms involved in pathologising and problematising mobile phone practices such as *addiction*, *dependence*, *nomophobia* and *problematic use*. Also, the term *mobile phone* will be used as the general term to encompass terms such as *smartphone* and *cell phone*.

2.3 Proposed Risk Factors Associated with Problematic Mobile Phone Users

Numerous quantitative studies sought to identify, quantify and generalise *who* uses mobile phones and potential risk factors of problematic mobile phone practices in order to provide further rationales for changing and problematic mobile phone practices. To identify those at risk, scales were developed to measure the user's level and style of problematic mobile phone use (e.g. Bianchi & Phillips, 2005; Chóliz, 2012; Kwon et al., 2013) which were used to correlate the scores with measures of other user characteristics and behaviours. Through the use of these and similar scales and questionnaires, many studies aimed to identify risk factors and pathways by investigating problematic mobile phone practices and their correlation with psychopathology, emotional, personality, psychological and socio-demographic related factors of the mobile phone user.

2.3.1 Psychopathology and emotion related factors.

Early research into the relationship between health and mobile phone use focused on physical health such as the relationship between mobile phone radiation and cancer (e.g. Christensen et al., 2004; Kundi et al., 2004; Lin, 2007). The advent of the mobile phone mass market and feature rich smartphones during the early part of the 21st century (Linge & Sutton, 2015) extended the focus of research to the relationship between problematic mobile phone practices and the mental health and existing psychopathology of the mobile phone user. This section will discuss problematic mobile phone practices in relation to anxiety, separation anxiety, nomophobia, fear of missing out (FoMO), loneliness and depression.

A significant relationship was found between higher levels of anxiety and increased time spent using a smartphone, higher frequency of use or problematic use (e.g. Elhai et al., 2016; Hawi & Samaha, 2017; Hussain et al., 2017; Jenaro et al., 2007; Lepp et al., 2014). Elhai, Dvorak, et al. (2017) systematic literature review showed that problematic smartphone use was consistently associated with anxiety severity although Harwood et al. (2014) found no association. A mechanism of the relationship was considered by Hawi and Samaha (2017) who suggested that the increased levels of smartphone use may increase anxiety. However, it may also be considered that that anxious people use their smartphone to ease their anxiety such as through social connection. Elhai, Levine, et al. (2017) found that the higher levels of anxiety were strongly associated with non-social process smartphone usage (e.g. entertainment, news, relaxation) more so than social usage (e.g. voice calls, messaging, social media). Process usage

was considered to be a stronger determinant of smartphone addiction (Van Deursen et al., 2015). This evidence shows that there is a stronger association between high levels of anxiety and problematic mobile phone practices related to process usage more so than practices related to social usage.

Anxiety levels were not only related to levels of mobile phone use and dependence, but also the user's separation from their mobile phone or interrupted mobile activities which related to raised anxiety (e.g. Cheever et al., 2014; Nie et al., 2020). Nie et al. considered the irreplaceability of the unique array of applications and features of smartphones as an attachment agent because other communication technology, such as a computer, could not alleviate the user's smartphone separation anxiety when their smartphone activities were interrupted. The users demonstrated smartphone separation anxiety from interrupted online activities (related to their network) and offline activities (related to power). The user was attached to their smartphone more so than other communication device which emphasises the irreplaceability of the device and the user's unique emotional attachment to the array of activities in which they could engage through their smartphone. This notion was supported by Fullwood et al. (2017) implication that users were attached to the affordances provided by their mobile phone rather than the device itself. However, Elhai, Hall, and Erwin (2018) found that users who imagined losing access to their smartphone for two days did not report higher scores on psychopathology scales, which included anxiety measures, compared to pre-test measures.

The notion of mobile phone addiction, compulsive checking and separation anxiety has given rise to the term *nomophobia* which refers to the pathological fear of remaining out of contact with a mobile phone (King et al., 2010), social connections via the mobile phone (Argumosa-Villar et al., 2017) or other affordances the device provides (Arpaci et al., 2017). Yildirim and Correia (2015) developed and validated a self-report 20-item nomophobia questionnaire (NMP-Q) based on the four dimensions of nomophobia the study identified: "not being able to communicate, losing connectedness, not being able to access information and giving up convenience" (p. 130). Aguilera-Manrique et al., (2018) used the NMP-Q and found a positive correlation between level of smartphone use and nomophobia among student nurses. Further to this, higher levels of nomophobia were displayed by individuals who were emotionally dependent and desired high levels of closeness and attention in a relationship (Arpaci et al., 2017). This collection of evidence shows that the user can be emotionally connected to the convenience of constant connection to their social network and information.

Problematic mobile phone practices have been associated with the *fear of missing out* (e.g. FoMO; Elhai et al., 2016; Elhai, Levine, et al., 2018; Lo Coco et al., 2020) FoMO is

“defined as pervasive apprehension that others might be having rewarding experiences from which one is absent, FoMO is characterized by the desire to stay continually connected with what others are doing” (Przybylski et al., 2013, p 1841). As well as a positive correlation with anxiety, Elhai et al. (2016) found a positive relationship between FoMO and problematic smartphone use but not frequency of use, although Elhai, Levine, et al. (2018) found a mild relationship with smartphone use frequency. Elhai, Levine, et al. further suggested that negative affectivity, which mediated the relationship between FoMO and problematic smartphone use in their study, may play a role in the process through which FoMO may drive problematic use. Further to this, Elhai et al. (2020) suggested that FoMO may mediate the positive relationship between anxiety and problematic smartphone use. With regard to type of use, Elhai et al. reported that problematic smartphone use was positively related to process use and FoMO, but problematic use and FoMO were not related to social use. The authors explained that process smartphone use may be a way to reduce or avoid the stressful content of social interactions. Van Deursen et al. (2015) argued that social stress positively influenced smartphone addiction behaviour such that the smartphone was used to avoid the anxiety evoked by the stress of real-life interactions by engaging in the more anonymous online interactions.

This brings the fore the idea of passive use of social media which is characterised by browsing social media and observing other people’s profiles and comments rather than actively communicating with others through messages, posts and profile updates (Giagkou et al., 2018). Giagkou et al. found a positive relationship between FoMO and passive following on social media. This highlights that FoMO may not only represent an intense interest in the rewards of maintaining constant connection to social information (and other information) but also represent an interest in reducing or avoiding the stressful content of social interaction. FoMO and the positive relationship with problematic practices may represent an addiction to the rewards of knowing rather than addiction to the means (mobile phone).

Many studies report a positive relationship between problematic mobile phone practices and a sense of loneliness such that the users sense of loneliness increases with increased levels of problematic mobile phone use or dependence (e.g. Bian & Leung, 2014; Ezoe & Toda, 2013; Oztunc, 2013). This indicates that mobile phone practices are associated with a sense of social disconnection. However, Jafari et al. (2019) found a negative relationship such that users who demonstrated higher levels of mobile phone addiction reported a lower sense of loneliness. Further to this, Takao et al. (2009) reported that problematic mobile phone use was unrelated to loneliness but associated with a need for social approval. Considering this evidence, the mobile phone can be seen as a tool for social connection as well as social disconnection which

alludes to the influence of personal context and needs of the user shapes the relationship between loneliness and mobile phone practices.

A positive relationship was found between problematic mobile phone use and depression (e.g. Demirci et al., 2015; Elhai, Dvorak, et al., 2017; J.-H. Kim et al., 2015) and average daily depressive mood over one week (Rozgonjuk et al., 2018). However, Harwood et al. (2014) found that smart-device involvement (the cognitive aspects such as awareness of the phones location and thinking about a new message) was significantly associated with higher levels of depression, but *not* smart-device use (the behavioural aspect of checking and keeping it close by). The authors suggested that the relationship with the smartphone (e.g. importance, conflict with other activities), rather than frequency of use, was predictive of depression. J.-H. Kim et al. (2015) suggested that depressed mobile phone users may use their mobile phone in an attempt to regulate their emotion by temporarily alleviating their depressive mood which can lead to problematic mobile phone use. Emotion regulation was further highlighted by Panova and Lleras (2016) who suggested that the mobile phone could be used as a comforter in times of feeling stress.

This discussion has shown that the relationship between problematic mobile phone practices, psychopathology and emotional related factors is not necessarily definitive and the mediating mechanisms of the relationships need more research. However, the discussion illuminates that mobile phone practices may be shaped by the deep emotional connection the user can have to their mobile phone practices, the rich set of activities the device offers, the user's emotional regulation and their constant connection to social networks and information. Further to psychopathology and emotion related factors, research also considered personality and psychological factors as predictors of problematic mobile phone practices.

2.3.2 Personality and psychological related factors.

Research aimed at identifying risk factors related to problematic mobile phone practices focused on the dimensions of personality related factors. Trait theories of personality claim that personality traits are generally stable over time and can be isolated and measured through personality related questionnaires and scales (e.g. Cattell, 1956; Eysenck, 1991; John et al., 2008; McCrae & Costa, 1987). Cross-sectional correlational study designs were used to find relationships between mobile phone users' scores on scales related to personality and psychological related factors, and scales which represented the measure of problematic mobile

phone practices. This section will discuss problematic mobile phone practices in relation to extraversion, self-esteem, narcissism, conscientiousness and neuroticism.

The dimension of extroversion has been proposed as a factor which can be related to problematic mobile phone practices such that mobile phone users' high scores of extroversion were associated with problematic mobile phone use (e.g. Bianchi & Phillips, 2005; Lane & Manner, 2011; Pérez et al., 2012). Extroversion was associated with a strong desire to communicate with others (Lane & Manner, 2011), an increased use of social media apps (Y. Kim et al., 2015) and a need for frequent stimulation that the mobile phone provided (Bianchi & Phillips, 2005). From this perspective, extroversion in relation to mobile phone use can be interpreted as an interest to be stimulated through frequent social connection. Kuss and Griffiths (2011) considered that both extraverts and introverts were at risk of potential addiction to social networks because extraverts use the networks to gain social capital while introverts used social media to help compensate for their difficulties in relating to others. However, Mitchell and Hussain (2018) and Pearson and Hussain (2015) did not find extroversion to be a significant factor in problematic mobile phone use. Also, Roberts et al. (2015) reported a negative relationship between introversion and smartphone addiction such that shy people were less likely to become dependent on their mobile phone than extroverts.

The dimension of self-esteem has also been considered as a predictive factor of problematic mobile phone use. Self-esteem is considered to be a relatively stable self-evaluation of the person's value as a person and is linked to identity and self views which are sustained by social relationships (Swann, 1996). However, Heatherton & Polivy (1991) considered that level of self-esteem could change according to the needs of personal context. Low self-esteem was related to problematic mobile phone use (e.g. Bianchi & Phillips, 2005; Leung, 2008; Pérez et al., 2012). However, Elhai, Dvorak, et al. (2017) systematic review showed that self-esteem was inconsistently related. Bianchi and Phillips (2005) attributed the function of low self-esteem to the use of an indirect style of communication which suited the user's preference for indirect social connection. This indicates that the user may use their mobile phone to elevate their self-esteem by feeling socially popular which can be seen to relate to narcissism. The criteria for *Narcissistic Personality Disorder* are self-promotion, exaggerated sense of self-importance, fantasies of power, vanity and superficial relationships (American Psychiatric Association [APA], 2013). Pearson and Hussain (2015) studied the relationship between narcissism and smartphone addiction and found that higher narcissism scores and self-serving personalities were linked to smartphone addiction. Smartphone use encouraged self-serving and narcissistic traits even in non-narcissistic users mainly through the

accessibility to social networking sites. However, Hussain et al. (2017) found that narcissism was not associated with problematic smartphone use but was linked to increased time spent using a smartphone which led to narcissistic traits. This suggests that the social connection provided by the mobile phone can support and encourage the user's self-serving interest in promoting their identity.

Problematic mobile phone practices were also shown to be negatively associated with conscientiousness such that users with lower conscientiousness were more likely to demonstrate problematic mobile phone practices (Hussain et al., 2017; Roberts et al., 2015). The level of conscientiousness represents an individual's level of self-discipline, orderliness and responsibility such that conscientious individuals are efficient and better organised (McCrae & Costa, 2008). The studies suggest that mobile phone users with lower levels of self-control or self-regulation are more prone to problematic mobile phone practices (Kim et al., 2016; van Deursen et al., 2015). However, the negative relationship between conscientiousness and problematic mobile phone practices was shown to be limited to women in a sample of undergraduate students (Arpaci & Kocadag Unver, 2020) or not a significant relationship (Takao, 2014). Arpaci and Kocadag Unver's (2020) focus on gender further showed that neuroticism (level of emotional stability) was positively related to smartphone addiction, but this relationship was also limited to women. Further studies also showed a positive relationship between neuroticism and smartphone addiction (Gao et al., 2017; Pearson & Hussain, 2015) or problematic mobile phone practices (Takao, 2014). As an explanation to this positive relationship, Gao et al. (2017) suggested that neurotics have difficulties communicating face-to-face and so increased smartphone use, as an alternative form of communication, aligned with the needs associated with increased levels of neuroticism. However, Bianchi and Philips (2005) did not find neuroticism to be a predictive factor of problematic mobile phone use.

The evidence discussed shows that personality and psychological related factors may not be stable predictors of problematic mobile phone practices across studies or, in the cases of conscientious and neuroticism, across genders. Many studies describe interactions between selected factors and mediating effects, but this is beyond the scope of this discussion which aimed to show that the evidence does not provide a definitive relationship between factors and problematic mobile phone practices. The relationship between mobile phone practices and the factors discussed appear to be shaped by personal interests in social connection style and identity. Additional to considering coexisting personality and psychological factors as predictors of problematic mobile phone practices, research also focused on socio-demographic factors.

2.3.3 Socio-demographic factors.

Socio-demographic factors were also investigated as potential predictive factors related to problematic mobile phone practices to develop a socio-demographic profile. Data from socio-demographic questionnaires and scales which represented the measure of problematic mobile phone practices were correlated to examine relationships between the data. This section will discuss problematic mobile phone practices in relation to age, gender, socio-economic status and education.

Age has been reported as a factor which is related to levels mobile phone use such that younger mobile phone users were more prone to high levels of use and problematic mobile phone habits than older users (e.g. Bianchi & Phillips, 2005; van Deursen et al., 2015; Walsh et al., 2011). For example, Bianchi and Phillips (2005) used questionnaires in a cross-sectional correlation design study to examine mobile phone practices with participants whose ages ranged from 18 to 85 years. The study found that younger people were associated with a higher frequency of attending to their mobile phone and mobile phone use which was also supported by Walsh et al. (2011). The highest use times are reported during adolescence and generally decreases with age as usage shifts from playful to professional (Mazaheri & Najarkolaei, 2014). This may be due to decreased self-control found in the younger age groups (Bianchi & Phillips, 2005) or that young people tend to try new technology and thus be more prone (Hussain et al., 2017). The positive effect of age on self-regulation indicates that the development of habitual practices by older people is less likely (van Deursen et al., 2015).

The correlation between frequency of mobile phone use and age aligns with the notion of a generational distinction between digital communication technology (DCT) practices and competence such that the younger generation is more digitally literate and use their DCT more frequently than the older generation (see Howe & Strauss, 2000; Prensky, 2001; Tapscott, 1998). However, the generational distinction between DCT practices was contested by the proposal of a contextual continuum rationale such that differences in personal needs and contextual motivations, which continually develop, could account for differences between people's DCT practices (e.g. Bullen et al., 2011; White and Le Cornu, 2011). With regards to smartphone use, Zhitomirsky-Geffet and Blau (2016) cross-generational analysis compared the smartphone practices of samples from Generation X (born before 1980), Generation Y (born from 1980 to 1995) and Generation Z (born from 1996 to 2003). The study showed that Generation Y (the middle generation) demonstrated a higher level of smartphone addiction

than the other two generations. Motivation to use their smartphone was shaped by the user's personal context of social pressures and emotional gain.

However, Ofcom (2018; 2019a) reported that there was little difference in mobile phone take-up in the UK between adult age groups below 55 years and that mobile data consumption had increased within all age groups. Further to this, Lu et al. (2011) showed that text messaging dependence was prevalent among adults and not limited to adolescents. Also, Nahas et al. (2018) found that smartphone problematic use was prevalent throughout Lebanese adults aged between 18-65, although more prevalent in the sample aged 18 to 34. Nevertheless, Ofcom (2018) supported significant generational differences between the mobile phone practices of 16-24-year olds and the over-55s such that the younger generation showed greater use of communications services particularly instant messaging and online services. The collection of evidence clearly indicates that age or generation is not a stable, definitive or generalisable factor to predict the problematic use of mobile phones or rationalise differences in mobile phone practices. This may indicate a contextual or cultural shift over time as users respond to the development of their needs in a progressive social technology culture, rather than a *cut-off* age for frequent mobile phone use.

Gender was a further socio-demographic factor to be considered as a predictor of mobile phone practices. Generally, females demonstrated higher levels of mobile phone dependence, frequency of use and problematic use compared to males (Beranuy et al., 2009; Choliz, 2012; Jenaro et al., 2007; Sanchez-Martinez & Otero, 2009). More recently, gender was not associated with problem mobile phone use (Beison & Rademacher, 2017; Mitchell & Hussain, 2018; Pearson & Hussain, 2015; Tavakolizadeh et al., 2014) which may indicate a contextual or cultural shift similar to the factor of age. With regards to types of mobile phone practices, females generally used their mobile phones for socialising, emotional communication and the creation and maintenance of interpersonal relations (Beranuy et al., 2009; Bianchi & Phillips, 2005; Toda et al., 2006; van Deursen et al., 2015). In contrast, males generally used their mobile phones for less social purposes (van Deursen et al., 2015) and were more likely than females to use their mobile phone in risky situations (Billieux et al., 2008). Considering the network connected features of the latest smartphones, it is relevant to note that males demonstrated problematic internet use more frequently than females (Yoo et al., 2014). Generally, the mobile phone appears to be conceptualised as a means of intense social contact for females whereas males demonstrate a more diverse pattern of mobile phone use. This highlights that the conceptual understanding of the mobile phone's function and personal context are important aspects in shaping users mobile phone practices.

With regard to socio-economic status and education, higher levels of problematic mobile phone use were demonstrated by students from families with higher cultural and economic levels (Mazaheri & Najarkolaei, 2014; Sanchez-Martinez & Otero, 2009) and students with higher educated fathers (Beison & Rademacher, 2017; Mazaheri & Najarkolaei, 2014). However, Sahin et al. (2013) and Thomas et al. (2009) found greater levels of mobile phone addiction was demonstrated by students in lower income families. An impact of increased mobile phone use was associated with decreased academic performance (Kates et al., 2018; Lepp et al., 2015, Hawi & Samaha, 2016), However, it was also shown that this relationship was more prevalent in males than females (Nayak, 2018). It was considered that more research was needed to identify the underlying mechanisms of this relationship (Lepp et al., 2015). In contrast, Tavakolizadeh et al. (2014) reported no significant relationship between excessive mobile phone use and academic achievement but did find that students with higher education demonstrated a higher level of excessive mobile phone use. From the perspective of students in education, the mobile phone can be an accessible, practical and productive tool in their academic and social context while their mobile phone practices may relate to their need to maintain compensatory social relationships when feeling isolated and lonely during extended periods of study and studying away from home (Mazaheri & Najarkolaei, 2014; Tavakolizadeh et al., 2014).

This sample of evidence shows that the factors of socio-economic status and education, in line with the socio-demographic factors of age and gender, do not appear to be definitive or stable predictors of problematic mobile phone practices. The relationship between the factors discussed and mobile phone practices can be seen to be shaped by personal contextual interests. The studies which have focused on identifying individuals who may be at risk of, and pathways to, problematic mobile phone practices prompts an evaluation of the notion of addiction in relation to mobile phone practices and the scales used to measure problematic mobile phone practices.

2.4 Evaluation of the Measures which Pathologise Mobile Phone Practices.

The notions of smartphone addiction (e.g. Kwon et al., 2013), mobile phone dependence (e.g. Choliz, 2012) problem mobile phone use (e.g. Bianchi & Phillips, 2005) and similar terms have been used to pathologise the practices of mobile phone users who are involved in their mobile phone practices to the extent that their involvement with other aspects of their life is significantly neglected (Goswami & Singh, 2016). However, interpretation of the

findings from studies focused on identifying problem mobile phone users or identifying risk factors of mobile phone addiction, dependence or the problem mobile phone user, should be conducted with caution. Many scales developed to measure problematic phone use, smartphone addiction or mobile phone dependence (e.g. *The Test Of Mobile Phone Dependence*, Chóliz, 2012; *Smartphone Addiction Scale*, Kwon et al., 2013) were designed by drawing on the criteria for substance dependence defined by *Diagnostic and Statistical Manual of Mental Disorders* of the time (e.g. APA, 2000; 2013). A further example is the *Mobile Phone Problem Use Scale* (MPPUS; Bianchi & Phillips, 2005) which was validated using the *Addiction Potential Scale* (see Weed et al., 1992), a measure of the potential for substance abuse and alcoholism. Billieux, Schimmenti, et al. (2015) proposed that the similarities between the symptoms of excessive behaviours and substance addiction were inevitable because substance addiction theory underpinned the measure of problematic levels of repetitive behaviours. Such diagnostic criteria of biological addiction did not consider the mobile phone as a lifestyle tool within the user's unique personal context of needs and separated them from their unique social context (see Marecek & Hare-Mustin, 2009). West and Brown (2013) emphasised that the study of people's behaviour in their social context has become of secondary importance to statistical interpretations. Participant responses to questionnaires which are administered in unnatural settings often do not represent real world human practices and so may not provide accurate and generalisable measures of addiction. Consequently, the measures of mobile phone addiction, dependence or the problem user may not adequately distinguish between normal and problematic practices of a unique user situated within their world of needs and interests. This suggests that physiological dependence may be more generalisable than social behaviours which are immersed in social context. The studies which have used such scales may reflect an ill-informed understanding of mobile phone users and their mobile phone practices in the current digital culture.

In recent years there has been an increasing number of studies which have investigated the commonly termed *behavioural addiction* which is distinct from substance related addiction in that no substance needs to be used (De-Sola Gutierrez, 2016; Panova & Carbonnell, 2018). The studies investigated behaviour addictions related to internet use (Young, 2009), online gaming (Hussain et al., 2012), online gambling (Trivedi & Teichert, 2018), shopping (Clark & Calleja, 2008), working (Andreassen et al., 2010), studying (Atroszko et al., 2015), exercise (Adams & Kirkby, 2002), and engagement with reading Harry Potter books (Rudski et al., 2009). According to such research many common behaviours and leisure activities are becoming pathologised which risks the credibility of behavioural addictive disorders (Billieux,

Schimmenti, et al., 2015; Kardefelt-Winther et al., 2017). Particularly, there is a rising focus on pathologising technology behaviours such as the increasing interest in mobile phone addiction and similar terms (e.g. Bian & Leung, 2014; Bianchi & Phillips, 2005; Cha & Seo, 2018; Cholz, 2012; Kwon et al., 2013; Merlo et al., 2013; Mitchell & Hussain, 2013) even though there is no recognised psychiatric diagnosis. The only disorder due to addictive behaviours with recognised psychiatric diagnosis relate to gambling (APA, 2013; World Health Organisation [WHO], 2019) and Gaming (WHO, 2019). Considering this information and a case study of a woman who was positioned as overusing her mobile phone, Billieux, Philippot, et al. (2015) considered that the addiction conceptualisation of mobile phone overuse simplified the user's psychological functioning and offered non-relevant treatment. Interventions related to the user's underlying motivations would be more supportive than treating the symptom of mobile phone overuse. The authors considered it important not to over pathologise mobile phone use.

Following a review of literature related to smartphone addiction, Panova and Carbonell (2018) proposed that the addiction framework was not appropriate to the study of technology behaviours such as excessive mobile phone practices and recommended a term such as problematic use. The term *addiction* is inaccurate and misleading because the term represents the severe end of a mild to severe continuum of some disorders and is not representative of problematic or maladaptive behaviours (APA, 2013; Panova & Carbonell, 2018). Also the notion of mobile phone or smartphone addiction conceptualises the mobile phone as the rewarding stimuli, but the mobile phone parallels with paraphernalia such as the delivery mechanism of rewarding stimuli (e.g. syringe) or the vessel containing the rewarding stimuli (e.g. bottle, casino; Panova & Carbonell, 2018). The contemporary smartphone provides continuous interactive access to applications (e.g. games) and the content of the internet (e.g. social media, gambling websites; Apple, 2019; Linge & Sutton, 2015). From this perspective the mobile phone is not the singular rewarding stimulus but a continuously connected portal to many activities with which the user can engage depending on the user's personal and contextual motivations. While the mobile phone may not be the object of addiction, the device can facilitate problematic mobile phone associated practices by providing the opportunity for continual access to gaming apps and gambling websites which are associated with behavioural disorders (APA, 2013; WHO, 2019). Problematic practices can be interpreted from mobile phone related activities and the motivational rewards received which reinforce the benefits of continued mobile phone use (Jeong et al., 2016; Lopez-Fernandez et al., 2017). "On the whole, it is argued that the evidence supporting PMPU [problematic mobile phone use] as an addictive

behaviour is scarce” (Billieux, Maurage, et al., 2015, p. 156). To understand mobile phone practices and mobile phone users in greater depth, the role that the mobile phone plays in the user’s lifestyle must be considered.

2.5 The Role of the Mobile Phone in the Current Digital Culture

The research which focused on *who* is using the mobile phone and the factors which can categorise a mobile phone user’s level of risk to problematic mobile phone practices, highlighted the individualist perspective adopted by the studies. The studies positioned the mobile phone user as an isolated container of risk factors who was considered to be separate from their social context. This perspective did not consider the complexity of the socially integrated nature of human subjectivity and behaviour (Burr, 2015; Teo, 2012). In order to begin to consider mobile phone users’ meaningful personal context, this section will focus on the contextual lifestyle interests and relational accounts of *why* people use their mobile phone. Contextualised accounts will help to build a more complete picture of mobile phone practices and the mobile phone user in the current digital culture.

The mobile phone has become an essential part of modern living and are a compulsory device within industrialised cultures (Kwon et al., 2013; Panova & Carbonell, 2018; Yang et al., 2019). According to Pearson and Hussain (2015) their participants mostly reported that they could not live a satisfactory life without their smartphone, the lack of which would have a negative impact on their relationships and daily activities. The feature rich and internet connected smartphone has become the favoured mobile communication device in the UK used by an estimated 79% of adults and has become the preferred device for accessing the internet (Ofcom, 2019b). Current smartphones are highly customisable and support a variety of applications (apps; e.g. store personal and social data, play interactive games, play audio and video), mobile connectivity to the internet (e.g. access web browsing, social networking, social media, entertainment, news, information and purchase products online), cameras (e.g. capture photo, capture audio video, video phone call), Global Positioning System (GPS; e.g. satellite navigation, personal surveillance) and Bluetooth (beam) transfer of information to and from other devices (e.g. Apple, 2019; Linge & Sutton, 2015; Ofcom, 2016; Samsung, 2019a).

Further to Van Deursen et al. (2015) categorising mobile phone practices into social usage and process usage, Elhai, Dvorak, et al. (2017) summarised the typology of smartphone use as: Social (e.g. calls, messaging, social media, social information), information seeking (e.g. news media, general web browsing), productivity enhancement (e.g. calendar, alerts),

entertainment (e.g. music, games), diversion and relaxation (e.g. relieve boredom), monetary compensation (e.g. finding consumer deals) and personal status. The mobile phone was also associated with escaping problems (Fullwood et al., 2017) safety and feeling secure (Balakrishnan & Raj, 2012; Campbell, 2006; Fullwood et al., 2017; Walsh et al., 2008) and assisting with travel (Yang et al., 2019). Also, the accessible multifunction smartphone allows the user to record and share all aspects of their daily life.

Social usage remains the most popular use of the mobile phone and social networking apps have become the most prominent apps used (Barhuus & Polichar, 2011; Pearson & Hussain, 2015; Hussain et al., 2017; Textlocal, 2019). From a social perspective, the mobile phone is portrayed as an additional tool to enhance the social lives of the users by achieving social goals such as staying in constant contact with their social network (Pearson & Hussain, 2015) reinforce relationships (Balakrishnan & Raj, 2012; Geser, 2004; Parks, 2005), increase social inclusion within a group (Srivastava, 2005) and strengthen interpersonal solidarity (Chung, 2011). Leung (2008) argued that face-to-face socialising was considered a normal process for social and identity development and so even high social usage of a mobile phone may also be considered normal behaviour (see also Balakrishnan & Raj, 2012). The wider social connectedness that the socio-technological culture offers people new and exciting ways to continually develop their social skills, social capital and identity within multiple social spaces (Green, 2002). Further to widening access to the social world, Campbell and Park (2008) suggested that mobile communication technologies were becoming increasingly personal in nature which was characteristic of the shift in society toward enabling people to remain embedded in their social networks and maintain their identity while on the move choosing distance or privacy (Geser, 2004). However, in light of perpetual contact, Walsh et al. (2008) suggested the users may be addicted to being in contact with others and Walsh et al. (2010) considered that mobile phone dependence was related to dependence on the social connection.

Further studies focused on the role the mobile phone played in the user's subjectivity and identity. Material objects can be used to represent the user's identity and enhance their emotional state particularly in young people (Dittmar et al., 2007). The ability to personalise the mobile phone to individual needs through a unique portfolio of apps makes it a desirable device to use (Barhuus & Polichar, 2011). A personalised mobile phone can be used to represent the user's identity (Srivastava 2005). Also, the mobile phone can be used as a status symbol, as a fashion article, as a popularity display, and as a display of one's time poverty (Vanden Abeele et al., 2014). The draw on more senses with mobile phone use compared to

other DCT may establish new forms of emotional attachment and symbolic representation of the self (Campbell & Park, 2008).

Studies also focused on the relationship between identity and mobile phone practices. For example, Walsh et al. (2008) thematic analysis of six focus group discussions on identifying psychological benefits of mobile phone use explored the role of mobile phone use played in young Australian's lives. The study showed that the mobile phone played an integral role in the participants lives and some participants were extremely attached to their mobile phone. Later, Walsh et al. (2011) found that the user's constant awareness of their mobile phone and frequent use was associated with their identity of "Being a mobile phone user is an important part of who I am" (p. 336). This indicated that mobile phones had become integrated into many people's lifestyle and identity and may have become a materialistic representation of the self.

Studies which adopt a critical approach toward the study of mobile phones may explore the ways in which culturally available narratives and the user's social context may shape their mobile phone practices and construction of their identity, but such studies are sparse. One study by Campbell (2006) argued that the mobile phone may function as a practice of self construction in the lives of teenage girls. Campbell (2006) compared the idealisation of image and independence presented in advertisements involving the mobile phone with the mobile phone experiences of teenage girls. The discourses of idealised independence constructed within the advertising did not completely match the girls' constructions of the mobile phone in relation to independence mainly due to safety and freedom limitations imposed by their parents. Campbell (2006) suggested that considerations of safety limited teenage girls from enacting identities portrayed by mobile phone advertising. For the young women the mobile phone symbolised independence from parents and connection with friends. Simultaneously, the phone represented a reminder of the risks in the public space and their responsibility to care for their image and their future as independent adults.

Consideration of literature which has focused on the contextual lifestyle interests and relational accounts of *why* people use their mobile phone has helped to build a more complete picture of mobile phone users' interests in their productive social connection, convenient lifestyle and identity in the current digital culture. The discussion has highlighted that a clear distinction between normal and problematic practices may not be generalizable across unique but connected mobile phone users immersed in their personal context.

2.6 Rationale for a Critical Perspective

Psychology's interest in digital technologies, such as the mobile phone, is to investigate the psychological underpinnings of interactions between individuals, societies and digital technologies, and consider how these interactions may shape people's behaviour and psychological states (Kirwan, 2016; Witty & Young, 2017). Witty and Young (2017) further highlighted that psychology's interests in DCT "offers a new way to define the self and society" (p.1).

The theoretical and methodological perspectives adopted by the mainstream psychological research has dominated the study of mobile phone practices. Previous quantitative studies mostly focused their methodological designs on cross sectional correlations of data collected through questionnaires and scales (e.g. Arpaci & Kocadag Unver, 2020; Bianchi & Phillips, 2005; Elhai et al., 2016; Kwon et al., 2013). The data generated was used to quantify mobile phone practices, correlate practices to proposed risk factors related to socio-demographics, personality and psychopathology, and make statistical inferences about differences between groups of mobile phone users and their practices. The individualist perspective focused on identifying risk factors within the individual mobile phone user separated from social context who would make a convenient entity to treat rather than treating the demanding society within which the user is embedded. The findings of such methodologies did not reveal the influences of the social environment which may have shaped these practices. Previous qualitative studies which generated data through interviews and focus groups (e.g. Pearson & Hussain, 2015; Fullwood et al., 2017; Walsh et al., 2008) considered the emerging themes related to the typology of participants' mobile phone practices, their reported reasons for such practices, attitudes and experiences related to their practices, and relationship with their identity. However, such studies did not use their methodological design to fully explore the deeper mechanisms by which the types of practices were shaped such as the deep meaning the mobile phone has to them and their lifestyle.

Qualitative studies which adopted a critical perspective to investigate the mobile phone user's perspective, the meaning the mobile phone has to the user, the mechanisms which shape mobile phone users' contextualised understandings of mobile phones and contextualised mobile phone practices (e.g. Campbell, 2006) were underrepresented in the literature. In an endeavour to update the rationale for current differences in mobile phone practices, an intensive and focused critical approach to explore the contextualised meaning the mobile phone has to the user was considered an important contribution to the literature. The research would also

consider how broad cultural conceptualisations of the mobile phone in the UK may have shaped users' contextual understandings of mobile phones, their mobile phone practices and their subjectivity. The intimate data generated from an underrepresented critical perspective on the topic of mobile phone practices could open unique perspectives through insights into the influences and mechanisms which may shape current mobile phone practices. The next chapter will discuss the relevance of a critical approach in understanding mobile phone users and their subjective experiences of their mobile phone practices.

2.7 Chapter Summary

This literature review has shown that psychology research into mobile phone practices and the mobile phone user has been dominated by mainstream quantitative approaches which served to pathologise mobile phone practices in order to distinguish between healthy and problematic practices and users. It was argued that most risk factors identified were not stable across studies and were not definitive predictors of problematic mobile phone practices. The relationship between the risk factors and mobile phone practices could be seen to be shaped by personal contextual interests, preferred social connection style, identity or the deep emotional connection the user can have to the meaning of their mobile phone practices. The discussion further argued that the scales used to measure problematic mobile phone practices (e.g. smartphone addiction, mobile phone dependence and problem use) may not be suitable because they were founded on the criteria of substance dependence which does not account for the uniqueness of the user's social context. The diversity of social behaviours may be less generalisable than physiological dependence. The turn from *who* uses the mobile to *why* the mobile phone is used brought into focus the importance of personal interests and social context which laid the foundation for the argument toward a critical perspective as a next step in exploring mobile phone users and their practices. The next chapter (*Chapter 3*) will argue the case for the critical perspective of social constructionism to underpin the methodological approach to explore the complexity of the mobile phone user's understanding of the mobile phone and how this conceptualisation can shape their practices and subjectivity.

Chapter 3

A Critical Perspective

In light of the dominance of mainstream experimental psychology and the essentialist focus by research about mobile phones, mobile phone users and related practices, this chapter argues the benefits of an underrepresented critical perspective which may provide fresh insights into mobile phone practices in context. To meet this aim, the chapter introduces the orientation of critical psychology and critiques the mainstream essentialist perspective through arguing the suitability of a social constructionist methodology in relation to the aims of this thesis. In line with the interests of this thesis to explore the relationship between the self, conceptual understandings of the mobile phone and mobile phone practices, the chapter continues by discussing a critical perspective of the self which aligns with social constructionism.

3.1 The Question of Theoretical Perspective

The question of theoretical perspective informs the questions of method and rationalises the methodology as the most suited research approach to meet the aims of the study and develop knowledge about a phenomenon which can be justified (Guba & Lincoln, 1994). The development of the research process is guided by a set of beliefs about the nature of a psychological phenomenon, what knowledge about it can be attained and the relationship between the known and the inquirer (Denzin & Lincoln, 2011). Willig (2013) clarified that methodologies are ways of approaching a research question and justifying the answer. In this light, the research process of this study must commence with the selection of the theoretical perspective which is most suited to approaching the research aims of this thesis. The theoretical perspective must allow the investigation of the deep meaning that the mobile phone has to the user and consider how conceptualisations of the mobile phone in the UK may have shaped their contextualised understandings of mobile phones, their mobile phone practices and their subjectivity. Critical psychology represents a range of approaches which take a critical stance toward the dominant approaches and theoretical perspectives in mainstream psychology research such as the approaches from a realist position discussed in the previous chapter used to develop knowledge related to mobile phone practices and mobile phone users.

3.2 Critical Psychology

The critiques posed by many psychologists toward experimental research in psychology inspired a critical stance toward the philosophies and methodologies which underpinned the traditional acquisition of knowledge within psychology (Parker, 1989a; Parker & Burman, 2008). Critical psychology embodies a collection of approaches toward psychological knowledge development and research practice which challenge taken for granted assumptions, values and practices in order to destabilise unjust and unsatisfying hierarchies of power relations between social groups (Fox et al., 2009). This relates to the principle of justice in research which is concerned with the even distribution of benefits and burdens of research findings across the demographics of community members (Israel, 2014). Critical psychology embodies a diverse range of theoretical perspectives and methods which are orientated toward the ever-shifting needs of community, social equality and social justice (Fox et al., 2009; Parker & Burman, 2008; Teo, 2012). The debates raised between the theoretical positions provides the means by which critical psychology can develop the critique it offers psychology research practices and knowledge development.

One critique of mainstream experimental psychology is the assumption that a person responds to stimuli as an individual biological machine separate from society without the agency to reflect, choose and act (Teo, 2012). Teo highlighted that the study of isolated aspects of human behaviour and psychological life does not account for the complexity of the integrated totality and societal nature of human subjectivity. This mechanistic and atomistic model strips away the complexity of a person's subjectivity, agency and social-historical context to reduce psychological experience to isolated independent and dependent variables, or stimuli and responses. Further to the notion of isolation, mainstream psychology's focus on the individual, rather than the group and larger society to which the person is connected, overemphasises individualistic values, hinders the attainment of community and strengthens unjust segregation by institutions (Fox et al., 2009). With regard to differences between groups and changes over time, Parker and Burman (2008) reported that people of different groups and cultures may not think or behave the way that a psychological model may predict, and people change over time to align with current social practices, linguistic resources and representations of the self.

Critical psychology provides a framework to look at how people are affected by their position in society and consider how psychology may contribute to any inequalities (Burr, 2015). For example, from a critical perspective "Psychology is constructed within the horizons

of capitalist society to enable that society to run more efficiently, and it constructs within that society its own images of pathology” (Parker & Burman, 2008, p. 113). From this perspective the study of psychology can be considered as a politically motivated activity which is an integral part of current society (Parker, 1999). Rose (1998) highlighted the rise of new authorities in the construction of knowledge in the form of experts such as psychologists who claimed authoritative mastery of psychological knowledge and techniques. The authoritative status of mainstream psychology authors may have led to the popularisation of concepts such as a generational distinction between levels of digital literacy (e.g. Prensky, 2001) and mobile phone addiction (e.g. Kwon et al, 2013). However, all researchers and authors who disseminate their arguments, regardless of their perspective, can be considered in this way.

Brysbart and Rastle (2009) considered “Psychologists as pawns in power games” (p. 463) because they can manipulate the distribution of power between social groups. The political role of psychologists can be used to improve their own standing, but they are also manipulated by others in their own power struggle. The uneven distribution of social power can be exploited in unjust ways such as the capitalist masters who profit more from occupational research of their workers than the workers themselves (Chung & Hyland, 2012). Also, in order to justify the uneven distribution of wealth during the development of monopoly capitalism in America and Europe, scientific measures of intelligence were developed during the 19th century (Gonzalez, 1979). The measures were founded on the measured skills of males from the elite social class and so intelligence testing clearly benefitted the elite. The political economy of psychology has contributed to the progression of Anglo-American neoliberal capitalism (Roberts, 2015). In relation to current digital communication technologies, Buckingham (2011) recognised the economic dimension of the argument which posed a generational distinction between levels of digital literacy and practices such that younger people were more digitally capable than older people (see for example Bennett et al., 2008; Jones & Shao, 2011; Thomas, 2011). Buckingham (2011) suggested that the argument exotified the digital literacy of younger people which may have been used as a marketing strategy to benefit the economic goals of technology service providers. From this perspective, the mainstream science of human behaviour can be seen as social engineering which can be manipulated for profit in some form (Leahey, 2004). Regardless of intention, institutional allegiances fostered by mainstream psychology’s underlying assumptions can facilitate inequality which can disproportionately oppress under-powered and marginalized groups (Fox et al., 2009).

Over the past decade, academics have argued that the academic marketplace has restricted tolerance for epistemological and methodological diversity (e.g., Koro-Ljungberg, 2016; Lather, 2010; Torrance, 2011). It was proposed that epistemological diversification can destabilise existing power structures which support the epistemological-ontological dominance of neo-positivist research. Koro-Ljungberg (2016) further argued that research institutions are leaning toward financial independence which involves epistemological and methodological conservatism and so the narrowing of their openness to methodological and cultural diversity. However, through this power struggle, the theoretical perspectives and methodological approaches orientated to the aims of critical psychology have become an influential power in the development of just psychological knowledge. The critical perspective has challenged mainstream psychology's understanding of concepts such as the self (Gergen, 2009; Rose, 1999), mental health (Cohen, 2016; Marecek & Hare-Mustin, 2009), sexuality (DeLamater & Hyde 1998; Foucault, 1978), memory (Middleton & Edwards, 1990), cognition (Edwards, 1997), emotion (Hepburn & Jackson, 2009), attitude (Potter, 1996; Wetherell & Potter, 1992), social relationships (Duck, 1999) and the relationship between digital technology and identity (Campbell, 2006; Siles, 2012).

A critical approach offers this thesis the potential to be sensitive to the considerations of interest and operations of power which may have shaped the current psychological knowledge of mobile phones, mobile phone practices and the position of mobile users. The social constructionist framework has become an influential and popular approach within the critical psychology orientation (Burr, 2015; Stainton Rogers, 2011). As a critique of mainstream experimental psychology, social constructionist approaches can account for the complexity of a person's subjectivity and the ways in which it is shaped through social processes (Gergen, 2015; Stainton Rogers, 2011). This meets the aims of this thesis to explore the relationship between the self and conceptual understandings of the mobile phone. This discussion will turn to exploring the social constructionist framework.

3.3 Social Constructionism

Social constructionism takes a critical stance toward taken for granted knowledge about the social world and ourselves (Gergen, 2015; Stainton Rogers, 2011). This perspective is an invitation to reconsider the objective and unbiased observations of the social world and psychological objects posed by mainstream psychology (Gergen, 2015). The social constructionist framework has stimulated a continuing debate between the common essentialist

perspective of mainstream experimental approaches and social constructionist approaches toward psychology research (e.g. Adriaens & De Block, 2006; DeLamater & Hyde, 1998; Stein, 1998). This section will open by introducing the essentialist-social constructionist debate which represents a fundamental contention in contemporary social psychology. The discussion will compare their different philosophical underpinnings; the role of social context; their different conceptualisations of language which restricts method choice and the type of knowledge generated; and the generalisability of findings.

3.3.1 From the isolated gardens of essentialism to the developing landscapes of social constructionism.

“Essentialism is classically defined as a belief in true essences - that which is most irreducible, unchanging, and therefore constitutive of a given person or thing” (Fuss, 1989, p. 2). Fuss’s definition highlights that essentialist ontology (in the context of psychology) assumes that psychological phenomena exist as underlying true inner forms or essential inherent essences within people which are distinctly discontinuous between forms and are stable and enduring over time and across cultures (DeLamater & Hyde, 1998). Burr (2015) elaborated on the epistemological perspective that a psychological phenomenon positioned as a real and stable essence of an individual can be objectively (independent of social representation) apprehended, observed, defined and measured through suitable experimental methods such as questionnaires, or cross-sectional correlations. In contrast to essentialism’s epistemological perspective, social constructionism assumes that knowledge is produced and sustained through social processes; knowledge and social action are in relationship; and that knowledge is historically, culturally and linguistically mediated (Burr, 2015). Social constructionist approaches to knowledge assume that there is not a fixed singular truth but there are many possible versions of reality which could be known depending on the perspective of the knower (Gergen 2015; Lincoln et al., 2011).

Essentialism accepts that social factors have influence on the development of the psychological phenomenon as in the nature/nurture debate, but the definable and measurable essence is what is left when the individual and the psychological phenomenon are socially isolated and stripped of cultural and historical context (DeLamater & Hyde, 1998; Fuss, 1989). While essentialist arguments can emerge from social perspectives, the social world is generally assumed to be a medium in which social actors operate, separate from the actors and their inherent essence (Wetherell & Maybin, 1996). Social factors are reduced to a collection of

extraneous variables to be controlled in order to inhibit their influence on the variables under investigation and challenge the reliability of the method and validity of the conclusions (Clark-Carter, 2010). For example, family tree investigations can isolate the gene variable for genetic studies of male sexual orientation (e.g. Iemmola & Ciani, 2009), while twin studies arguing a nature-nurture debate about homosexuality recognise the social factors as variables (e.g. Eckert et al., 1986). However, the social factors are still considered separate from the individual. The social constructionist perspective views the individual and social context as a single inseparable being rather than a dichotomy because ‘From the constructionist position the process of understanding is not automatically driven by the forces of nature, but is the result of an active, cooperative enterprise of persons in relationship’ (Gergen, 1985, p.267). Gergen further highlighted that the conceptual understanding of the psychological object is a socio-historical artefact of interchanges between people of a particular culture. This illustrates that people’s understanding of reality is derived from socially negotiated meanings which are sustained through contextual social processes between people of a particular culture and so cannot be imposed upon people of other cultures or periods in history. Further to this, knowledge and social action are considered to be in relationship such that a current conceptual understanding of a psychological object (e.g. mobile phone) shapes current social action (e.g. mobile phone practices) and normal ways of being (e.g. identity) within a particular social, cultural and historical context (Gergen, 2015; Willig, 2013).

Researchers who adopt a social constructionist perspective are interested in exploring people’s constructed meaning of reality and value a deep understanding of the individual’s unique understanding of a psychological object rather than a detached objectivity sought by experimental psychology (Willig, 2013; Stainton Rogers, 2011). The social constructionist researcher and the psychological phenomenon being researched are relative such that the inquiry and findings will be subjective and biased, the nature of which will be disclosed by the researcher. Social constructionist approaches conceptualise language as an active process for constructing and negotiating a shifting contextual reality during social practices and is the data of interest to be explored (Wiggins, 2017). The data can be generated through social interactions during dyadic interviews or focus groups (Willig, 2013) as well as printed text and images (Braun et al., 2017; Parker, 1992). This constructive function of language challenges the positivist view that language is a window through which mental process can be objectively observed (Potter & Wetherell, 1987). Further to this, social constructionist approaches assume that a psychological phenomenon (e.g. self) is external to the person because it is a socially negotiated product which is generated during social processes situated within a specific cultural

and historical context (Gergen, 2015; Wetherell & Maybin, 1996). This perspective challenges the essentialist assumption that psychological phenomena exist as underlying true inner forms within people which are distinct, stable and discoverable (DeLamater & Hyde, 1998; Fuss, 1989).

Gergen (1973) emphasised that psychological premise is confined to the social and historical circumstance in which it was developed because people and societies are continuously shifting, therefore psychological laws are not static and only apply to the population at that time. However, essentialist researchers assert that their findings are generalisable to wider society, but by editing out the complexities of our social world, essentialist approaches do not represent real social life across time and culture which limits their claim of external validity and generalizability of findings.

This discussion has shown that social constructionist research explores the role of language or any symbolic system of meaning (e.g. talk, text, images; Parker, 1992) during the construction of human experience, and considers how this experience is mediated by social, cultural and historical context (Burr, 2015). The research of this thesis seeks to understand institutional and personal conceptualisations of the mobile phone as a psychological object and the constructed identity of the mobile phone user by exploring the language, text and images used to construct a version of reality which is shifting and negotiable (Willig, 2013). In relation to the analysis of language, social constructionism can be seen as a spectrum which accommodates the exploration of different layers of social context.

3.3.2 Social constructionist methodology and layers of context.

Social constructionism can consider language from a micro social context (a person's subjective experience such as their meaningful experience of their mobile phone) to a macro social context (the wider background narratives such as Mass Media about mobile phones; Burkitt, 1999; Burr, 2015; Danziger, 1997). The micro and macro approaches to social constructionism each align with different methods of discourse analysis which explore language in a social context to develop insights into people's constructed understanding of psychological phenomena (Stainton Rogers, 2011; Willig, 2013).

Micro social constructionism assumes that people use language as an active tool to construct meaningful accounts of psychological objects and personal identities during interpersonal interactions in specific circumstances. A micro social constructionist approach, such as discursive psychology (DP), aims to analyse the strategic use of language which

negotiate versions of events, psychological objects and personal identities into existence in a certain light to achieve social goals such as blame, criticise or impress (Potter et al., 1993; Wiggins & Potter, 2008). DP views the practice of strategic language use as a social action and is the target of investigation. This suggests that a micro social constructionist approach could be used to explore the strategies used to construct the mobile phone and position the user during conversation or within text accounts. While the micro social constructionist approach allows exploration of a person's subjective experience of the mobile phone and practices, the deep analysis of language strategies loses the person involved (Burr, 2015) and so this aspect of the analysis is not of interest to this thesis. Also, this approach will not pursue the consequences of the ways in which constructed meanings may shape people's experiences and practices within their wider social, cultural and historical context.

In contrast, macro social constructionism recognises that constructed meanings of psychological objects and personal identities are shaped by culturally available narratives which are governed by the material reality of power in guises such as institutional practices and social structures (Burkitt, 1999; Burman & Parker, 1993). From this perspective, peoples' understanding of objects, practices and identities are shaped by the socially and institutionally fashioned knowledge. A macro social constructionist approach such as Foucauldian discourse analysis (FDA), is not interested in DP's fine focus on language and how an object is constructed but is interested in analysing language (or any symbolic systems of meaning such as text or images; Parker, 1992) to explore the broader consequences of constructed meanings (Willig, 2013). Willig explained that FDA "is concerned with language and its role in the constitution of social and psychological life" (p. 130). FDA acknowledges the constructive power of culturally available narratives and aims to analyse language to gain insights into institutions' and people's conceptualisations of psychological objects and personal identities that they construct within their social, cultural and historical context from which they are inseparable (Burr, 2015; Stainton Rogers, 2011; Willig, 2013). Further to this, FDA focuses on the ways in which different narratives are deployed, how they can challenge and shape each other over time, and gain dominance within specific cultural settings (Stainton Rogers, 2011). Central to the assumptions of macro social constructionism is the Foucauldian concept of power and its relationship with knowledge (Burman & Parker, 1993; Burr, 2015; Danziger, 1997).

The macro social constructionist perspective assumes that knowledge is shaped by the power in society which is omnipresent in the form of social, political and historical factors (Foucault, 1980). Foucault (1977) emphasised that knowledge and power are inseparable, and

that techniques of language and corpuses of knowledge are formed and entangled with practices of power and influence. Foucault (1980) discussed power as a network of relations which thrives as a productive social strategy circulating between members of a social body who simultaneously undergo and exercise this power strategy. Foucault (1980) emphasised this notion of power operating through a chain of relations rather than a localised commodity of an institution (e.g. of the state), “They are not only its inert or consenting target; they are always also the elements of its articulation. In other words, individuals are the vehicles of power, not its points of application” (p. 98). Power is pervasive throughout the levels of the social body and is exercised during social interactions to produce particular types of knowledge and cultural order (O’Farrell, 2005). In this way, mechanisms of power can shape people’s knowledge and understanding about a phenomenon. The culturally available narratives which circulate through the network of relations establish normal and acceptable knowledge within a particular society through forms of selection, exclusion and domination (Hook, 2001; Young, 1981).

Foucault’s proposed mechanism of power not only shapes culturally available knowledge and people’s contextual understanding of a psychological object but power also shapes available positions for people to be in the world which provides a point of view from which to see the world and be seen within it (Willig, 2013). Such a position offers the person a basis for identity and experience (Burr, 2015). The positions embedded in the narratives of constructed meanings imply the social actions that are permissible for different people (who can say and do what). The social hierarchies of positions to which people become subjugated creates power relations with others and justifies how different groups may be legitimately treated by others (Burr, 2015; Davies & Harré, 1990). For example, Foucault (1978) highlighted that criminalising homosexuality positioned a homosexual as a criminal whereas pathologising homosexuality positioned a homosexual as a patient. Foucault highlighted that the positions of criminal and patient are viewed differently by society which can lead to different power relations during social interactions with others and different social consequences such as exclusion and inclusion.

Further to the relationship between power, knowledge and power relations, different forms of culturally available knowledge can be produced and organised to be used intentionally in inhibiting and productive ways to shape people’s knowledge and power relations for the purposes of inclusion and exclusion (Hook, 2001). Foucault (1961; 1977; 1978) analyses of narratives showed that the dominant knowledge sites (e.g. legal documents, journals and books) exercised power to circulate knowledge throughout the body of society which shaped the wider population’s culturally normal understanding of the phenomenon of analysis (Madness,

discipline and sexuality). For example, Foucault (1961) identified radically different narratives about abnormal mental health (madness) presented by dominant knowledge sites throughout the 17th to 19th centuries that regulated talk and thought about madness which changed over time. The changing narratives and knowledge about madness consequently governed changing practices of how the mad were excluded and confined or eventually cared for. Foucault provided insights into the power of intellectual, economic and cultural structures which shaped reason and enabled society to construct its experience of madness. Foucault (1972; 1980) further highlighted that such discursive practices which circulate within a society guide the production and organisation of further knowledge.

The discussion on macro social constructionism and the underpinning assumptions indicate that a macro social constructionist approach offers a perspective for the exploration of the ways in which power operates within different narratives which involve the constructed meaning of the mobile phone. The approach allows the exploration of the relationship between culturally available conceptualisations of the mobile phone developed by the wide institutional context of the Mass Media and those developed by the personal experiential context of the mobile phone user. Further to this, the approach offers the exploration of the ways in which constructed meanings of the mobile phone can shape subjectivity and mobile phone practices of mobile phone users within the context of the neoliberal digital age in the UK in which the user is immersed. However, the analyses of this thesis will not focus throughout on the relationship between societal powers and the shaping of meaningful mobile phone conceptualisations.

After considering the layers of context that the social constructionist framework offers, a synthesis of the micro and macro social constructionist approaches will suit the aims of this thesis. A holistic approach which facilitates the flexibility to explore the layers of social context will allow the investigation of the user's deep subjective experience of the mobile phone (micro context) and consider how broader cultural conceptualisations of the mobile phone in the UK (macro context) may have shaped their contextualised understandings of mobile phones, their mobile phone practices and their subjectivity. DP and FDA are each closely aligned with a different perspective of social constructionism and so cannot be used as the analytic method for this thesis. However, thematic analysis is a widely used, structured and theoretically flexible analytic method for developing, analysing and reporting patterns of meaning (themes) in qualitative data within psychology (Braun & Clarke, 2006). Braun and Clarke positioned thematic analysis as an analytic method which is not tied to any specific epistemological perspective or methodology and can be underpinned by the social constructionist perspective.

Thematic analysis informed by social constructionist principles have been shown to be suitable for the analysis of a range of topics (e.g. Clarke & Smith, 2015; Doncaster et al., 2018; Farvid & Braun, 2006; Hallam et al., 2008; Taylor & Ussher, 2001). A thematic analysis informed by social constructionism will suit the aims of this thesis because it will allow the flexibility of working with the different layers of social context offered by social constructionism to explore contextualised conceptualisations of the mobile phone and the user's subjectivity whilst maintaining a consistent methodology. See *Chapter 4* for a full description of the analytic approach used in this thesis.

One aim of this thesis is to explore the relationship between the self and conceptual understandings of the mobile phone. In pursuance of understanding this relationship, a critical perspective of the self which aligns with social constructionism must be considered.

3.4 A Critical Perspective of the Self

The modern conception of the self as a conscious, active and rational agent which is the foundation of knowledge and social action draws on Descartes; 'I think, therefore I am' (Elliot, 2014, p.14). The concept of the self has been considered an important topic of interest across many disciplines, such as psychology (e.g. James, 1890/2010; Gergen, 2009), sociology (e.g. Cooley, 1902/2008; Mead, 1934/1972) and anthropology (e.g. Kondo, 1990). However, the understanding of the self has been argued from many perspectives. For example, Murphy (1947) defined the self as "the individual as known to the individual" (p. 479) while Burns (1991) described the self as "the set of attitudes a person holds towards himself" (p. 183). In more recent years Leary (2004) discussed an essentialist view of the self as a cognitive structure that organises information about oneself and allows self-reflection. However, the essentialist view of the self as a fixed internal entity was contested by English and Chen (2007) who considered the self to be dynamic and emerging through external social interactions. However, the development of the study of the self within psychology was not inevitable nor neutral but shaped by the political powers of psychology as a science.

Psychology emerged as an independent scientific discipline during the late nineteenth century (Rosenberg, 1989). As a scientific discipline psychology served to secure a stable society through defining and treating its subjects (Rose, 1998). However, psychologists were bound to their dominant paradigms and so scientific principle stood in the way of scientific progress (Rosenberg, 1989). Rosenberg highlighted that the subjective nature of studying the self was thought to undermine the scientific principle of objectivity, a quality which positioned

the growing field of psychology as a scientific discipline. Consequently, the self could only be studied through the endorsed paradigms. Through the 1970's and 80's major theoretical advances were made in self theory which were spurred by the 'cognitive revolution'. The restriction on paradigms and political motivation limited the perspectives of the self which trapped people inside socially restrictive and often unjust identities (Burr, 2015).

Psychology's role was to investigate and measure individual differences to distinguish between the desirable and undesirable. This gave rise to the Western ideology of individualism which understood each person as having individual skills and abilities (Rose, 1998). Individualism served the interests of the white middle-class elite within capitalist patriarchal structures which promoted competition between people to mask power and prestige (Parker, 1989b; Sampson, 2008). For example, intelligence and personality tests were developed to differentiate between the successful and subordinate people to explain the uneven distribution of wealth (Gonzales, 1979; Parker, 2007). Personality tests were marketed as the only effective technology for selecting staff, identifying criminals, explaining and predicting behaviour (Rose, 1999). Further to this, individualism facilitated a politics in which the visible and distinct subject, rather than social factors, was responsible for problems and crimes (Parker, 1992; Sampson, 2008). In this way, belief in individualism acted as a form of social control by the state.

The individualist tradition of the bounded self as an atom of the social world promoted an essentialist view of the self which assumes that the self is a single and fixed internal quality of an individual separate from social context which is stable over time (Burr, 2015). The individualised atoms that make up society are separate from each other, social context and relationships. Knowledge about the self and its causes are separate from our conceptual representations and so can be objectively discovered, defined and measured. For example, Trait theories of personality conceptualise the self as a collection of personality dimensions which are present from birth and can be isolated and measured (e.g. Cattell, 1956; Eysenck 1991; John et al., 2008; McCrae & Costa, 1987). A unique combination and dimension of personality traits make up a unique and fixed core-self from which the individual deviates slightly to meet the demands of different social contexts. However, the unique set of personality characteristics which make up the core-self is viewed as an essence of the individual and so remains separate from the external social context (Gough et al., 2013). Another essentialist theory posits self-schemas as cognitive structures that categorise all we know about our self (Markus, 1977). This relates to self-knowledge rather than the self directly but influences self-expression. The concept of self-schemas was developed, in part, from Tajfel's (1969) work on category-based

thinking. Markus (1977) drew on category-based thinking to provide an explanation as to how the self was cognitively represented by the individual. The theory of self-schemas assumes that past social experiences form these self-generalisations, such as fashionable or sophisticated, on which the individual can draw. Different social situations activate different self-schemas (aspects of the self; Breckler et al., 1991). While self-schemas clearly have a relationship with social context during their formation and activation process, their form is an internal structure of the individual and so separate from social context. However, Burr (2015) elucidated that the essentialist ontology of the self, as an inherent and fixed property of a person, can trap people inside identities that are socially restrictive and often unjust which can position mainstream psychology as an oppressive practice.

In sharp contrast to essentialist's bounded and fixed essence perspective of the self, the anti-essentialist perspective of social constructionism posits the self as a dynamic linguistic process which is immersed within the social context and fragmented across social interactions, narratives and cultural and historical norms (Wetherell & Maybin, 1996). Social constructionists understand that the self is external to the person because it is fabricated and maintained during everyday social processes and can be seen as a negotiated product of a particular culture and its language, institutions and sources of knowledge from which it is inseparable (Gergen, 2015; Wetherell & Maybin, 1996). Interpretation of the self will depend on, and be limited to, the historical and cultural understandings in which the self was generated. From this perspective, the self is not a fixed essence but an active social process which is continuously produced, reproduced and shifting to align with different social situations, cultural norms, current ideals or styles of communication (Gergen, 1991). Further to this, the self construction process can lead to multiple selves which can become simultaneously plural (Rappoport et al., 1999). However, Gergen (2015) argued that society is occupied by differing values, competing morals and diverse cultural norms which can influence an individual's emotional state and behaviour for which a linguistic process does not account.

To summarise, the contested parameters that shape the essentialist and social constructionist perspectives of the self include relationship between the self and social context, location of the self (internal essence vs external social process), stability of the self (in the form of historical and cross-cultural consistency) and multiplicity of the self (single essence vs multiple constructs). However, neither theoretical perspective elucidates the function of the self which may add validity to its proposed ontology.

3.4.1 The self in an ocean of social forces.

The conceptual foundation of the self as a product of social interaction was laid by Cooley's (1902/2008) theory of the 'looking glass' self. Cooley claimed that in order to understand our self we gain information by looking at how others see us. The looking-glass self suggests that our self is reflected to us in the reactions of other people which result from their evaluations and judgments about our appearance and behaviour. We imagine how we appear to others, imagine their judgement of our appearance, and develop our self through the encouraging or discouraging feelings that their (imagined) judgements evoke such as pride or shame (Yeung, & Levi, 2003). The theory promotes a reflexive self embedded in relationships with others which observes, plans and responds to one's own behaviour (Stainton Rogers, 2011). For example, young trick-or-treaters were more likely to take only one sweet from a full bowl as they were instructed when they saw a reflection of themselves in a mirror placed behind the bowl than when there was no mirror (Beaman et al., 1979). The study suggested that when the trick-or-treaters were aware of their behaviour and imagined how it appeared to others, they could adapt their behaviour to be viewed favourably. However, community studies suggested that conceptions of self were likely imparted through role modelling by significant others rather than the powers of social interactions (Yeung, & Levi, 2003).

A more sophisticated account of the social nature of the self was developed from Mead's (1934/1972) theories about the relationship between self and society. Mead's theories gave rise to the theoretical perspective of symbolic interaction which considers how society is formed through continual interactions between individuals (Carter & Fuller, 2016). Blumer (1962; 1969) summarised that meanings of physical and social objects (people) emerge from interactions with other people and society. The meanings are continuously formed, updated, learned and categorised through processes of interpretation during social interaction. The theory assumes that a person can take on the viewpoint of another person because they share a common language and a similar capacity for symbolic thought (Stainton Rogers, 2011). It is also assumed that people can judge themselves in terms of a shared social system and cultural norms represented by the generalised other (Rosenberg, 1989). From the perspective of social interactionism, the meaning of our self is shaped by the meaning we attach to symbolic objects which are traded and negotiated with other people through language and symbolic gestures during our social interactions and development (Aksana et al., 2009). However, Aksana et al. also highlighted that symbolic interactionism does not consider the sources of meaning because

the theory does not consider the social context in which an interaction was positioned which could modify the meaning of symbols.

Giddens (1999) suggested the self is constructed through a reflexive process which can be shaped by social context. The reflexive self is a result of observing, planning and responding to our social practices. Social practices are continuously examined and transformed in the light of new information, not just in the current moment as suggested by the looking glass theory and symbolic interactionism, but over weeks and years. A person can reflect on how they are fitting in to a new role, law or duty and respond by reconstructing their self during social interactions to suit the updated information within the current context. The self can develop as a person aligns with shifting social context which can be shaped by societal powers such as social structures, gender roles, inequalities, socioeconomic status, who can say or do what, state powers such as law and duty and what they convince a person that they should do and be. Social contexts are the sources of meaning which are continually updated. From this perspective, reflexive agency can become a form of social control implemented through social structures and institutional powers (Elliott, 2014).

From a relational perspective, Gergen (2009) critiqued the individualist tradition of the bounded-self as an atom of the social world to create assemblages of autonomous 'units' which may or may not come together to form relationships. Gergen's relational account of the self proposed that the self emerges from a nest of relatedness and the self is constructed in relation to others. The self is positioned as a relational being within a web of relations as if the self is an intersecting node within the web which moves and adapts in relation to other nodes (other selves). Relational being refers to the state of being in relationships as well an entity situated within relationships. People are embedded in a living web of social relations (relational-selves) engaged in collaborative action from which meaning originates. Gergen emphasised that relationships come first within which the self is fabricated, and its meaning derived relative to others within a relational web. We do not derive our self in isolation and then insert our self into a relational web, we need to form our self relative to others within a relational web. This is evident from experiences of growing up within a family surrounded by significant others. Relational-self and knowledge rely on the well-being of community and relations such that the relational web functions best when all selves are attached and well. The decay of one self effects the well-being of the other selves in the web. Through the lens of relational being, the self is formed between us through an external living process of negotiation within a relational web rather than being something within us. However, within relationships with others power relations can be constructed.

The notion of the serviceable other was proposed by Sampson (2008). The serviceable other was a position constructed by a dominant group for other groups who the dominant group positioned as inferior and serviceable to their dominant needs. Sampson explored western culture and science to reveal a narrative of power and exploitation in which the Western male had constructed his role as leading protagonist through culture and science. The Western male had assembled a supporting cast of women and non-Western people who could be of service to their lead performance rather than positioning the serviceable others as people equal in their own right. For example, through their dialogical self the male constructed their superiority, dominance and autonomy relative to their construction of the inferior, submissive and dependent female. Sampson's study also contested self as essential or intrinsic because, for example, the superior position of the male identity was constructed only relative to the inferior position of the female identity through historical narratives.

The notion of the self as relational and formed within relationships with others during social interaction is relevant to the array of social technologies accessible in the digital age which can keep us socially connected 24/7.

3.4.2 Digital 'technologies of the self'.

Foucault's (1988) concept of 'technologies of the self' encompassed the meaningful processes consciously aimed at self-regulation through which people formed their self and enacted specific identities. 'Technology' in this context referred to the practical operations which were governed by a conscious aim (O'Farrell, 2005). Foucault elaborated that technologies of the self are the meaningful strategies and practices available in society (e.g. regulating voice, thoughts, feelings, conduct and ways of being) that people use to construct and represent themselves within society and systems of power "so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality" (Foucault, 1988, p.18). Foucault (1982) further proposed that the formation of subject positions, from which one can be in the world and a point of view from which to see it and be seen within it (Willig, 2013), is a modern power. A subject position can emerge from wider power relations and can be used as a useful social strategy, within the process of self-formation, to achieve social goals such as achieving a state of meaningful satisfaction with one's self within the current social context.

Immersion in the digital age has inspired a growing body of literature which has explored the relationship between digital communication technology (DCT) and self-formation

through Foucault's theories of subjectivity (e.g. Abbas, 2009; Aycock, 1995; Campbell, 2006; Siles, 2012; 2017). Contemporary practices of technologies of the self was illustrated by Aycock (1995) who drew on Foucault's theories of self-formation to conceptualise the internet as a technology of the self amid the rise of the global communication network during the 1990s. Aycock looked at postings on an internet news group about playing chess and showed that the postings were used to fashion the self online, such as a master of chess knowledge, a position within a hierarchy of technical expertise created by offering advanced chess tutoring (Aycock, 1995). Continuing the social technology theme, Campbell (2006) argued that the ubiquitous mobile phone functioned as a meaningful tool within the operations of the technologies of the self. The discourses of idealisation constructed within mobile phone advertising did not completely match the constructions generated by the teenage female participants mainly due to the freedom and safety limitations of their current social context. Campbell argued that at the intersection of competing discourses of independence, safety and femininity, the mobile phone served as a tool within the girls' available practices through which they shaped their self and identity enactment.

Further to these studies, Abbas and Dervin's (2009) edited collection of essays explored the role of an array of DCTs (such as social networking platforms, online communities, online gaming and podcasts) from a range of perspectives (e.g. discourse analysis, sociology, philosophy) as tools during the processes self (co-) construction and digital identity expression. For example, Abbas (2009) explored social networking platforms related to Barack Obama's 2008/2009 U.S. presidential campaign and proposed they were used to construct a 'political self' that engaged in a structured series of interactions which were regulated to serve the group at the apex of the power structure, Obama and colleagues. Abbas suggested that the social network platforms were deployed as instruments of political change intended to mobilize participants to co-construct their identity as well as that of the candidate.

More recently, Siles (2012) further highlighted that meaningful and popular social media websites are contemporary tools in internet users' self-formation processes. Siles conceptualised the websites for online diary writing and blogging as technologies of the self through which practitioners could construct their self and enact online identities such as online diarist or blogger. However, Siles (2017) contested the notion that the development of blogging as practices of subjectivity was an autonomous process in a longitudinal (approximately 20 years) and cross-cultural comparative analysis of the development of blogging in the USA and France. Siles explored the evolution of blogging, mutual shaping of web technologies and practices of subjectivity which had become legitimised in public culture. The study highlighted

that blogging as practices of self-formation was not neutral because such online activities were shaped by articulating specific conceptualisations of technology, publicness and the self within the interests of social, economic, political and cultural processes such as neoliberalisation. This suggests that self-regulation through digital communication practices may be governed by institutions with interests in shaping the trajectory of digital communication technologies in the neoliberal digital age.

The studies discussed show that meaningful contemporary objects, such as DCTs which includes mobile phones, can be used by a person as tools during their social interactions and strategies of self-formation and identity enactment. Practices of self-formation were also shown to be under the influences of external contextual powers within their social context such as advertising (Campbell, 2006) audience expectations (Abbas, 2009; Aycock, 1995; Siles, 2012) and Neoliberalism (Siles, 2017). The notion of technologies of the self further alludes to a notion of multiple selves.

3.4.3 The self as plural.

Presentations of self model proposed by Goffman (1959) is a dramaturgical model of self which positions the self as a series of roles that we perform to craft a suitable presentation of self within our current social context. The model draws on the symbolic interactionist perspective and draws on the metaphor of theatre and the belief that the world is a stage. The model assumes the self is constructed through a performance which can create an appropriate impression when interacting with others. The model distinguishes three relational aspects of the self as; the agentive performer, the passive audience, and the performed self which is the role that provides the mask visible to others. For example, a public speaker chose to broadcast information about their self as well as their topic being presented. The broadcaster's role was interacting with the audience by presenting information about their self such as confidence, skill and interest in the topics they have chosen to present. Relative to the presenter, the audience politely plays their role of interested listener which further highlights the relational aspect of the self. A social interaction of performances is developed in which the actors play their roles suitably to the situation through respecting and responding to other people's roles. The model indicates that a person can perform many different selves, each self crafted to suit their needs of the social situation (Elliot, 2014)

Gergen (1991) supported the notion of multiple selves by considering self-formation as a process of continuous change. Gergen proposed the concept of the saturated self which

considered how self-formation had been shaped by a bombardment of cultural images and an expanding range of relations (e.g. real, virtual) offered by access to emerging technologies (e.g. internet, computer, mobile phones). Technologies of social saturation can overpopulate the self with many compelling potentials for expression and connection. Gergen highlighted that we are continuously aligning with different social situations, ideals, cultures or styles of communication technology so the self cannot be fixed or singular. The self is constructed and reconstructed from moment to moment depending on with whom we are interacting and what medium we are using to guide the interaction (e.g. face-to-face, mobile phone, internet chat room).

Further to the notion of multiple selves, simultaneous pluralism embodies a dynamic portfolio of alternative selves which can coexist in the moment to manage dynamic social situations of the developing multicultural and technological world (Rappoport et al., 1999). This moves beyond the view of serial pluralism which presents the idea that an individual can transition through different selves as they move through their life and different social situations.

The discussion has shown that the self, as a self-social process, has the potential to be pleural. The self is likely to be pluralised through role play and adapting to the ever-evolving range of social situations and communication styles presented in the contemporary digital age. The notion of the self as pleural within a self-social process alludes to a dynamic and unstable self rather than fixed and enduring.

3.4.4 The self and neoliberalism.

Baumeister's (1987) historical review of selfhood delineated the development of the modern self and its uncertainties from late medieval period to late 20th century. Baumeister's tapestry of historical eras embroidered the self as unstable and not enduring over time. Through the relatively brief history of European society from the late medieval period to the late 20th century, the self shifted from a socially dependent interdependent self embedded in social relations to an independent self distinct from social context. However, the ideas of individualism, self-definition and striving for personal fulfilment were shaped over time through forces of social, ideological, political and cultural changes such as secularisation, the enlightenment revolution and neoliberal capitalism (see also Cushman, 1990).

Neoliberal capitalism is a consumer-based economy ideology based on free-market competition which is the primary driving force behind the country's economy (Kotz, 2015). Neoliberalism came to dominate the British economy during the 1980's driven forward by

Margaret Thatcher's Conservative administration. Neoliberalism feeds off an endless cycle of consumers' needs (Roberts, 2015). As such the subjects are viewed and acted upon as consumers. Within the system of neoliberalism, the self is viewed as a commodity which can be transacted and marketed (Foucault, 2008). Rose (1998) expounded that striving for the construction of the self is a regime of subjectification, and so analysis of the relationship between the self and power is a matter of "Investigating the ways in which subjectivity has become an essential object, target, and resource for certain strategies, tactics and procedures of regulation" (p.152). Subjectivity, in the Foucauldian context, is the sense of self which has been shaped by social forces that bear on the subject (the self-aware and apparently autonomous entity) within systems of power relations. Subjectivity, the sense of self as a subject, is specific to social and historical context. For example, I inhabit the identity of consumer which was emphasised by the neoliberal society in which I reside. I have been subjected to the rules and demands of neoliberalism. More broadly, subjectivity refers to a state of selfhood or personhood to substitute mainstream psychology's essentialist rooted terms such as personality (Burr, 2015).

According to the neoliberal model of subjectivity, 'entrepreneur of the self', the neoliberal subject acts upon itself within the economic system to adapt to the power relations of neoliberal society (Foucault, 2008). Institutions can work through seemingly objective and benevolent means, such as online mass media, in order to direct the population's self-regulation (Blackman & Walkerdine, 2001; Foucault, 1978). Through the lens of neoliberal governmentality, narratives can be intentionally utilised in productive and inhibiting ways to shape people's knowledge for the purposes of inclusion and exclusion (Hook, 2001) to benefit those with the influential power within unequal power relations.

In the context of the current neoliberal society (see Kotz, 2015), neoliberal narratives receive institutional reinforcement (e.g. media, workplace, schools, universities) and encourage people to embrace an achievement-orientated enterprising self (Rose, 1998). Rose clarified that the enterprising self strives for fulfilment, achievement and seeks to act on itself to become that which it wishes. Through the governing process of neoliberalism, the formation of the enterprising self may be conducted using beliefs about the digital social norms to which to aspire as a tool within the practices of enterprising self-formation.

Blackman and Walkerdine (2001) argued that consumable products, such as their monetary value, are bound up with the construction of personal identity and social meaning while the individual is bound by ever increasing choices to express their identity. Rose (1998) agreed that life is made meaningful and the self is styled through acts of personal choice. Rose

further described consumers as “actors seeking to maximize their 'quality of life' by assembling a 'life-style' through acts of choice in a world of goods” (p.162). Personal choice leads to the construction of autonomous-self which Blackman and Walkerdine (2001) recognised as able to account for choices made in relation to its own biography of needs and motivations toward personal fulfilment and development. However, people’s consumer choices may not be solely autonomous. Sugarman (2012) clarified that consumable goods were made meaningful for the enterprising consumer to encourage them to enter the endless succession of consumable choices as an element of their enterprising venture to maximise the quality of their personally meaningful life. Further to the enterprising self being suited to the demands of neoliberalism, the notion of the neo-nomad proposed that people have a natural propensity to be mobile while remaining socially continuous and gaining self affirmation which can be achieved through mobile technologies (Abbas, 2011). The neo-nomad fits well with the continual consuming needs of neoliberalism because the continuous temporary states of living require the continual consumption of temporary, disposable and upgradable things. The notion of the neo-nomad is a continuum of striving to move on without being held back.

Lewis’s (2013) study of the science behind consumerism considered why people buy and how they can be manipulated for commercial profit. Lewis showed that the apparent free choices made by the consumer have been influenced in subtle ways through the power of the ‘persuasion industry’ which create needs for the consumer. The choice a consumer makes when subjected to an array of consumer choices, such as necessary mobile phone upgrades, can be viewed as instrumentalised autonomy (Rose, 1998) orchestrated by neoliberal service providers who create endless cycles of upgrades to meet their commercial goals.

A potential explanation for self-expression through perpetual consumption promoted by the neoliberal mechanism was presented by Cushman (1990) who propounded that consumerism is a symptom of an empty self which people fill by acquiring and consuming. Cushman drew on the historical shift of the self from the repressed self of the Victorian era (see also Baumeister, 1987) to the empty self of post-World War II. The emptiness and loss people experienced at that time needed healing. Self-expression through consumption was a way people could compensate for their losses and feelings of emptiness. Consumerism suited the goals of economic recovery of the state and so was encouraged which eventually led to neoliberal capitalism. Marketing and psychotherapy were charged with healing the empty self but were unable to treat the historical causes of the emptiness. Instead, marketing promoted consumption of goods to assemble a better lifestyle and better self. Additionally, the self-help industry promoted self-improvement through the consumerist culture of self-improvement

goods, idealised celebrities and institutions for spiritual guidance. Cushman also charged psychology with participating in the configuration of the bounded and masterful self that experiences absence of community and shared meaning which is the empty self. The empty self was perpetuated to support state control of the population, not through Victorian style restriction but by creating and manipulating citizens desires to be soothed through consumer choice. Further to this, Cohen's (2016; 2018) view is that psychiatry is under institutional corruption as it extends its narratives beyond the psychiatric institution in support of the neoliberal capitalist needs for productive, self-governing subjects. Cohen positions the business of mental health as a political, economic and cultural project which considers social dynamics such as labelling, deviance, consumption and social control. Cohen also questioned the popularisation of targeting young people's/adults' mental health.

The notion of surveillance as a power which can shape self-formation was proposed by Foucault (1977) who suggested that the self is constructed when subjected to the gaze of others within institutions. Foucault conceptualised institutions as organisations of practices that employ assumptions and objectives pertaining to the people that inhabit them (e.g. prison, asylum, workplace, home). Rose (1998) explained that institutional assumptions and objectives were represented by such things as systems of normative standards, judgements and goal directed activities which could benefit some people and constrain others. Foucault (1977) explored the potential of constant surveillance in prisons and considered that prisoners would behave in accordance with the prison rules when under the threat of constant observation, or normalizing gaze. Foucault asserted that the power of surveillance was prevalent throughout society in the form of being continuously evaluated in relation to social norms. Consequently, the self can be formed through self-reflection in relation to others within their social institutions in order to meet their social norms.

The notion of surveillance for governing self-regulation in the contemporary consumer world exists in the form of consumers' data (Cheney-Lippold, 2017). When it comes to digital communication technologies there is a flip in viewpoint from the consumers looking in, to the service providers (e.g. Facebook, Google, advertisers) looking out which positions the consumers as data generators and a product. From this perspective the mobile phone is conceptualised by the service provider as a continually open portal to the data generator (consumer) to continually update their app behaviour, demographic, purchases, comments, social associations, political orientation, interests, vocabulary etc. The data generated can be used to assign the consumer to a group (e.g. conservative, liberal, celebrity, social influencer, radical, potential terrorist) and repackaged to be returned to the consumer in the form of

targeted advertising, political campaigns and opportunities. Cheney-Lippold (2017) emphasised that the consumer has little control over their algorithmic identity nor the algorithmically constructed world they inhabit which are made to be useful to those who govern their practices.

The Foucauldian concept of governmentality highlights the ways in which individuals can be regulated toward useful objectives of political and institutional prosperity (Rose, 1998). Governmentality was conceptualised by Foucault (1991) as the mentalities of rule for governing mentalities. Foucault (1988) elaborated that governmentality was the “contact between the technologies of domination of others and those of the self” (p.19) which highlighted that strategies for the ‘conduct of conduct’ often function by attempting to shape technologies of the self so subjects may conduct themselves in alignment with political objectives.

3.4.5 Summary of a critical perspective of the self

Through the critical lens of social constructionism, the self can be seen as external to the person and constructed within relationships during contextual social interactions. Meaningful DCTs, which keep people connected to networks of relationships, can be used as tools in the process of self-formation and identity enactment. The self, as a self-social process, is dynamic, pleural and continually reconstructed to align with the developing social situation and the developing range of social situations and communication styles offered by the contemporary digital age. External societal powers, such as neoliberalism, can shape and govern the processes of self-formation.

3.5 Chapter Summary

This chapter has argued the case for the critical perspective of social constructionism to underpin the methodological approaches of this thesis in order to offer fresh insights about mobile phone practices in context and the relationship between the self and conceptual understandings of the mobile phone. The critical perspective of social constructionism to underpin methodology and understand the self and mobile phone practices was discussed in relation to mainstream essentialism and its assumption of individualism. It was considered that the layers of context which could be explored through a social constructionist methodology and the critical perspectives of the self would meet the aims of this thesis. This chapter has set

the scene for the methodology and design of this thesis which will be discussed in the next chapter (*Chapter 4*).

Chapter 4

Methodology

This chapter outlines the methodological approaches employed by the four studies that inform the thesis and the following four analytic chapters. The first section provides an overview of the studies and their relationship in terms of the social constructionist perspective which underpins this thesis. Next, the methods used to collect a range of data types rich in representations of the mobile phone are discussed. The chapter turns to consider the method of data analysis by discussing relevant principles of thematic analysis and social constructionism, data management and the steps of the data analysis process. Finally, the organisation of the following chapters which report the analysis findings of the four studies is summarised.

4.1 Design of Thesis

The thesis adopted a qualitative methodology from a critical perspective rooted in social constructionism (see Burr, 2015; Gergen, 2015) which informed a thematic analysis (see Braun & Clarke, 2006). Thematic analysis is a widely used, theoretically flexible and structured analytic method for developing and reporting patterns of meaning (*themes*) which is suited to the analysis of a wide range of data. Social constructionist research explores language or any symbolic system of meaning (e.g. text, images; Parker, 1992) to gain insights into the construction of human experience and considers how experience is shaped by social, cultural and historical context (Burr, 2015). Social constructionism can consider language from a macro social context, such as the broad cultural context of mass media, and a micro social context, such as personal subjective experience of mobile phone users (Burr, 2015; Stainton Rogers, 2011). The macro social constructionist perspective assumes that constructed meanings of psychological objects are shaped by culturally available narratives informed by societal powers in the form of social structures and institutional practices such as those represented by the mass media (Burkitt, 1999; Burman & Parker, 1993).

The aim of the methodology was to collect data which was rich in representations of the mobile phone from a range of sources and perspectives which could be analysed using an inductive thematic analysis informed by social constructionism to work with latent themes. Two data sources represented a wide institutional context of the mass media (macro context) and two data sources represented a personal experiential context (micro context). The social

constructionist approach was focused toward exploring mobile phone users' contextualised conceptual understandings of the mobile phone and the ways in which these constructed meanings may have been shaped by the wider cultural conceptualisations. The critical approach allowed exploration of the layers of social context which can shape subjectivity, mobile phone practices and the social culture of mobile phone users within the neoliberal digital age in the UK. (see Burr, 2015; Hook, 2001; Willig, 2013; Young, 1981).

The thesis is a collective of four qualitative studies which explored conceptualisations of the mobile phone in the UK during the neoliberal digital age from four perspectives (institutional news, institutional advertising, general mobile phone users and mobile phone users positioned as *problem users* by psychology literature) and through four main data sources (mass media news, mass media advertising, general mobile phone users' mobile phone reviews and interviews with *problem* mobile phone users). The range of data included institutionally generated secondary sources of text and image data from the mass media, participant-generated textual data through an online qualitative survey, and data generated through researcher and participant interaction during a semi-structured interview which resulted in textual data (transcribed audio data). The range of data sources, data types and data collection methods used in this thesis was inspired by Braun et al. (2017) and Braun and Clarke (2013) who discussed the collection of data suitable for thematic analysis from a diverse range of sources. The data was analysed using an inductive thematic analysis informed by social constructionism to work with latent themes which allowed the exploration of the layers of context.

Social constructionism can account for the macro context and micro context which allows the exploration of the links between the macro context and the construction of subjectivity (Burr, 2015). The four studies progressed from the macro context of the broad cultural background (represented by accessible mass media narratives about the mobile phone) to the micro context of the individual's subjective experience (represented by mobile phone user narratives). The progression from the macro to the micro context allowed examination of the ways in which these layers of context worked together and contested each other to shape mobile phone users' subjective experiences and conceptual understanding of the mobile phone. The perspective of macro social constructionism suggests that institutional powers in society, such as the mass media narratives about the mobile phone, shapes mobile phone users' conceptual understanding about the mobile phone which shapes their subjective experiences, practices and their constructed identities (see Blackman & Walkerdine, 2001; Burr, 2015; Gergen, 2015).

Mass media can play an instrumental role in shaping people's understanding of new technology (Rooke & Amos, 2013). Rogers' (2003) diffusion of innovations theory emphasises that the mass media (e.g. newspapers, websites) are key elements in informing people of new innovations, such as technology, and shaping their understanding of it. The theory suggests that there are commonly five stages to the decision-making process for a person to understand the innovation and decide whether or not to take it up: knowledge, persuasion, decision, implementation and confirmation. The mass media is key to the *knowledge* stage in which awareness and information about an innovation is presented to people. News media, such as newspapers, are culturally established dominant forums for trusted information on lifestyle, technology and new products which can be disseminated throughout society especially with accessible online versions of newspapers (Jauhiainen, 2007; Rooke & Amos, 2013). However, through a process of selection and exclusion of information, news items can present a version of reality which can shape people's conceptual understanding of a product such as a new technology (Rooke & Amos, 2013).

The news media study (*Study 1*, see *Chapter 5*) aimed to explore popular cultural narratives about the mobile phone that have been presented by news articles about the mobile phone published in accessible UK national newspapers since 1985 when the first consumer handheld mobile phone was introduced into the UK consumer market (Linge & Sutton, 2015; Vodafone, 2014). This study also sought to explore the ways in which conceptualisations of the mobile phone within the news media have changed over time. News media about mobile phones offers culturally available narratives which can shape the wider cultural context for current mobile phone users' subjective experience through the dissemination of information positioned as *truth* (see Blackman & Walkerdine, 2001; Burr, 2015; Rooke & Amos, 2013). Also, the mobile phone as a physical object is definable and has a recorded history of its development (see Linge & Sutton, 2015). The mobile phone as a psychological object, a conceptual understanding, is not universally definable nor stable but is a shiftable product of contextually and historically based narratives and so qualitatively different from the physical object (see Bunn, 2011; Gergen, 2015). Bunn (2011) emphasised that a psychological object (e.g. mobile phone) is a socially constructed consequence of historically situated powers which have shaped its meaning over time and so is best understood through a form of historical analysis (see also Foucault, 1978). This indicates that our current taken for granted conceptual understanding of the mobile phone may appear to be without history. Historical shifts in the ways in which the mobile phone has been conceptualised within the media needs to be explored

to provide the wide context to current representations of the mobile phone within the broad cultural background of the UK.

Advertising can also be seen as a central forum to the *knowledge* stage of the innovation-decision process but also the following *persuasion* stage which focuses on the person's attitude toward the innovation (Rogers, 2003). The aim of advertising is to encourage a positive attitude toward the product in order to inspire people to adopt the product. Lewis (2013) highlighted that the science-based persuasion industry focuses on the ways people can be manipulated to encourage purchasing of products.

The advertising media study (*Study 2*, see *Chapter 6*) aimed to explore conceptualisations of the mobile phone that were promoted by current website-based advertising of mobile phones which was accessible by the UK population. This study added further weight to the wider cultural context examined by the thesis because the ways in which mobile phones are currently marketed to people represents a further cultural source of knowledge about mobile phones to be investigated (see Blackman & Walkerdine, 2001; Campbell, 2006). The findings of studies 1 and 2 aimed to inform the question of relationship between the conceptual constructions of the mobile phone promoted by mass media and culturally contextualised conceptual understandings of the mobile phone by individuals.

Culturally contextualised subjective experiences and conceptual understandings of the mobile phone by contemporary mobile phone users in the UK were explored by *Study 3* (see *Chapter 7*) and *Study 4* (see *Chapter 8*). This enabled insights into the interface between the micro and macro context and how they work together to shape understanding of the mobile phone. The mobile phone reviews study (*Study 3*) aimed to explore the conceptual understanding of the mobile phone presented by general mobile phone users through participant-generated reviews of their mobile phone. Mobile phone users have lived experiences which have included their mobile phone and so their narratives related to their choices of mobile phone and practices are of interest to the exploration of culturally contextualised understandings of the mobile phone.

The problem mobile phone user interviews study (*Study 4*) aimed to explore the conceptual understand of the mobile phone presented by mobile phone users who could be positioned as at risk of being addicted, dependent or problem users by psychology literature (e.g. Bianchi & Phillips, 2005; Chóliz, 2012; Kwon et al., 2013). Notions such as mobile phone addiction, mobile phone dependence and the problem mobile phone user are positioned by the psychology literature as rationales for specific types of mobile phone practices such as frequent attending and using. The pathologising of mobile phone practices may subjugate mobile phone

users who frequently use and attend to their mobile phone to the position of *problem user*. This *abnormal* position may separate them from other members of society who are positioned as *normal* and detrimentally shape their relationships within society. In depth semi-structured interviews provided a means to collect intimate data about the subjective experiences related to mobile phones of this group of participants. The findings of studies 3 and 4 aimed to inform a contextualised rationale for contemporary mobile phone practices, practices of self-formation and digital social culture in the neoliberal digital age.

The four studies received ethical approval through the College of Life and Natural Sciences Research Ethics Committee or the Human Sciences Research Ethics Committee (See *Appendix A*).

4.2 Data Collection

The aim of the data collection methods used for the four studies was to generate rich data about mobile phones from a range of sources and perspectives which represented the broad cultural context and individual's subjective experience that could be analysed using a thematic analysis informed by social constructionism. A specific data corpus (all data collected for one study) was developed for each of the four studies. Data were gathered from the dominant and accessible knowledge sites of the mass media about the mobile phone accessible in the UK represented by news media (relevant data for *Study 1*) and advertising media (relevant data for *Study 2*). Also, data were generated through mobile phone users' mobile phone reviews (relevant data for *Study 3*) and at-risk problem mobile phone users' accounts of their subjective experiences and relationship with their mobile phone (relevant data for *Study 4*). This range of data met the broad aims of the thesis. The methods of data collection will be discussed in terms of the different types of data collected for the four studies.

4.2.1 UK national newspaper articles published between 1985 and 2019.

The method of data collection for the news media source focused on collecting institutionally generated secondary sources of text data from UK national newspaper articles about the mobile phone published from 1 January 1985 (when the first consumer handheld mobile phones were made available in the UK; Linge & Sutton, 2015; Vodafone, 2014) to the present represented by 15 March 2019 (when data collection commenced). Analysis of this data source allowed the exploration of historical shifts in the macro context of culturally

available conceptual constructions of the mobile phone that are prevalent in the institutional news perspective which is a culturally established dominant forum for trusted information on lifestyle, technology and new products (Jauhiainen, 2007; Rooke & Amos, 2013).

Data collection specifically centred on national newspapers and excluded local newspapers because this was in line with previous studies which focused on newspaper articles as data to explore the representations psychological objects (e.g. Bilic & Georgaca, 2007; Jauhiainen, 2007; Kay, & Mendes, 2018; Rooke & Amos, 2013). A range of national newspapers represented a range of political positions within mainstream British press (Kay & Mendes, 2018), a range of readership profiles (Rooke & Amos, 2013) and a range of education levels and socio-economic status (Joffe et al., 2011). The data was collected using the Infotrac Newsstand database (currently known as Gale OneFile: News) because it accommodated a systematic and cross-sectional search of newspaper articles about mobile phones published in 17 UK national newspapers between 1 January 1985 and 15 March 2019. The national newspapers comprised of nine daily newspapers and seven Sunday newspapers. However, the database did not provide coverage of all newspapers for the entire period. For example, only *The Times* and *Sunday Times* were covered by the database for the entire period, but coverage of *The Guardian* commenced during 1996 and coverage of the *Daily Telegraph* commenced during 2000 (Infotrac Newsstand, 2019). See *Appendix B* for the 17 UK national newspapers searched during data collection and the years of full-text coverage provided by the Infotrac Newsstand database.

The data collection process commenced by developing a systematic search strategy through trial searches using the advanced search feature of the database in order to gather a manageable data corpus which was meaningful to the aims of the analysis. The final search syntax used the Boolean operator *or* between the search terms (and their plural) derived from the psychology literature (e.g. Elhai, Dvorak, et al., 2017; Goswami & Singh, 2016) and relevant news articles to search the *document title of article* and *brief article* document types published in the 17 UK national newspapers between 1 January 1985 and 15 March 2019. The resultant news articles were saved in 35 Microsoft Word documents which separated the articles by year of publication. See *Chapter 5* for details of the search strategy development process and the resultant yield of news articles available for the analysis which informed *Study 1*.

4.2.2 Website-based advertising of mobile phones which was accessible to the UK population during 2019.

The data collection for the advertising media source focused on collecting institutionally generated secondary sources of text and image data from current consumer-facing website-based advertising of mobile phones which was accessible to the UK population. This advertising medium is widely used by popular mobile phone brands (e.g. Apple, 2019; Samsung, 2019a; Huawei, 2019) and is culturally accessible to the UK population through mobile phones and other common digital technologies. Analysis of this data source allowed the exploration of culturally available conceptualisations of the mobile phone that are prevalent in the institutional advertising perspective which is a culturally established forum for knowledge and persuasion (Rogers, 2003). Exploring the ways in which mobile phones are currently marketed to people added further weight to the wider cultural context examined by the thesis.

Data collection specifically centred on current consumer-facing website-based advertising elements created by the mobile phone brands which offered some consistency of data across the brands. The webpages targeted were related to the branded advertising of the mobile phone models reported by the review participants of *Study 3* and the interview participants of *Study 4* of this thesis (see *Appendix C*). The brands mapped on to the popular mobile phone brands in the UK during 2019 (see Kielty, 2019; O’Dea, 2019; YouGov, 2019) and so the data corpus was considered to represent a diverse sample which was relevant to this thesis and the current diverse mobile phone culture. The data was collected from webpages which were accessible in the UK between 27 July and 1 December 2019.

Data collection included the text and image data of the accessible main consumer-facing promotional webpages for each of the mobile phone models and the text and image data of linked webpages which related to consumer-facing information about the mobile phone brand and model. Data collection excluded linked audio-video about the mobile phone brand and model, and webpages of products and information not directly related to the mobile phone model. Data from the webpages were collected and managed in the form of PDF documents, *FireShot* (webpage capture extension for a web browser app) webpage capture or screenshots depending on the nature of the webpage and the most suited method for capturing the relevant text and image elements. See *Chapter 6* for details of the search strategy and the resultant yield of website-based advertising webpages available for the analysis which informed *Study 2*.

4.2.3 UK mobile phone users' reviews of their mobile phone.

The general mobile phone users' mobile phone reviews data were collected as participant-generated textual data through an online qualitative survey process. The data collection process aimed to mirror the naturalistic data generated by real-world mobile phone product reviews which are an established cultural practice by consumers (see for example Amazon, 2019; Carphone Warehouse, 2019; Samsung, 2019b). The narratives of general mobile phone users were of interest to this thesis because their lifestyle has included experiences with their mobile phone and they are located in their personal consumer context while subjected to broad cultural narratives of neoliberal culture. Analysis of this type of data allowed the exploration of general mobile phone users' personal experiential perspective and links between the broad cultural narratives promoted by advertising media and mobile phone users' conceptualisations of promoted aspects of the mobile phone.

The data were collected through a Qualtrics based online qualitative survey (Braun & Clarke, 2013) which was designed to simulate the real world online mobile phone product review process. The online mobile phone review process was designed by the researcher based on the design and terminology presented by the online smartphone product review process used by Samsung UK (see for example Samsung, 2019b). The design of the review process was shaped by the interests of the study in the demographic details of the anonymous participants so that the researcher could gain a sense of the participant group and report the demographic range of the participants. The review process was further shaped by the ethical considerations of the study for the participant to be informed, instructed, remain anonymous and not reveal their identity or the identity of other people within their written review to comply with the British Psychological Society code of ethics (British Psychological Society [BPS], 2014). The standardised mobile phone review process facilitated focus on the topic of a mobile phone review across the participant group and allowed them to produce their own words in their response (Braun & Clarke, 2013).

The Qualtrics online platform allowed the online mobile phone review process to be widely distributed throughout the UK and make it accessible to a diverse sample of mobile phone users who could self-select to participate as they could for a real-world mobile phone review. The risk to excluding marginalised groups who do not have convenient and affordable access to the internet was considered to be similar to real life in which they would have similar limitations to posting an online mobile phone review. Consequently, the online mobile phone review process paralleled the real-world mobile phone review process and resulted in

participant-generated textual data from self-selected participants across the UK which was suitable for thematic analysis (Braun & Clarke, 2013).

The participants of interest were mobile phone users aged 18 years or over who resided in the UK. Participants were not selected based on other demographic details such as gender, nationality, race, socio-economic status or their level of mobile phone use. Recruitment of participants was initiated through invitation emails, announcements and promotion through the researchers professional Facebook social media page (dedicated to the researcher's PhD research) in order to make the online mobile phone review process accessible to a wider spectrum of adult mobile phone users in the UK. The invitations to participate in the study included brief details about the study, their voluntary participation, the contact details of the researcher for further information about the study and a link to the Qualtrics online mobile phone review process. See *Appendix D* for examples of the study's recruitment announcements.

The invitation link opened with the *Information About the Study* page which informed the participant further of the nature of the study, the inclusion criteria, what their voluntary participation would involve, that their responses would be anonymous, data protection, that they could exit the review at any time during the process and their right to withdraw their data from the study up to two weeks after completing their review without explanation. The contact details of the researcher and director of studies were provided so that the participant could seek further information about the study if they chose. See *Appendix E* for a copy of the *Information About the Study* page and the complete mobile phone review process.

The participant moved to the next page, the page of informed consent statements, by clicking on the clearly marked arrow graphic at the bottom right of the *Information About the Study* page. The text of the informed consent statements instructed the participant to click on each informed consent statement if they wished to continue with the survey. The survey was designed so that the participant could not advance to the next page of the survey unless all informed consent statements were clicked (forced response). Once the participant had signalled their consent, they could advance to the instructions on how to create their unique *Individual Participant Code* (IPC) used to ensure their anonymity and identify their data should they request to withdraw their data from the study. The IPC creation page was followed by the *Mobile Phone Review* page which requested brief demographic information (gender, age, and details of their mobile phone brand and model), a rating of their mobile phone (1 – 5 stars) and their mobile phone review. The participant could type their review of their mobile phone in to the expandable textbox provided.

The final page of the review process thanked the participant and displayed the *Debrief Information*. The debrief information included details of the process that the participant could follow if they chose to withdraw their data from the study and the contact details of the researcher and director of studies for further information about the study. The information also included details of support services in case the participant felt that they had been affected by the review process even though a risk assessment considered that the participants would not be at risk of physical, psychological or emotional harm greater than encountered in ordinary life.

Throughout the review process, a progress bar was visible at the bottom of each page which informed the participant of how far they had progressed through the survey. The participant was informed on the first page (*Information About the Study*) that they could exit the survey process at any time by simply closing the web-browser.

Participant responses were recorded and saved by the Qualtrics secure data base. Incomplete reviews were deleted from Qualtrics database because it was assumed that the participant had exited the process and did not consent to submit their review. The data was downloaded by the researcher as a Microsoft Excel document and transferred to a Microsoft Word document in preparation for analysis. The documents were stored securely. See *Chapter 7* for details of recruitment, participants and the number of reviews available for the analysis which informed *Study 3*.

4.2.4 UK mobile phone users' Mobile Phone Problem Use Scale scores.

The data collection of mobile phone users' *Mobile Phone Problem Use Scale* (MPPUS; Bianchi & Phillips, 2005) scores were collected through an online questionnaire process. This data served as selection phase for *Study 4* to identify frequent users of the mobile phone who were positioned as *problem users* by psychology literature (e.g. Bianchi & Phillips, 2005). These participants would be invited to participate in the interview phase of data collection without obligation.

The data collection process involved participants' completion of an online version of the MPPUS (Bianchi & Phillips, 2005) for which permission for use in this study was granted by the copyright holder (see *Appendix F*). The MPPUS was used as a selection process because it was reported to be the most used and reliable self-report scale in the measure of adult problem mobile phone use which was considered to be a possible gold standard (Goswami & Singh, 2016; Kalhori et al., 2015; Lopez-Fernandez et al., 2014). The scale covered social motivational characteristics, issues of preoccupation and loss of control of the time spent on

mobile phone related activities, and the symptoms of craving, withdrawal, tolerance, escape from problems, negative life consequences in the areas of social and work, which were reported to be associated with problematic technology behaviour (Bianchi & Phillips, 2005). Higher scores of the MPPUS were considered indicative of more problematic mobile phone use (Lopez-Fernandez et al., 2014) and so could be used to identify mobile phone users more at risk of problematic mobile phone use relative to lower scoring participants of a diverse group.

Data collection for this participant selection phase was interested in recruiting mobile phone users aged 18 years or over who resided in the UK to complete the online version of the MPPUS adapted for the Qualtrics online platform by the researcher. The wording of the 27 statements of the scale was not amended. The recruitment process did not select participants based on other demographic details such as gender, nationality, race or socio-economic status. Recruitment of participants involved circulating invitations to participate through emails announcements and promotion through the researchers professional Facebook social media page in order to make the online version of the MPPUS widely accessible across the UK population.

The sample size of the selection phase was governed by the aim to recruit 20 consenting participants, who met the inclusion criteria, for the concurrent interview data collection phase. Braun and Clarke (2013) suggested between 10 and 20 interviews was suitable for a medium qualitative project or a study within a larger project such as a PhD. It was further suggested that between 15 and 30 interviews was common in studies which aimed to identify patterns across data and highlighted that small samples in studies can be seen as inadequate for publication. These participant group size suggestions were in keeping with published interview-based studies which involved the thematic analysis process outlined by Braun and Clarke (2006) used in this study (e.g. Pickens & Braun, 2018; Taylor & Ussher, 2001; Terry & Braun, 2011).

The invitations to participate in the selection phase invited participants to take part in an online mobile phone use questionnaire. The title of the questionnaire (MPPUS) was not revealed to the participants until after completion during the debrief stage so that the title was not an influencing factor in the participants' responses. The invitations included details about the study, their voluntary participation and that the questionnaire was a selection phase to invite suitably characterised mobile phone users to participate in an interview about their mobile phone experiences which was not obligatory. Also, the invitations included the contact details of the researcher for further information about the study and a link to the online questionnaire. See *Appendix G* for examples of the selection phase's recruitment announcements.

The link to the questionnaire opened with the *Information About the Study* page which provided further information about the study, inclusion criteria, what their voluntary participation would involve, data protection, that they could exit the questionnaire at any time during the process and their right to withdraw their data from the study up to two weeks after completing the questionnaire without explanation. The participant could seek further information about the study by using the contact details of the researcher and director of studies provided. See *Appendix H* for a copy of the *Information About the Study* page and the complete mobile phone use questionnaire process.

The participant could move to the following page of informed consent statements by clicking on the arrow graphic at the bottom right of the *Information About the Study* page. The informed consent statements instructed the participant to click on each statement if they wanted to continue with the questionnaire. The consent page required all informed consent statements to be clicked before the participant could advance to the next page. The consenting participant could advance to the instructions on how to create their unique Individual Participant Code (IPC) which could be used to identify their data should they request to withdraw their data from the study. Next, the participant could submit their preferred email address through which they would receive their MPPUS score and an invitation to participate in the voluntary interview phase of the study if their score met the inclusion criterion. However, submission of an email address was optional so that the participant could continue with the questionnaire without submitting an email address if they chose. The next page requested brief demographic information of gender, age, occupation, favourite apps and details of their mobile phone and use. The following three pages of the online process presented the 27 item MPPUS, 9 items per page. The 27 statements were on a 10-point Likert scale ranging from 1 (not true at all) to 10 (extremely true). The participants were instructed to indicate how true each statement was to them on the related scale. There was no time limit to complete the questionnaire. A progress bar was visible at the top of each page throughout the questionnaire process so that the participant could exit the questionnaire process at any time by closing the web-browser.

The final page of the questionnaire process displayed the *Debrief Information* which revealed the questionnaire title and that the questionnaire was not aligned with any clinical diagnosis but was used to characterise the frequency of their mobile use. The participants were reminded that their score would be emailed to their preferred email address and that the questionnaire was a selection process to invite suitable mobile phone users to take part in an interview about their mobile phone experiences which was not obligatory. The debrief information included details of the withdrawal process and the contact details of the researcher

and director of studies for further information about the study. Although a risk assessment considered that the participants would not be at risk of physical, psychological or emotional harm greater than encountered in ordinary life, the information included details of support services in case the participant felt that they had been affected by the questionnaire process.

Participant responses were recorded and saved by the Qualtrics secure data base. Incomplete questionnaires were deleted from Qualtrics database because it was assumed that the participant had exited the process and did not consent to submit their responses. The Qualtrics process recorded the participant's individual score for the questionnaire from their responses. The participant's score was emailed to their preferred contact email address (if provided) within three days of their participation (see *Appendix I* for examples of these emails). The email also contained either; a conclusion to their valued participation for participants whose score did not meet the criteria of the interview phase, or an invitation to participate in the interview which highlighted that their participation was voluntary. See *Chapter 8* for details of recruitment, participants and MPPUS scores for the selection phase of *Study 4*.

4.2.5 Semi-structured interviews with UK mobile phone users positioned as problem mobile phone users by psychology literature.

The narratives of mobile phone users positioned as *problem users* by psychology literature (e.g. Bianchi & Phillips, 2005) were generated through researcher and participant interaction during semi-structured interviews which resulted in textual data transcribed from audio data. Analysis of this data allowed the exploration of the contextualised conceptualisation of the mobile phone by this under-represented group of users embedded in their personal context and subjected to broad cultural narratives of neoliberal digital culture. This analysis added a further dimension to inform contextualised rationales for the distinction between normal and problematic mobile phone practices.

The participants of interest were mobile phone users whose MPPUS score was higher than the cut-off score calculated as the 80th percentile of the scores resulting from the sample who participated in completing the MPPUS. With an aim of 20 interviews (see Braun & Clarke, 2013) in mind, the interview data was collected concurrently with the selection phase (MPPUS scores) to avoid unnecessary participant recruitment and data collection during the selection phase. In light of the concurrent data collection process for the selection phase and interviews, the initial cut-off score of the MPPUS was set to 174/270, below which did not meet the criteria for the interview. The rationale for the initial cut-off score of 174 was derived from Lopez-

Fernandez et al. (2014) who used a version of the MPPUS adapted for adolescents (26 of the complete 27 items) which was completed by 1,026 British adolescents in and around London, United Kingdom. The authors proposed a tentative cut-off score (separating problematic users from non-problematic users) of 167 which represented the 90th percentile. 167 proportionally equates to 173.42 ($270/260 \times 167 = 173.42$) of the complete 27 item MPPUS used in the current study. Taking into consideration the excellent internal consistency of the original scale (Cronbach's alpha greater than 0.90; Bianchi & Phillips, 2005; Kalhori et al., 2015) the use of a proportionally adjusted cut-off score of an adapted MPPUS was considered adequate to initially justify that the participants of the interview study could be included in the group positioned as at risk of problematic use to which the literature referred. However, most of the literature comments that a cut-off score to distinguish between problematic users from non-problematic users requires more research before proposing a scale for the purpose of detecting clinically significant symptoms (e.g. Bianchi & Phillips, 2005; Kalhori et al., 2015; Merlo et al., 2013).

The participant group in the study by Lopez-Fernandez et al. (2014) represented adolescent mobile phone users in the UK whereas the current study focused on adult mobile phone users. For this reason, a final cut-off score relevant to the current adult sample was needed. While Lopez-Fernandez et al. (2014) suggested a cut-off score which related to the 90th percentile could be used to distinguish between problematic and non-problematic mobile phone users, it was also suggested that scores between the 80th and 90th percentile represented risk to problematic use. The 80th percentile was approximately supported by Kalhori et al. (2015) study which was validating a 24 item MPPUS. The cross-sectional research with 600 Iranian university students reported 23.4% of participants were identified as mobile phone dependent by systemic diagnostic interviews conducted to diagnose behavioural addiction related to mobile phone addiction based on DSMIV-TR. For these reasons, and the practicality of recruiting high scoring interview participants, the final cut-off score to meet the criteria of the interview phase was calculated from the 80th percentile of the final sample of MPPUS scores. The upper quintile range represented the mobile phone users who were more at risk of problematic use relative to the current sample of UK adult mobile phone users who participated in the selection phase.

Participants were recruited through the email which informed them of their MPPUS score and their eligibility to participate in the interview phase of the study. For participants who met the inclusion criteria, the email contained an invitation to participate in the interview which highlighted that their participation was voluntary and included an participant

information pack document. The information pack included *Information About the Study* which provided information about their participation and that the interview could be conducted face-to-face, through the mobile phone or through social media; the *Interview Schedule* which provided the topics to be discussed during their interview; and the *Informed Consent Statement* which highlighted that the interview would be audio recorded and their ethical right to withdraw (see *Appendices J, K and L* respectively). Also, the invitation included an offer of a £10 Amazon voucher as reasonable recompense for their time and effort involved in participating in the interview which was in line with guidelines reported by BPS (2014).

The aim of data collection method was to exploit the participants' accounts of their unique subjective experiences and their relationship with their mobile phone during the current digital age. The participants' data were collected during audio recorded semi-structured interviews guided by a flexible interview schedule (see *Appendix K*). Interviews were conducted face-to-face or through mobile phone which are both considered reliable methods of semi-structured interview data collection (Braun & Clarke, 2013; Terry & Braun, 2011). The semi-structured interview is a dyadic discussion between interviewer and participant guided by a flexible interview schedule during which data is co-produced between participant and interviewer (Braun & Clarke, 2013; Willig, 2013). It offered a flexible balance between guiding structure and natural subjective narratives generated through open-ended inquiries which required elaboration (Breakwell, 2012). Willig (2013) reported that the semi-structured interview is the most widely used qualitative data collection method in psychological research because of the compatibility of the data collected with a wide variety of qualitative analysis methods. The data generated can provide a richly detailed account about how individuals make sense of their experiences such as mobile phone related experiences (Braun & Clarke, 2013). Personal narrative data collected through semi-structured interviews has been shown to be suitable for analysis of a range of topics using thematic analysis informed by social constructionism (e.g. Clarke & Smith, 2015; Doncaster et al., 2018; Taylor & Ussher, 2001).

The semi-structured interviews were guided by a pre-designed interview schedule aimed to generate a subjectively relevant narrative of the participant's conceptual understanding of their meaningful experiences with mobile phones. The inquiries which make up a flexible interview schedule within a qualitative study serve a different purpose as a data generation apparatus than questions which make up a questionnaire in a quantitative study (see Breakwell, 2012; Fife-Shaw, 2012; Hugh-Jones, 2010; King & Horrocks, 2010; Willig, 2013). A flexible interview schedule of a qualitative study is not an empirical instrument of measure intended to generate data used to quantify a psychological phenomenon. The inquiries of the

interview schedule are not apparatus of scoring and so have no intended influence on the value difference of the data they may generate. The interview schedule is designed to generate data in the form of the participant's chosen narrative. It is acknowledged that this narrative will be shaped by the dialogue with the interviewer which is in keeping with the social constructionist perspective that meaning is constructed within social interaction. The interview schedule of this study served as a flexible guide from which further questions could be asked which were sensitive to the participant and their mobile phone experience that they could chose to bring up (see Hugh-Jones, 2010; Willig, 2013). In this light of interview schedule, inquiry flexibility, tailoring to each participant, and each inquiry's equal influence on the value to the data they generated, the fundamental elements of the interview schedule and inquiry construction can be justified.

Constructing a suitable interview schedule is vital to a productive interview (Breakwell, 2012). The fundamental elements of the flexible interview schedule which may have influenced the data generated for this study were the focus of the inquiries (e.g. mobile phones, media, practices), the inquiry type (e.g. open, non-leading), and inquiry sequence (moving from broad public inquiries to more specific personal inquiries; See Atkinson, 1998; Breakwell, 2012; Hugh-Jones, 2010; Willig, 2013).

The focus of the open-ended inquiries was drawn from literature and accessible mass media relevant to the mobile phone. Inquiries about representations of the mobile phone in the media were inspired by accessible media which related to mobile phones which may shape participants understanding of the mobile phone (Blackman & Walkerdine, 2001; Rooke & Amos, 2013). For example; *"What are your thoughts on how the mobile phone is portrayed in their marketing"*, *"Do these representations relate to your life in anyway?"*. Inquiries about mobile phone practices were inspired by research into mobile phone practices (e.g. Balakrishnan & Raj, 2012; Lu et al., 2011; Srivastava, 2005; Textlocal, 2019; van Deursen et al., 2015). For example; *"Can you describe your most recent experience with your mobile phone that you are willing to share with me?"*, *"How has your mobile phone use changed since your first mobile phone?"*. Inquiries about mobile phone features and apps were inspired by mobile phone marketing (e.g. Apple, 2019; Samsung, 2019a; Huawei, 2019). For example; *"Can you show me some of your apps you have on your phone that you are willing to discuss?"*, *"Can you tell me about the features on your phone?"*. Inquiries about distinctions of differences in mobile phone practices was encouraged by literature which investigated differences in mobile phone practices (e.g. Bianchi & Phillips, 2005; Ofcom, 2016; Pearson & Hussain, 2015; Walsh et al., 2011). For example; *"How do you think your experiences with*

your mobile phone may be different from other people's?". Inquiries about meaningful photos the participant has taken with their mobile phone during their natural daily life (not specifically for the interview) was inspired by the photovoice method (see for example Sutton-Brown, 2014). Discussion about participant's meaningful photos was of interest toward their mobile phone experience and the meaningfulness of the events that they chose to record using their mobile phone. The inquiry opened with "*Can you discuss any photos that you have taken with this mobile phone that you are willing to discuss?*". When the participant discussed a photo, inquiries followed such as; "*What is meaningful to you about this photo?*". Consideration of the participants' subjectivities and their relationship with their mobile phone was stimulated by research such as Campbell (2006), Siles (2012) and Walsh & White (2007) as well as theoretical literature such as Foucault (1988) and Rose (1998). For example; "*Can you describe your relationship with your mobile phone?*", "*Do you think your mobile phone has changed the way you see yourself, if so, how?*".

The type of questions constructed for the interview schedule were designed to be open and non-leading. Open-ended inquiries encourage the participant's unconstrained and uninterrupted subjectively rich narratives about the participant's mobile phone experiences and meanings relevant to them (see Braun & Clarke, 2013; Willig, 2013) which were the data of interest for analysis. Leading questions were avoided so as not to apply pressures on the participant which may distort their narrative and so distort the data of interest (see Braun & Clarke, 2013; Breakwell, 2012). The open-ended and non-leading style of the inquiries further helped to keep the power of the participant's narrative with the participant. Further to this, 'why' inquiries were avoided because they often elicit rationalised answers or justifications which detract from the participant's meaning (Hollway & Jefferson, 2000).

The sequence of the interview schedule was important to provide the participant with a common rhythm of sensibly related topics to assist their comfortable and productive interview experience (Breakwell, 2012; Hugh-Jones, 2010). The interview schedule consisted of three sequential stages: The initial focusing task which explored the initial ideas raised by the participant; the second section consisted of open-ended inquiries about the participant's view of mobile phones and their experiences; and final personal inquiries which lead to a comfortable summary and closure to the interview. The interview opened with a non-leading focusing task (Joffe, 2012) to mitigate the risk of initially imposing ideas upon the participant. The participant was asked "*What springs to mind when you think about mobile phones?*". They were invited to take the time to write a word or draw an image that related to mobile phones if they chose. The open-ended inquiries within the second stage were sequenced from public to

personal to assist the participant to feel comfortable with the topic and allow rapport to build (Willig, 2013). For example, “*Tell me about your service provider*”. The inquiries then progressed to a more personal nature which focused on the participant’s subjective experiences with their practices and their position relative to others. For example, “*How does your mobile phone use compare to other people you know?*”. The final personal inquiries were designed as deep inquiries and find a comfortable summary of the participant’s experience, for example, “*What role does your mobile phone play in your life?*”.

Before the interview, the participants had previously received information about the study and informed that the interview would be about their views on and experiences with mobile phones. Face-to-face participants were asked to bring their phone to the interview and make visible any apps and photos on their phone they would be willing to discuss and hide others. At the agreed appointment, the Face-to-face participant was welcomed to the safe and comfortable space convenient and satisfactory to participant and researcher. The phone participant was phoned at the agreed time. The participant was reminded of the purpose of the study, their role in the interview, the topics to be discussed, that their interview would be audio-recorded, how their information would be used, confidentiality, data protection, and their right to withdraw without justification. Questions about participation were invited by the researcher. Participants voluntarily consent was recorded by either a signed *Informed Consent Statement* form or an audio recording of their consent to each of the consent statements (see *Appendix L*). The consenting participants were given the opportunity to select a pseudonym which would represent their general demographic information and any extracts used from their interview data in the finished report in order to conceal their identity and so maintain their confidentiality through anonymised data (see Grinyer, 2002). All participants chose their pseudonym which represents their data in this report.

The facilitator followed the sequence of the interview schedule at a pace that was sensitive to the participant’s comfort (see Braun & Clarke, 2013; Hugh-Jones, 2010). The main role of the facilitator was to hold the space for discussion while the participants found and voiced their views and experiences which were meaningful to them. The participant was left to respond to the open-ended inquiries as unguided as possible in order to keep the power of their narrative with them. This served to generate their subjective narrative and meaning of the mobile phone which was the data of interest. The facilitator sensitively negotiated rapport with the participant (Willig, 2013) and used verbal and non-verbal encouragers as well as elaboration probe questions to encourage the participant to open up themes they raised and

elucidate richer responses (King & Horrocks, 2010). Throughout the interview the participant was never pressured to speak (Grinyer, 2001).

After the interview was completed the researcher verbally summarised the discussion, debriefed the participant and invited questions in order to provide a comfortable ending to the interview experience. The participant was either presented with a printed debrief sheet or the debrief document was email to them. The debrief reminded the participant that their interview was audio recorded, their right to withdraw their data from the study and provided contact details of local support services in case the participant felt that they had been affected by the interview process (see *Appendix M*). A £10 Amazon voucher was sent to the participant's preferred email through the Amazon voucher system. The details of the phone interviewee, such as phone number, was deleted from the researcher's smartphone.

Face-to-face interviews were audio recorded on a small Olympus WS-6505 digital voice recorder and the phone interviews were recorded on a Windows Lumia 950XL smartphone. No notes were taken by the interviewer during the interviews because notetaking may have interfered with natural conversational flow and the development of rapport between participant and interviewer (Willig, 2013). Audio recording allowed all information to be recorded accurately with minimal distraction. The audio files were transferred and stored securely on a password protected laptop and deleted from the recording device. The audio recordings were transcribed verbatim suitable for thematic analysis (see Braun & Clarke, 2013). The interviews were transcribed by the researcher or transcribed by a transcription service (due to time constraints). The researcher finalised all transcriptions so that they were transcribed to the same verbatim standard and used the same notation system. See *Appendix N* for the transcription notation system. Each transcript was processed and stored in a separate Microsoft Word document labelled with the participant's pseudonym and stored securely. See *Chapter 8* for details of recruitment, participants and the number of interviews available for the analysis which informed *Study 4*.

4.3 Analytic Approach

The data corpus developed for each of the four studies were analysed separately using an inductive thematic analysis informed by social constructionism to work with latent themes. The inductive thematic analysis aimed to systematically identify and explore coherent themes related to the conceptualisations of the mobile phone which ran throughout the data corpus of

each study without preconceptions (Braun & Clarke, 2006). The separate studies collectively allowed the exploration of mobile phone conceptualisations across layers of context.

‘A theme captures something important about the data in relation to the research question and represents some level of *patterned* response or meaning within the data set.’ (Braun & Clarke, 2006, p.82). Braun and Clarke (2019) emphasised that a theme was a pattern of shared meaning that is united by a central organizing concept. A theme is not to be determined by a quantifiable measure (frequency, size across the data set) but through researcher judgement of the prevalence of the theme and its *keyness* in relation to the research aims (Braun & Clarke, 2006). This judgement was located in the later phases of thematic analysis which involved interpretation and reviewing themes.

Braun and Clarke (2006) highlight that themes in data can be identified through an inductive or deductive logic of inquiry. Inductive logic of inquiry is a *bottom-up* approach concerned with discovering new information which is strongly linked to the data which may provide unexpected insights (Braun & Clarke, 2006; Willig, 2013). This is in contrast to a deductive logic of inquiry (*top-down* approach) which is analyst-driven through the researcher’s focus on a priori theory and testing hypotheses about the relationship between data (Fife-Shaw, 2012). Inductive approaches focus on exploring an open-ended question, rather than testing a hypothesis, and developing fresh ideas which are inspired by analysis of the data. Subjective conclusions can be drawn which provide a deeper understanding of the phenomena rather than reaffirming previous evidence. The initial literature review of an inductive study aims to identify trends and knowledge gaps rather than inform expectations or generate hypotheses associated with deductive approaches. However, a subjective input is inevitable because researchers generally have some expectations of their findings (Fife-Shaw, 2012). An inductive logic of inquiry is suited to the social constructionist perspective which may develop new insights into the meaning the mobile phone has to the user and current mobile phone experiences and practices.

An inductive thematic analysis can identify themes at a semantic level or a latent level (Braun & Clarke, 2006). Themes identified at a semantic level are considered explicitly and descriptively at face value of the text or image in order to categorise a description of the theme. However, themes identified at a latent level are analysed beyond its surface description at an interpretive level. Latent themes are generated by analysing and interpreting the underlying assumptions and conceptualisations that shape the semantic content of the data. Working with latent themes were of interest to this thesis in order to explore the underlying conceptualisations of the mobile phone in the data.

The inductive analysis of the latent themes was shaped by the principles of the social constructionist perspective. Social constructionist approaches can explore language or any symbolic system of meaning (e.g. text, images; Parker, 1992) during the construction of human experience and recognises the influence of social, cultural and historical context (Burr, 2015). Willig (2013) explained that social constructionist methods of analysis can develop insight into people's understanding of psychological phenomena by exploring language in a social context. Language is conceptualised as a dynamic social process for negotiating the construction of a contextual reality and is the data of interest to be explored (Wiggins, 2017). The constructive function of language does not support the positivist perspective that language is a representation of objectively observed mental process (Potter & Wetherell, 1987). Social constructionism can account for language through the layers of social context from the broad cultural macro social context to the subjective experience represented by the micro social context (Burr, 2015; Stainton Rogers, 2011). The macro perspective considers the influence of societal powers, such as social structures and institutional practices, in informing culturally available narratives which can shape constructed meanings of psychological objects (Burkitt, 1999; Burman & Parker, 1993).

Social constructionist approaches assume that a psychological object (e.g. mobile phone) is a socially negotiated concept which is developed during social processes situated within a particular cultural and historical context (Burr, 2015; Wetherell & Maybin, 1996). The negotiated construction has the power to shape people's understanding of the object and consequently shape their practices (Hook, 2001; Willig, 2013). Also, the understanding of the constructed object has the power to shape a person's position from which they can see the world and be seen within it (Willig, 2013). Through these positions people can be categorised into hierarchies which can lead to unequal power relations during social interaction in which one speaker has more influence than another (Foucault, 1978). For example, people positioned as problem mobile phone users can be categorised by others and themselves into hierarchies, such as normal and abnormal, or healthy and problematic, which enables and constrains what they can say or do from their position (see Davies & Harré, 1990). These positions can lead to unequal power relations during social interactions and different social consequences such as exclusion and inclusion.

The guiding principles of social constructionism were considered to enhance the inductive thematic analysis process which allowed working with the different layers of social context. The analytic approach offered a way of exploring the conceptual constructions of the mobile phone within the broad cultural context and the user's deep subjective experience of

the mobile phone. It can be considered how broader cultural conceptualisations of the mobile phone in the UK may have shaped users' contextualised understandings of mobile phones, their mobile phone practices and their subjectivity.

4.4 Analytic Process

The thematic analysis process was guided by the six-phase approach to thematic analysis proposed by Braun and Clarke (2006) and shaped by social constructionist principles for deeper analysis of the emerging main themes and subthemes. The analysis was supported by NVivo 12 (computer assisted qualitative data analysis software; CAQDAS; see Jackson & Bazeley, 2019). This section will discuss the preparation and management of data for thematic analysis and the thematic analysis process.

4.4.1 Data management for the analytic process.

NVivo 12 CAQDAS was used to manage the large amounts of qualitative data generated by the data collection processes used for the four studies. The data was managed in a systematic way to ensure efficient retrieval of the analysis data. The software was not viewed as an alternative to the researcher's effort and skills of analysis which are considered to encourage closeness of the researcher to the data for deep and meaningful findings (Jackson & Bazeley, 2019; Braun & Clarke, 2013; Willig, 2013). NVivo was used as a tool for data management and to manage the identification of codes and themes during the analytic progress through the thematic analysis phases. Also, the visual structure NVivo can provide was exploited. No auto-coding features of NVivo were used to generate codes or themes during the analysis process.

The data corpus of each study was imported into its own unique NVivo project which was named to represent the relevant study. The text data of studies 1, 3 and 4 were imported into their relevant NVivo project through the Microsoft Word documents in which the data was stored, and the text and image data of *Study 2* were imported as PDF and image files. The distinct NVivo projects highlighted that the analysis for each study was a distinct task.

4.4.1.1 Managing the historical aspect of the news media data analysis.

During the analysis process the researcher experienced the enormity of the huge data corpus. In order to assist the historical aspect of the analysis of the newspaper articles in *Study 1*, the 35 files (each containing the news articles which related to a specific year from 1985 to 2019) were separated into three relevant folders within NVivo. Each folder represented a distinct time period. The early period (1 January 1985 to 31 December 1998) represented the period in which of the first consumer handheld cellular phones was introduction into the UK market in 1985 and before the massive mobile market expansion (Linge & Sutton, 2015; Vodafone, 2014; The World Bank, 2019). The use of these expensive and cumbersome early mobile phones was hampered by limited mobile network availability and limited battery duration. However, the revolution in mobile communications were desired by young upwardly mobile professionals who were motivated by symbols of success and financial wealth (Linge & Sutton, 2015; Vodafone, 2014). During this period the development of reliable and wide coverage digital transmission techniques, increase in device battery duration and reduction in size and cost contributed to the increase in mobile phone subscription uptake and prepared the device for mass-market popularisation (Linge & Sutton, 2015).

The middle period (1 January 1999 to 8 November 2007) represented the period of massification of the mobile phone. 1999 was the tipping point in the UK for the massive expansion of the mobile phone market and popularisation of the device with the masses (Linge & Sutton, 2015; The World Bank, 2019). During 1999 mobile phone ownership in the UK almost doubled from 25.4% to 46.3% of the population which increased to 73.7% in 2000 (Linge & Sutton, 2015, The World Bank, 2019). The mobile phone moved from a preserve of the business user to a practical reality for the general consumer and an essential part of modern living. The mass-market growth can be attributed to wider coverage of mobile communication networks, digital transmission techniques which enabled data capability on devices, reduction in cost, pay as you go non-contract service, reduction in size of the device, extended battery life, additional features (e.g. camera) and downloadable content (Linge & Sutton, 2015).

The late period (9 November 2007 to 15 March 2019) represented the period in which Apple iPhone was released in the UK (9 November 2007) which was considered to be a landmark event in the popularisation of the smartphone (Elhai, Dvorak, et al., 2017; Linge & Sutton, 2015; Ofcom, 2018). The Apple iPhone was not the first smartphone in the UK, but its intuitive design, finger operated touchscreen, feature rich operating system and almost full access to websites revolutionised future smartphone design. This classic smartphone format

was considered to have radically changed consumer behaviour and ignited the irruption into digital social culture. Smartphones transformed the mobile handset market, significantly contributed to increased mobile phone take-up and increased consumption of data services.

The data set within each time period was analysed as a distinct thematic analysis so that each theme could be developed within the context of the related period. The data analysis within each period followed the principles of data saturation (see Beitin, 2012; Guest et al., 2006) such that the data set of the relevant period was sampled across the years within the period until no new information or themes could be developed within the period.

4.4.2 Thematic analysis process for the four studies.

The analysis of the data for the four studies aimed to identify dominant patterns of meaning (themes) which related to the conceptualisations of the mobile phone. The thematic analysis process involved a logical sequence of six reiterative phases which can be nonlinear (rather than a ridged linear sequence of tasks) and can be revisited as data analysis and interpretation influence each other (Braun & Clarke, 2006; Braun & Clarke, 2019). The six reiterative phases followed were 1. familiarising yourself with the data, 2. generating initial codes, 3. searching for themes, 4. reviewing the themes, 5. defining and naming themes, 6. producing the report. While the data set for each study was analysed separately from the data sets of the other studies, they were analysed concurrently at times. The analysis of advertising media images for *Study 2* was supported by the process for polytextual thematic analysis for visual data outlined by Gleeson (2011) which mapped on to the six phases of thematic analysis. Parker (1992) highlighted that many symbolic systems of meaning such as images can be considered suitable for social constructionist analysis.

During the first phase the thematic analysis process the data for the relevant study was read and reread several times in order for the researcher to become familiar with the text or images through a process of immersion. This was the news articles for *Study 1*, the advertising images of *Study 2*, the mobile phone reviews of *Study 3* and the interview transcriptions of *Study 4*. This phase was initiated during data collection and data management processes. For example, while transcribing the interviews (or refining the professionally transcribed interviews) in *Study 4*, the researcher began to become familiar with the data. The audio recordings of the interview were listened to while reading the transcripts repeatedly which also ensured the accuracy of the transcription. The familiarisation phase involved seeking all references to the mobile phone (directly and indirectly) in the data. During the familiarisation

process, initial notes were taken about references to the mobile and surrounding dialogue. These notes referred to small or broad areas of the data and were recorded in the relevant NVivo project which highlighted the data area and attached the notes to this data area for future reference and development. The familiarisation process continued over many weeks for each study.

The second phase focused on generating initial codes (meaningful labels attached to areas of the data) which began to organise the data into meaningful groups. The codes referred to small areas of data (e.g. a sentence, an area of an image) and broader areas (e.g. group of sentences, an image as a whole). Four fundamental questions, rooted in social constructionism, were asked of the data to initiate the analysis; What is the conceptual construction of the mobile phone? What does the construct say about mobile phone practices? What position does the construct make available for people? What can be practiced and experienced from this position? (see Willig, 2013). Images were questioned and read as a symbolic language which represented ideas about the mobile phone in a similar way to text (see Gleeson, 2011; Parker, 1992). This phase built on the notes and ideas generated in the previous data immersion phase. The data across the data set of a study was given equal attention so that complete consideration was given to repeated meaningful patterns within the data corpus. The coding identified meaningful features of the data that the researcher considered to be relevant to conceptualisations of the mobile phone, mobile phone practices, positioning of the mobile phone user and mobile phone experiences. The meaningful coded areas were selected and labelled using the NVivo system which attached the highlighted coded area and attached it to the code label for future reference and further development. The software organised the codes in a visible list of *nodes* which helped the researcher to see any relationships between codes. Initial coding continued to be developed until all the data had been analysed several times and the initial notes had been accommodated.

Phase three focused the researcher's attention on generating broader themes by organising the codes into meaningful groups. Similarity between codes, which related to mobile phone conceptualisations and experiences, were analysed in order to group similar codes into potential themes and subthemes (levels beneath the main theme) which represented a larger body of the data than individual codes. Similar codes were clustered together and organised as *children* beneath potential themes in the hierarchy of nodes which was assisted by the visual hierarchy provided by NVivo. Using the visual hierarchy, the relationship between codes, between potential themes and between potential subthemes were analysed further in order to arrange the codes in the appropriate candidate theme or subtheme. Codes which did

not fit into any theme were contained under a node labelled *Miscellaneous*. The hierarchy provided a sense of the data and which themes were becoming significant.

The fourth phase reviewed the content of each candidate theme for consistency of data extracts within the theme, the distinction between themes and the theme's representativeness of the data set. The coded data extracts within each candidate theme were read and re-read together to analyse their similarity with each other and coherence with the theme. Commonalities and differences between the coded data extracts within candidate themes were identified. The data extracts which did not form a coherent pattern with the other data extracts were reassigned to another theme or the *Miscellaneous* node. This refinement process continued until there were no more meaningful changes. Some candidate themes and subthemes were renamed to reflect their reorganised content and new internal consistency. Similarly, commonalities and differences between the themes were identified which resulted in several themes being merged with similar themes. This helped to form a candidate thematic map of themes which were distinct from each other. The candidate themes were considered in relation to their representativeness of the data by re-reading the text data or looking at the image data. The themes and the developed thematic map represented the data, but additional data extracts were identified and were included in the relevant themes.

Phase five involved defining and naming the themes and subthemes through a detailed analysis of their content and relationship with each other. The themes and subthemes were analysed to explore their meaning, their parameters, what aspect of the data each theme represented and how they worked together (independent of overlap) to tell the story about the data in relation to conceptualisations of the mobile phone. In a Microsoft Word document, the themes, subthemes and their relationship were described. Considerations were made to the story told within individual themes and how these themed stories related to the overall story that was evident within the data. Through this process of defining each theme and subtheme, concise and precise names were developed that conveyed an immediate indication of the spirit of the theme or subtheme. This process continued until each theme was clearly defined and conveyed through a detailed analysis. However, naming the themes and capturing the essence of the themes was ongoing and returned to during the writing up process.

The final phase focused on producing a separate analysis report for the analytical findings of each study. Each report aimed to convey a meaningful story of the relevant data in relation to conceptualisations of the mobile phone. The process to develop a report commenced within a Microsoft Word document in which the framework of themes and subthemes, that would be used to tell a coherent story of the findings, was organised. Data extracts which

exemplified an aspect of a theme or subtheme across the data were identified and stored in distinct nodes within NVivo. The extracts were transferred to the Word document and located with the relevant subtheme that it would help to illustrate. A detailed analytic commentary was developed for each extract which argued responses to the social constructionist rooted questions asked of the data during the analysis (see phase two). The analytic commentaries of each extract were weaved together to provide a coherent narrative of a meaningful picture of conceptual constructions of the mobile phone within the context of the study.

4.5 Chapter Summary

Chapter 4 focused on the methodological approaches that shaped the findings of each of the four studies that informed the thesis. The discussion opened by outlining the design of the thesis and discussing the relationship between the studies that the social constructionist perspective allowed. Next, the processes for collecting data rich in representations of the mobile phone was reported which highlighted the range of data sources and types that were collected for the studies as well as the variety of perspectives that the data encompassed. The final two sections presented the principles of thematic analysis and social constructionism which were relevant to the analyses and an account of the analytic process used by the studies.

4.6 Organisation of the Following Analysis Chapters

The findings developed from the analysis of the data within each of the four studies that make up the thesis will be reported and discussed in the following four discrete but interconnected chapters. Each chapter will represent the analysis of one of the four studies. The chapters will progress from the mass media institutional conceptualisations of the mobile phone explored through thematic analyses of UK national newspaper articles about the mobile phone published between 1985 and 2019 in *Chapter 5* and current mobile phone advertising in *Chapter 6*. Chapters 5 and 6 will serve to contextualise mobile phone users' conceptualisations of the mobile phone and subjective experiences explored through thematic analyses of mobile phone users reviews of mobile phones in *Chapter 7* and in-depth interviews with mobile phone users positioned as at-risk problem users in *Chapter 8*. *Chapter 9 (Discussion)* will present a synthesis of the findings of the four analysis chapters.

Chapter 5

Study 1:

Exploring Conceptualisations of the Mobile Phone Presented by UK National Newspaper Articles Published Between 1985 and 2019

This chapter is the first of two chapters which explore the broad cultural conceptualisations of the mobile phone which circulate throughout UK society via mass media to provide a wide cultural context for current mobile phone users' conceptual understanding of the mobile phone and their subjective experiences which are explored in chapters 7 and 8. This analysis specifically focuses on exploring the historical development of conceptualisations of the mobile phone presented by the news media over time. News media can play an influential role in shaping people's understanding of new technology, so it is important to consider the ways in which they portray the mobile phone. Also, as a socially constructed psychological object, its meaning may have been shaped over time by historically situated powers and so is best understood through analysing the historical development of its conceptualisations. To achieve this, three distinct inductive thematic analyses informed by social constructionism were used to explore UK national newspaper articles about the mobile phone published since the first consumer mobile phone was introduced into the UK market in 1985. The analysis investigated the ways in which the conceptualisations positioned mobile phone practices and the user as well as considered the societal powers which may have shaped the conceptualisations. It was argued that the conceptualisation of the mobile phone shifted from a business tool accessible to a wealthy few for productive business practices, to a normal need of modern living for the masses which is linked to the users identity and its use needs regulating. It was further proposed that the current cultural conceptualisations of the mobile phone were shaped by societal powers related to neoliberalism and regulation.

5.1 The Relevance of Historical Context

Handheld mobile phones were first introduced into the UK consumer market during 1985 (Linge & Sutton, 2015; Vodafone, 2014). They rapidly became the most popular consumable social technology and an integral part of UK social culture (Office of Communications [Ofcom], 2019a). During 2018 an estimated 79.5 million mobile phone subscriptions were supported by 94% of UK adults (Ofcom, 2019a) and currently an estimated

79% of adults use the feature rich smartphone (Ofcom, 2019b). The popularity of the mobile phone can be seen to have grown through three distinct time periods.

During the beginning of the early period (1 January 1985 to 31 December 1998) the mobile phone was a bulky and expensive innovation which limited the practical accessibility of the mobile communications revolution to business users and a wealthy few (Linge & Sutton, 2015). The development of reliable digital transmission techniques and more affordable and manageable devices lead to the massive mobile market expansion (The World Bank, 2019) represented by the middle period (1 January 1999 to 8 November 2007). Popularisation of the mobile phone continued to grow due to the introduction of devices capable of data transmission which opened the internet to the mobile user, additional features (e.g. camera and downloadable content) and the increasingly personalisable nature of the device (Linge & Sutton, 2015). During this expanding trend of mobile phone use, epidemiologic research highlighted concerns about the health of the user through suggesting links between electromagnetic radiation emitted by mobile phones and cancer such as brain tumours through mobile phone use (e.g. Hardell et al., 2003; Kundi et al., 2004; Lin, 2007). However, this association was not consistently supported (e.g. Christensen et al., 2004).

The late time period (9 November 2007 to 15 March 2019) commenced with a landmark event in the popularisation of smartphones in the UK, the release of the Apple iPhone (Elhai, Dvorak, et al., 2017; Linge & Sutton, 2015; Ofcom, 2018). The ergonomic, feature rich and internet connected iPhone revolutionised future smartphone designs, radically changed consumer behaviour and increased consumption of data services (Ofcom, 2018). The interactive smartphone turned research concerns from the relationship between mobile phone practices and society or physical health toward an association with mental health such as addiction, dependence and problematic practices (e.g. Chóliz, 2012; Kwon et al., 2013; Merlo et al., 2013). Studies which aimed to identify risk factors and those at risk of problematic mobile phone practices who could be targeted for interventions commenced earlier (e.g. Bianchi & Phillips, 2005). However, such studies which pathologised mobile phone practices began to dominate mainstream psychology literature during this period. These studies followed the trend of introducing the notion of behavioural addiction by pathologising common activities such as internet use (Young, 2009), studying (Atroszko et al., 2015), working (Andreassen et al., 2010) and shopping (Clark & Calleja, 2008).

The brief review of the historical development of the mobile phone has clearly shown that the physical object has fixed descriptions and an unassailable history that is accessible by society. However, the conceptual understanding of the mobile phone a psychological object is

constructed from socially and historically situated knowledge, and so is qualitatively different from the physical object (Bunn, 2011; Gergen, 2015). This suggests that the meaning of the mobile phone to people is not stable or universally definable but is a shifting product of a continually changing historical context. Further to this, the wider cultural conceptualisation of a psychological object, such as the mobile phone, is a socially constructed product of historically situated powers which have shaped its meaning over time (Bunn, 2011; Burman & Parker, 1993; Foucault, 1978).

The relationship between historically situated powers and meaning in relation to digital communication technologies (DCT) was demonstrated by Siles' (2017) longitudinal and cross-cultural comparative analysis of blogging as a means to publicly perform a self. The study showed that over approximately 20 years in USA and France blogging as practices of subjectivity were not inevitable nor neutral, they were a target rather than a consequence. The development of the web and social online activities were shaped through the articulation of specific conceptualisations of technology, self and publicness within the interests of social, political, economic and cultural processes such as neoliberalisation. The trajectory of blogging represented a sociocultural shift toward practices involving digital communication technologies (DCT) to construct a public self. The development of blogging involved the articulation of the powers in society which could be governed by institutions with interests in shaping the trajectory of DCT, culture and self within the neoliberal digital age. This suggests that the current conceptual representations of the mobile phone may have been shaped by the interests of cultural, economic and neoliberal processes.

News media can be influential in shaping people's understanding of new innovations such as new technology (Rogers, 2003; Rooke & Amos, 2013). Widely accessible news media, such as newspapers, are considered as culturally established dominant forums for trusted information on lifestyle, technology and new products (Jauhiainen, 2007; Rooke & Amos, 2013). However, people's conceptual understanding of a new technology can be shaped through a process of information selection and exclusion which can present a manipulated conceptualisation of the technology (Rooke & Amos, 2013). This suggests that mobile phone users understanding of the mobile can be shaped by widely accessible news articles about the mobile phone. In the light of meaning being shaped by historically situated powers, Bunn (2011) emphasised that a psychological object is best understood through a form of historical analysis. From this perspective, the historical shifts in the conceptualisations of the mobile phone within the news media needs to be explored to provide a historical context for current conceptualisations of the mobile phone within the broad cultural background of the UK which

may shape mobile phone users understanding of the mobile phone. Such a study is unapparent in the literature.

5.2 An Overview of the Methodological Approach

The study aimed to explore the historical development of current conceptualisations of the mobile phone presented by published UK national newspaper articles about the mobile phone since the first consumer mobile phone was introduced into the UK market in 1985 (Linge & Sutton, 2015; Vodafone, 2014). The analysis was interested in the societal powers which may have shaped the conceptualisations and the ways in which the constructions positioned mobile phone practices, people and institutions. The findings will help to provide a wide cultural context for current mobile phone users' conceptual understanding of the mobile phone and their subjective experiences which are explored in chapters 7 and 8.

In line with previous studies, data collection focused on a range of national newspapers which represented a range of political positions in mainstream British press and readership profiles (e.g. Bilic & Georgaca, 2007; Jauhiainen, 2007; Kay, & Mendes, 2018; Rooke & Amos, 2013). The data was collected using a systematic search strategy within the Infotrac Newsstand database which accommodated systematic and cross-sectional searches of newspaper articles about mobile phones published in 17 UK national newspapers between 1 January 1985 and 15 March 2019. This resulted in 9399 news articles available for analysis after duplicates and nonrelevant articles were removed.

The systematic search strategy was developed through a four-step process which involved trial searches using the advanced search feature of the Infotrac Newsstand database. First, five initial search terms; mobile phone, cell phone, cellular phone, smartphone and smart phone were derived from the psychology literature (e.g. Elhai, Dvorak, et al., 2017; Goswami & Singh, 2016). The search syntax used the Boolean operator *or* between the search terms (and their plurals) to search the *entire document* of news items published in 17 UK national newspapers between 1 January 1985 and 15 March 2019. This yielded 261,598 news items which would lead to an unmanageable data corpus. Also, reading a sample of the resulting items revealed that many mentioned the mobile phone in passing but did not focus on the mobile phone.

Step two aimed to reduce the number of results and find a sample of data meaningful to the mobile phone by searching in the *document title*. This search resulted in 9392 news items which could lead to a manageable data corpus. However, reading a sample of the items showed

that the meaningful focus on the mobile phone was most consistent in the document types of *article* and *brief article*. Step three focused the search toward data which was consistently focused on the mobile phone by limiting the search to the document types of *article* and *brief article* which excluded 24 other document types (e.g. *letter to the editor*, *obituary*, *correction notice*, *movie review*). The 9258 resulting news articles were consistently focused on the mobile phone. However, the results for the early years (1985 to 1995) of the search period were much lower than the later years. This may have been due to the lower number of publications covered during the early years by the database (see *Appendix B* for the years of full-text coverage of the 17 UK national newspapers searched provided by the Infotrac Newsstand database) and the language of the period.

Step four sought to help populate the early years of the search period with data. Five additional search terms; mobile telephone, cellular telephone, mobile communication, mobile telecom and mobile telecommunication, were developed from relevant news articles during the search strategy development process. The search terms (and their plurals) were added to the search syntax. Reading the titles of the 9510 resulting news articles revealed that 64 were duplicated and 47 were not relevant to mobile phones. Consequently, these 111 articles were excluded which resulted in 9399 news articles available for analysis.

To summarise, the final search syntax used the Boolean operator *or* between the 10 search terms (and their plural) to search the *document title* of *article* and *brief article* document types published in the 17 UK national newspapers between 1 January 1985 and 15 March 2019. See *Appendix O* for details and results of the search strategy development process and *Appendix P* for details of the final search results.

In order to consider the historical shifts in the conceptualisations of the mobile phone, the newspaper articles (saved in 35 Microsoft Word documents which separated the articles by year of publication) were divided into three distinct time periods. The early time period (1 January 1985 to 31 December 1998) represented the period in which of the first consumer handheld cellular phones was introduced into the UK market in 1985 and before the massive mobile market expansion (Linge & Sutton, 2015; The World Bank, 2019). The middle time period (1 January 1999 to 8 November 2007) represented the period of massification of the mobile phone which massively expanded the mobile market and popularised the device with the masses (Linge & Sutton, 2015; The World Bank, 2019). The late time period (9 November 2007 to 15 March 2019) represented the period in which Apple iPhone was released in the UK which was considered to be a landmark event in the popularisation of the smartphone (Elhai, Dvorak, et al., 2017; Linge & Sutton, 2015; Ofcom, 2018). The three distinct data sets related

to time period resulted in 713 news articles available for analysis in the early period, 2862 in the middle period and 5824 in the late period. See *Appendix Q* for the distribution of the newspaper articles across the three distinct time periods.

The text of the news articles was analysed using an inductive thematic analysis informed by social constructionism to develop *themes* (see Braun & Clarke, 2006) related to constructions of the mobile phone. The data set in each period was analysed as a distinct thematic analysis which allowed the themes to be developed within the context of the related period. The analysis within each period sampled data across the years within the period until no new information or themes could be developed within the period. This followed the principles of data saturation which is a common approach to sample size decisions for qualitative research (see Beitin, 2012; Guest et al., 2006). The analysis of the text was initiated by exploring questions rooted in social constructionism: What is the conceptualisation of the mobile phone? What does the construct say about mobile phone practices? What position does the construct make available for people? What societal powers may have shaped the constructions? (see Parker, 1992; Willig, 2013). See *Chapter 4* for further details of the data collection, management and analysis processes.

5.3 Analysis

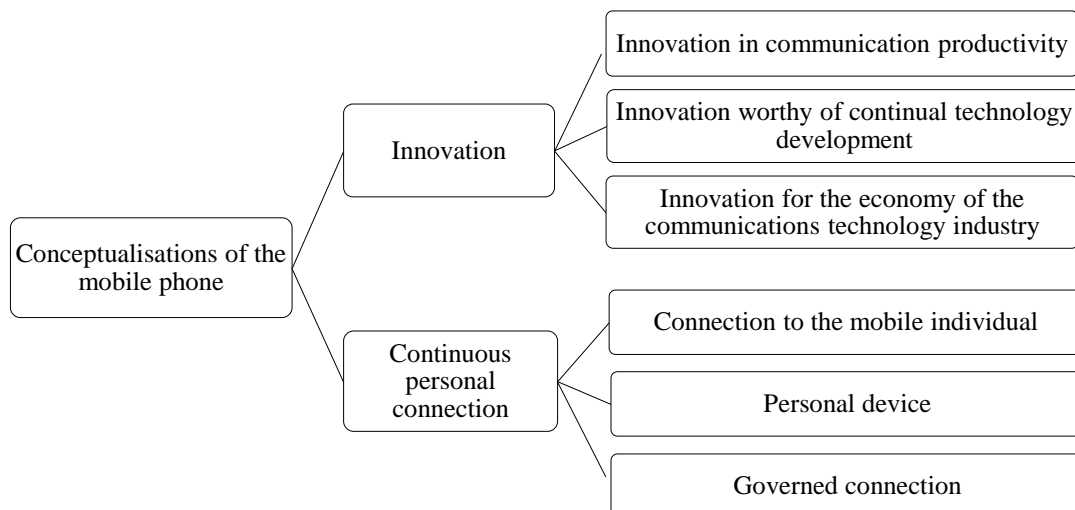
This analysis section presents the six main themes developed through three distinct thematic analyses. Two main themes were developed during the distinct analysis of each time period. The analysis of each period is presented as a distinct thematic analysis so that each theme can be explored within the context of the period in which it was developed. The themes represent salient narratives through which the mobile phone appeared to be constructed. The early period: innovation, continuous personal connection. The middle period: inclusivity; dangerousness, a threat to health and security. The late period: a normal need of modern living; dangerousness, a threat to mental health and security. Each of the themes and their subthemes are explored in depth using supportive extracts from the news articles published during the related period which typify the theme and the wider data of the related period. The ways in which the conceptualisations of the mobile phone have changed over the three periods are highlighted during the analysis of the middle and late periods.

5.3.1 Analysis of the early period: Introduction of the handheld mobile phone as a consumer device in the UK (01/01/1985 – 31/12/1998).

The analytic process of newspaper news articles about mobile phones published during the early period developed two main themes which related to innovation and continuous personal connection. The different aspects of the theme which related to innovation were illustrated through three subthemes which related to innovation in communication productivity, innovation worthy of continual technology development and innovation for the economy of the communications technology industry. The different aspects of the continuous personal connection theme were illustrated through three subthemes which related to connection to the mobile individual (rather than a fixed place), personal device (rather than a shared tool such as a fixed line business or home telephone), governed connection. Figure 5.1 shows a thematic map that represents the two themes and their subthemes.

Figure 5.1

Thematic map of the themes and subthemes which relate to conceptualisations of the mobile phone developed during the analysis of newspaper news articles about mobile phones published during the early period.



5.3.1.1 Innovation.

One of the main themes that was developed during the early period related to innovation. This theme is explored through three subthemes which related to innovation in productive mobile communication, innovation in continual technology development and innovation for the economic mechanism of the supply of goods (mobile phone device) and services (providing the service of wireless telephone connection) for consumption within the communications technology industry (technology developers and service providers). The mobile phone was conceptualised as an innovation.

Extract one of the early period: Taken from a brief article titled 'People: Telephone tribulation; Mobile phones'.

The subtheme related to innovation in communication is exemplified in one of the first newspaper news articles about mobile phones. The portable telephone was constructed as an intuitive innovation in productive mobile communication which positioned the user as an enterprising and productive business user.

News article extract is unavailable due to copyright restrictions.
Extract 1 of the early period: Discussed the novel functionality of communicating with the new technology of the mobile phone.

(Sunday Times, London, England, 7 July 1985)

The conceptualisation of the mobile phone as an intuitive device is evident in line 2 by suggesting that it can be 'easily mastered by citizens of low technical ability' The use of the word 'mastered' further illustrated that skills are required to use the device which can be developed and expertise can be achieved. The utility and convenience of the portable nature of the novel device was conceptualised by using a size comparison to a known manageable object, 'half the size of a Gideon Bible' (line 3). The mobile communication concept of the portable device was illustrated through its reported use to contact people while 'in the back of a London taxi' (line 4). This phrase also positioned the practice of mobile phone communication as

conveniently non-invasive to life's tasks, work schedules and social life. The focus on the intuitive technology, practical design and convenient utility of mobile phone communication together served to construct the device as a welcomed innovation in practical mobile communication practices for the masses.

The contacts mentioned in the text and the nature of the communications (interviewing, pursuing and making a lunch appointment; see lines 4-6) presented the practice of using the innovative communication device as a productive business activity. The conceptualisation of the portable telephone as a productive business tool to conduct business practices on the go positioned the user as a mobile and enterprising businessperson within a network of relations who could benefit from the productivity of frequent phone connections to colleagues, associates or clients. The use of the phrase 'I suspect a few do' (line 6) depicted the innovation as a preserve of a privileged few early adopters. Further to this, the text positions the author as an enterprising early adopter who wants to educate the business masses of the practical and productive potential of the innovative technology.

Extract two of the early period: Taken from an article titled 'Gearing Up; Mobile phones'.

Progressing from the innovation in communication subtheme illustrated in the previous extract, extract two illustrates the subtheme related to innovation worthy of continual technology development. Mobile phone technology was constructed as a continually developing technology shaped by its relationship with consumer demands and the economy of the communications technology industry.

News article extract is unavailable due to copyright restrictions.
Extract 2 of the early period: Commented on the need for technology development to allow mobile phone use internationally while the user travels abroad.

(Sunday Times, London, England, 13 August 1995)

The mobile phone is depicted as an innovation of interest in line 1 through the phrase ‘For all this talk about mobile telephones’. The technology is also construed as having a demand for development due to its limited capability to make international mobile roaming calls which is presented in line 2-3. Further to this, the notion of the arrival of the awaited solution is projected by the phrase ‘Until now, that is’ (line 3). The reveal of ‘A new generation’ (line 3) construes a shift in the capabilities of the technology and the demands of mobile phone users which has changed. Line 2 refers to the users’ international travel which positions these users as wealthy enough to afford international holidays or as a global business traveller. Further to this, line 7 positioned users as desirably contactable such as the mobile phone user who wants to remain within their network of relations or the business user who wants to remain productive. The conditions presented in lines 9-10 positions the powers of shifting consumer demands, technology progress and the economic interests of the service provider in relationship to shape a mutually beneficial economy for the continual technology development.

The extract conceptualised a shift in the mobile phone technology to accommodate the changing global demands of wealthy users and mobile business users. The implied continual development of mobile phone technology was position within the confines of its relationship with consumer demands and the economy of communications technology industry.

Extract three of the early period: Taken from an article titled ‘Cellular phones are spreading the work: Progress Report - Making Competition Work’.

Building on the previous subtheme, this extract demonstrates the subtheme related to innovation for the economy of the communications technology industry. More specifically, innovation for the economic mechanism of the supply of mobile phone related goods and services for consumption. Cellular technology is constructed as an economic strategy which positioned the user in a relationship with technology development and economy of the communications technology industry.

News article extract is unavailable due to copyright restrictions.
Extract 3 of the early period: Considered Britain’s technology achievements
around the mobile phone and commercial competition.

(Sunday Times, London, England, 25 Oct 1987)

The construction of the mobile phone as a viable economic strategy is first evident in line 3. This highlights that the mobile phone is presented as part of a network of goods and services (device, subscriptions and calls) which were chargeable to the mobile phone user who is positioned as consumer. Britain's technology achievements are initially positioned as lagging behind other countries but are repositioned as world class in lines 1-2. Britain's cellular marketisation is represented as successful in lines 5-6 which highlighted the greater number of mobile phone users in Britain when compared to other European countries. The competitive drive to the innovative economy is depicted in lines 4-5 which refer to two 'rival' networks. The extract construed the cellular developments in Britain as a much-needed innovation which shaped the innovative marketisation and economy of service providers.

The conceptualisation of cellular technology as an economic strategy positioned the user as a consumer and their practices were implicitly positioned as consumption which contributed to the economic goals of the service provider. This subtheme which relates to innovation for the economy of the communications technology builds on the previous subtheme to further highlight the construed relationship between the development of technology, economy and users.

5.3.1.2 Continuous personal connection.

Progressing from the innovation theme, this theme is related to continuous personal connection. This theme is explored through three subthemes which related to connection to the mobile individual (rather than a fixed place), personal device (rather than a shared tool such as a fixed line business or home telephone) and governed connection. The mobile phone was conceptualised as a continuous personal connection.

Extract four of the early period: Taken from an article titled 'Special Report on Mobile Communications (2): A system to follow you to the ends of the earth'.

The extract illustrates the subtheme related to connection to the mobile individual (rather than a fixed place). Mobile communication is constructed as a continuous connection

to the user which positioned the user as a potential to be continuously contactable and productive.

News article extract is unavailable due to copyright restrictions.

Extract 4 of the early period: Considered that mobile communications allowed users to be more available and contactable directly.

(The Times, London, England, 20 February 1986)

‘Mobile communications’ (line 1) is construed as a connection to the individual user rather than a connection to geographical location in lines 3-4. The text positioned the user as continuously contactable (on the assumption that they carry the mobile phone with them) and free to be mobile. The narrative which conceptualised the mobile phone as a personal connection positioned the practice of mobile phone communication as unhampered with geographical location and non-invasive to life’s tasks and social life. The narrative further positioned the user as liberated from the shackles of fixed line communication and a fixed place. The unhampered mobile individual appears to dwell in the open space of possibilities for mobile communication. In addition to this, Lines 1-2 presents the notion of being ‘more available’ which offers the position of the mobile user as more productive when liberated from the restriction of place. This text further suggests a potential increase in consumption of call time which can be related to the previously discussed concept that the consumer interests, technology development and the economic goals of service providers are in relationship and articulated toward a mutually beneficial equilibrium of satisfaction.

Extract five of the early period: Taken from an article titled ‘Mobile phones put owners on the hook’.

Building on the notion of connection to the individual user presented by the previous subtheme, extract five illustrates the subtheme related to the depiction of the mobile phone as a personal device (an individual’s unique device) rather than a shared tool. The mobile phone user is positioned as a wealthy and productive businessperson who is a company resource

News article extract is unavailable due to copyright restrictions.

Extract 5 of the early period: Considered the disadvantage of being continually contactable through their individual mobile phone.

(Sunday Times, London, England, 10 September 1989)

In this extract the mobile phone is conceptualised as an individual user's mobile device in lines 1-2. This text construed the mobile phone as a personal device for an individual user who can conduct their business wherever they are. This notion contrasts with a concept of a shared device such as fixed line home or office phones. The convenience and utility for productivity of the personal mobile device is also represented in this text by drawing examples of activity (clinching deals and buying shares) in a variety of situations (a traffic jam and sailing on the Solent). The concept of continuous connection that the personal device offers can maximise productivity by enabling the business user to work continuously and in situations where they usually could not. The continuous business productivity can lead to more wealth. The notion of continuous business productivity for the 'wealthy' (line 1) positions the personal mobile phone as a site for inequality because those who can afford to subscribe to the mobile phone system are able to gain more wealth.

However, lines 3-5 introduce the notion that the benefits of constant connection and freedom from fixed location communication have been repositioned from a productive convenience during the initial 'telecommunications revolution' (line 1) to the less desirable position of 'purgatory' (line 5). In this text the user is repositioned from the wealthy and productive business user to be positioned as a company resource which can be constantly consumed.

Extract six of the early period: Taken from an article titled 'Ramblers fear noisy intrusions; Cellular telephones'.

Building on the previous subthemes which conceptualised the mobile phone as a productive personal connection, the sixth extract illustrates the subtheme related to a governed connection. This narrative portrayed the mobile phone as the imprisonment of the business user within the power of governing demands.

News article extract is unavailable due to copyright restrictions.

Extract 6 of the early period: Commented on the constant connection with employer.

(The Times, London, England, 29 August 1989)

The construction of the mobile phone as the imprisonment of the business users' life is evident in lines 1-2. The constant connection 'businessmen' desired through 'their coveted mobiles' appeared to have become a demanding challenge to which the user is obliged. The mobile phone once conceptualised as the object of desire has become the object of control. Lines 2-3 utilised a conflict style narrative to emphasise the governing regime of the 'demanding employers' to which the user has become subjugated as a company resource. In this narrative the user is positioned as separate from the mobile phone which is used as a corporate tool to control the productivity level of the employed user.

This narrative which conceptualised the mobile phone as imprisonment to governing demand positioned mobile phone practices as an activity for a company to control their company resources. This positions the user as an obligated company resource subjected to the practices of power through the continuous governing demands of the company. From this perspective and with consideration of the phrase 'long-range phones' (line 3) it can be seen that the mobile phone construed as a continuously consuming connection between the company and their resources feeds into the notion which relates consumer demands, technology development and the economic goals of the service provider.

5.3.1.3 Summary of the thematic analysis of the early period.

The thematic analysis of newspaper articles about the mobile phone which were published during the early period developed two main themes which related to innovation and continuous personal connection. The themes illustrated that the mobile phone was conceptualised as an innovation in the technology and economy of productive mobile communication for business which allowed the user to remain continuously connected to their network through their personal device wherever they were located. As Rogers' (2003) diffusion of innovations theory highlighted, news media is an essential element in informing people of new innovations, such as the innovation of the mobile phone, and shaping their understanding of it through a process of selection and exclusion (Rooke & Amos, 2013).

Throughout the themes, the user was positioned as a productive business user who was continuously contactable and used their phone for productive business practices on the go. This relates to Rose (1998) proposal that the enterprising self strives for fulfilment, though

productivity and achievement. Through the process of information dissemination and neoliberalism, enterprising people may be inspired to use the conceptualisation of the mobile phone and new business practices to which to aspire as a tool within their practices of forming their enterprising self. The users were also positioned as members of the privileged few which supports the record of Linge and Sutton (2015). This exotifies the position of using a mobile phone and creates a social hierarchy such that using a mobile phone represents a higher status in the social hierarchy than those who are not seen to use a mobile phone which can create power relations between the groups (Burr, 2015; Davies & Harré, 1990; Sampson, 2008). However, the users privileged position was simultaneously situated with the position of company resource who was subjected to the practices of power through the continuous governing demands for business productivity.

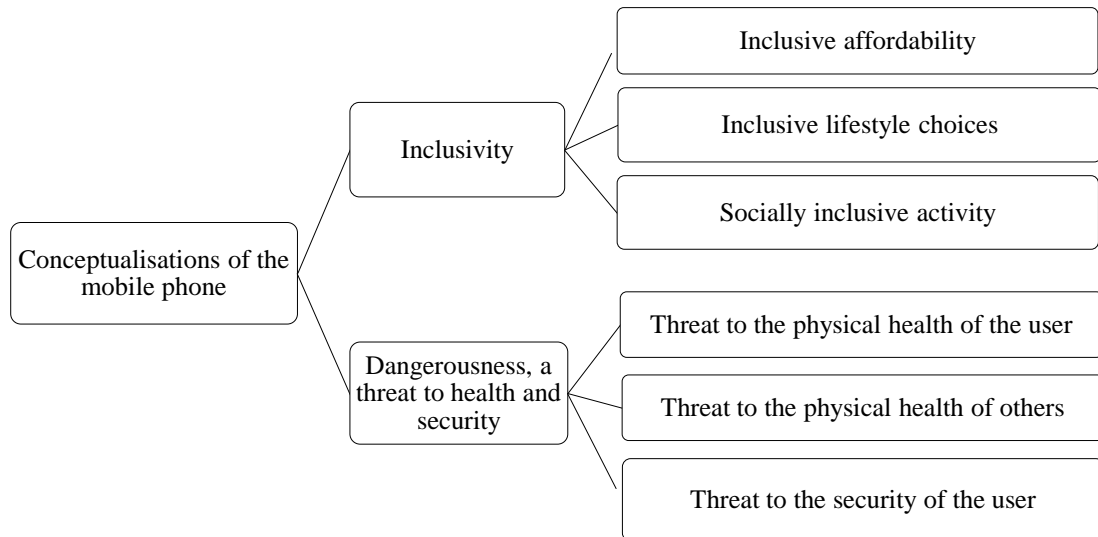
The themes further demonstrated the concept of a relationship between the powers of shifting user demands, continual development of technology and the economic interests of the communications technology industry. This relationship relates to neoliberal capitalism which is a consumer-based economy ideology that encourages an endless cycle of consumers' needs (Roberts, 2015). Within the process of neoliberalism, the people are viewed as consumers to be acted upon, in this case through selected information related to user demands. The construed relationships suggest that the societal powers of the user demands, information selection, technology development, economy and neoliberalism articulate to shape a mutually beneficial conceptualisation of the mobile phone. This relates to Siles (2017) findings that societal powers shaped the concept of blogging as a practice to enact identity.

5.3.2 Analysis of the middle period: Massification of the mobile phone in the UK (01/01/1999 – 08/11/2007).

The analysis of newspaper news articles about mobile phones published during the second period developed two main themes which related to inclusivity and dangerousness, a threat to health and security. The different aspects of the theme which related to inclusivity were illustrated through three subthemes which related to inclusive affordability, inclusive lifestyle choices and socially inclusive activity. The different aspects of the dangerousness theme were illustrated through three subthemes which related to threat to the physical health of the user, threat to the physical health of others and threat to the security of the user. Figure 5.2 shows a thematic map that represents the two themes and their subthemes.

Figure 5.2

Thematic map of the themes and subthemes which relate to conceptualisations of the mobile phone developed during the analysis of newspaper news articles about mobile phones published during the middle period.



5.3.2.1 Inclusivity.

One of the main themes developed during the middle period was inclusivity. The theme is explored through three subthemes which related to inclusive affordability, inclusive lifestyle choices and socially inclusive activity. The mobile phone was conceptualised as a popular and meaningful lifestyle activity for a wide spectrum of society.

Extract one of the middle period: Taken from a brief article titled 'Bestseller: Mobile phone Sony Ericsson T68i, £369.99'.

The first extract of the middle period illustrates the subtheme of inclusive affordability. The conceptualisation of the mobile phone as an inclusive invitation to the affordable mobile phone lifestyle highlights the hierarchy in society represented by the mobile phone choice of the user.

1. It's the mobile of choice for those of us with a little more cash to flash - 'the upper
2. to middle tier', in modern marketing parlance. The 'lower tier' pay-as-you-goers

3. favour the cheaper, more basic Nokia 3310, but those who can afford a monthly
4. contract go for the Sony Ericsson T68i.

(The Observer, London, England, 13 October 2002. Courtesy of Guardian News & Media Ltd.)

The construction of the mobile phone as an accessible and affordable device across socioeconomic status is evident throughout the extract. From the more expensive 'mobile of choice' represented in lines 1-2, to the 'cheaper' option represented in lines 2-3. Through this narrative a hierarchy of society is construed. The 'pay-as-you-goers' (line 2) and those who 'favour the cheaper more basic' (line 3) phone are positioned as people of low wealth who inhabit the 'lower tier' (line 2) of society. 'Those who can afford a monthly contract' (lines 3-4) and those who favour the more expensive option are positioned as wealthy people who inhabit the 'the upper to middle tier' (lines 1-2) of society.

The narrative conceptualised the mobile phone as an inclusive invitation to the affordable mobile phone lifestyle for people across socioeconomic status. The user was positioned as included in the mobile phone lifestyle and the practice of possessing a mobile phone was positioned as an inclusive social norm. Further to this, the mobile phone is construed as a representation of the user's position in society and so can be viewed as a representation of the user and their lifestyle.

The narrative further highlights that the development of technology in the form of a hierarchy of functionality in line 3 and the service provisions of payment type in lines 2-4 are construed to be in relationship with the user demands across socioeconomic status. To meet the economic goals of massification, the powers of consumer demands, technology development and the development of services provided are developing in relationship.

Extract two of the middle period: Taken from an article titled 'Technology: Call-rounders; Modern mobile phones prove it's good to talk. as well as e-mail, surf the net, download music, take photos and organise your life, says David Phelan '.

This extract illustrates the subtheme which related to inclusive lifestyle choices. The mobile phone is constructed as an inclusive invitation to a lifestyle and is a representation of the user's lifestyle.

1. Remember when a mobile could only make calls? Nowadays, they can stand in for
2. a digital camera, an MP3 player, a personal organiser, or even a computer for surfing

3. the internet or checking your e-mail. Meanwhile, users who don't need all these
4. add-ons can opt for ever-smaller phones, including some of the most stylish models
5. on the market.

(The Independent on Sunday, London, England, 24 April 2005. © David Phelan/The Independent)

The mobile phone is constructed as a collection of lifestyle choices in lines 2-3 such as 'digital camera', 'MP3 player' (audio player), 'personal organiser' and 'checking emails'. The notion of lifestyle choices is emphasised further in lines 3-4 which suggests that users can opt for 'smaller phones' rather than 'all these add-on' or 'stylish models'. This positioned the user as included in the range of lifestyle choices to meet their personal needs. The lifestyle choices of entertainment, productivity enhancement and information seeking, and the style and size of the models are positioned as an inclusive invitation for the user to meet their personal lifestyle needs. The narrative conceptualised the mobile phone as an inclusive invitation to a lifestyle which is representative of the lifestyle of the user. The mobile phone is represented as a social and entertainment system. The user was positioned as included in the mobile phone lifestyle to which they are connected.

The reference to a time when 'a mobile could only make calls' (line 1) and 'ever-smaller phones' (line 4) constructs the notion that the mobile phone was not always this way and a continually developing technology. The extract construed the technology development of the range of features, styles and sizes of mobile phones as focused toward appealing to the lifestyle for a wider spectrum of society. The narrative highlights the relationship between technology development and consumer needs through inclusivity of the lifestyle of the masses.

Extract three of the middle period: Taken from an article titled 'Finding a mobile with all the right features; Mobile phones'.

This socially inclusive activity subtheme builds on the previous subthemes which related to inclusive affordability and lifestyle choices. The mobile phone is conceptualised as a popular and socially inclusive lifestyle activity which was accessible to wide sample of society.

News article extract is unavailable due to copyright restrictions.

Extract 3 of the middle period: Discussed the popularity of the mobile phone and its abundant use in society.

(Sunday Times, London, England, 10 December 2000)

The mobile phone is conceptualised as a popular device in lines 1-2 which highlights 'half the UK population owns one'. Lines 2-3 recognised the popularity of the mobile phone but conceptualise the device as a popular and inclusive activity by referring to the frequent 'jutting elbows' and 'raised voices' related to mobile phone activities in public spaces which positions the activities as a disruption requiring etiquette. The meaning of the popularisation of mobile phone practices is constructed in line 1 which portrays the mobile phone as part of the users' lifestyle through the phrase 'more a way of life now'. The concept of the device as an integrated lifestyle activity is also represented in lines 4-5. Through this text the mobile phone was positioned as a meaningful lifestyle enhancer which was relied upon by the user to live their lifestyle.

The narrative construed the mobile phone as a popular and socially inclusive lifestyle activity in which a wide spectrum of society participates. The mobile user is positioned as an included member of a growing and inclusive mobile phone lifestyle to which the user is connected.

5.3.2.2 Dangerousness, a threat to health and security.

Progressing from the inclusivity theme, a further theme developed during the middle period related to dangerousness, a threat to health and security. This theme is explored through three subthemes which related to a threat to the physical health of the user, threat to the physical health of others, and threat to the security of the user. The mobile phone was constructed as a threat to health and security.

Extract four of the middle period: Taken from an article titled 'Victims' sue mobile phone companies for £1bn.

This extract illustrates the subtheme which related to a threat to the physical health of the user. The mobile phone is constructed as a dangerous threat to physical health of the user.

News article extract is unavailable due to copyright restrictions.

Extract 4 of the middle period: Reported that brain-tumour victims were suing mobile phone companies who were accused of covering up crucial medical information.

(Daily Mail, London, England, 29 December 2000)

Evidence that the mobile phone is constructed as a potential threat to physical health to the user is presented in lines 3-4 'seek to prove handsets can cause cancer'. The text positions the 'handset' as potentially the cause of cancer which implicitly positioned the handset user as the person at risk, the victim. The concept of the device as a health threat to many users is evidenced in line 2 which the 'lawsuits brought by brain tumour victims'. This phrase also served to introduce the position of blame which is attributed to 'mobile phone companies' (line 1) who are facing the lawsuits brought by the sick users. The use of 'billion-pound lawsuits' (lines 1-2) and 'legal assault' (line 3) positions the institution of law as an additional agent and new market involved in the economy around the mobile phone and services. A further agent in the scene of the mobile phone as a threat to users' health is the institution of medicine who are positioned as the authority of knowledge in lines 4-5. This text also served to blame and demonise the service provider by positioning them as corrupt by wilfully withholding evidence to avoid addressing the health risks of the handsets and so place their profit ahead of user health.

The construct of the mobile phone as a dangerous risk to physical health positioned the user as a victim at risk and mobile phone use as a risky behaviour which threatens the physical wellbeing of the user. The institutions of law and medicine are positioned as powers which protect the public. The relationship between the powers of the consumer, technology development and economy, which has been shown previously as an articulation to shape a mutually beneficial outcome of the mobile phone, was infiltrated by medicine, as an authority of knowledge, and legal services as a new market.

Extract five of the middle period: Taken from a brief article titled 'MP'S URGE MOBILE PHONE BAN'.

Building on the notion of the mobile phone as a threat to the user's physical health presented in the previous extract, this extract illustrates the subtheme which related to a threat to the physical health of self and others. The mobile phone is constructed as a dangerous

activity which risks the physical health of self and others which needs regulating to protect the citizens.

News article extract is unavailable due to copyright restrictions.
Extract 5 of the middle period: Commented on a ban on using mobile phones while driving and research with positioned mobile use while driving as more dangerous than drink-driving.

(Daily Star, London, England, 12 April 2002)

In this extract mobile phone practices are conceptualised as a dangerous activity which is evident in lines 2-3. The phrase draws on a relative comparison with the dangerous practice of ‘drink-driving’ which is presented by the text as a risk commonly known to the audience of the news article. This comparison served to place the activity of ‘using hand-held mobile phones while driving’ (line 1) on a commonly known scale of dangerousness. The phrase lends its credibility to ‘new research’ which positioned the institution of scientific research as the authority of knowledge to support the information presented in the news article. Lines 1-2 construed the risky behaviour as a practice that needs to be regulated. This text served to position blame for the threat posed from the risky behaviour with the risky users. The risky users are positioned as ignorant of how to use phones safely and need to be protected through regulation in the form of law.

The conceptualisation of mobile phone as dangerous activity positioned the user as a vulnerable risk taker who is responsible for the risks to the health and safety of self and others. The institution of scientific research, as the authority of knowledge of the dangers of risky mobile phone practices, and the institution of law, as an authority of regulating risky practices are positioned as further powers which have penetrated into the relationship of the societal powers portrayed as shaping the development of the mobile phone.

Extract six of the middle period: Taken from a brief article titled ‘Scots city worst for mobile phone theft’.

To develop this theme related to dangerousness further, this extract illustrates the subtheme which related to a threat to the user’s security. The mobile phone is constructed as a threat to the security of the user from others.

News article extract is unavailable due to copyright restrictions.

Extract 6 of the middle period: Reported the Metropolitan Police statistics of mobile phone theft, named the worst regions of the UK for mobile phone crime and commented on users' lack of handset insurance.

(Daily Mail, London, England, 3 April 2007)

The construction of the mobile phone as a threat to the user from others is first evident in lines 1-2 which refers to police statistics related to stolen mobile phone. Quantifying the incidences of stolen mobile phones served to conceptualise the threat as prevalent in society. The credibility of the information is attributed to 'a recent study' and positioned the 'Metropolitan Police' as the authority of knowledge in this matter. The concept of threat associated with possessing a mobile phone is implied in line 3. The words 'crime' and 'worst' were used to emphasise the undesirable nature of the physical threat. Further to this, the use of 'second worst place' projects the notion of a hierarchical scale of geographically positioned level of threat to mobile phone users' safety from others. The extract positioned the criminal others who would steal someone else's phone as the ones to blame. However, lines 5-6 refers to the consequences of not having handset insurance which implicitly positioned the user as partly responsible for this threat to mobile phone loss. This text introduced the value of the additional agent of insurers to the scene and the use of 'suffered a double blow' created the notion that users will feel punished if they do not involve the insurer into their economy around their mobile phone and services consumed. Also, the use of 'not even bothered' positioned the victims of crime who had not insured their device as lazier and less prepared when compared to other mobile phone users who fed the insurers economy. The additional new market of insurance implied the consumers need for further investment in the mobile phone economy to protect their financial security. Also, the value of the mobile phone is positioned as fuelling the criminal behaviour which threatened the mobile phone user.

The narrative which conceptualised the mobile phone as a threat to the security of the user from others positioned the user as a vulnerable target of criminal behaviour. The phone as a desirable object of value to be taken further positions the user as separate from their mobile phone. The practice of possessing a mobile phone is positioned as a financial risk to the user which can be mitigated through further payment for insurance. The institution of the police, as the authority of knowledge of crime, and the institution of insurance, as a new market in the mobile phone economy, are positioned as further powers which have intruded into the

relationship of the societal powers portrayed as shaping the development of the mobile phone's conceptualisation.

5.3.2.3 Summary of the thematic analysis of the middle period.

The thematic analysis of newspaper articles about the mobile phone which were published during the middle period developed two main themes that related to inclusivity and dangerousness, a threat to health and security. The themes illustrated that the conceptualisation of the mobile phone during the middle period had shifted from the innovative business tool and preserve of the wealthy during the early period to a popular and meaningful lifestyle activity for a wider spectrum of society. The mobile phone as a representation of the hierarchy in society shifted from the presence versus absence of a mobile phone to a hierarchy of consumer choices. This feeds into the process of neoliberalism (see Roberts, 2015) but also the notion that consumption is a symptom of an empty self which consumers fill by acquiring new products (Cushman, 1990). This may help to contextualise the themes' illustration that the user's mobile phone represented their lifestyle to which they were connected. Walsh et al. (2011) highlighted the notion that mobile phones had become integrated into many people's lifestyle and may have become a materialistic representation of the self. It was also highlighted that the personalisable nature of the mobile phone made it desirable (Barhuus & Polichar, 2011) and could be used as a status symbol to represent them self to others (Vanden Abeele et al., 2014).

Mobile phone practices were positioned as lifestyle choices rather than restricted to productive business practices represented during the early period. The user was positioned as an included member of a growing and inclusive mobile phone lifestyle which was a shift from the position limited to business user and company resource represented during the early period.

However, the device was also conceptualised as a dangerous threat to the health and security of the user and others during the middle period. Mobile phone practices were positioned as a risk to physical health and financial security. The notion of the threat to the user was represented in the form of the mobile phone as a source of cancer. The dangerous conceptualisation of the mobile phone was also portrayed by epidemiologic research during this period which highlighted concerns about links between electromagnetic radiation emitted by mobile phones brain tumours through mobile phone use (e.g. Hardell et al., 2003; Kundi et al., 2004; Lin, 2007). However, this concept of association was not consistently supported (e.g. Christensen et al., 2004).

The concept of threat was also portrayed by theft of the desirable mobile phone which further positioned the mobile phone as valued. Blame for these risks were posed with the service provider, the user and criminal behaviour. The institutions of law and insurance were positioned as the protectors of the vulnerable risk-taking users through regulation and insurance.

The themes demonstrated that the construed relationship between the societal powers of wider user demands, technology development and service provision articulated to meet the economic goals of massification. The themes further demonstrated that this relationship of societal powers was infiltrated by the powers of the institutions of medicine, scientific research and police which represented authorities of knowledge (truth) about the consequences of mobile phone practices. This further served to position the news article as true knowledge. Rose (1998) highlighted the rise of new authorities in the construction of knowledge in the form of experts who claim authoritative mastery knowledge. The claims to knowledge that are given to scientific research suggests that mobile phones can be subjected to scientific scrutiny and scientific authorities can make claims which can shape the conceptualisation of the mobile phone.

Further powers which intruded the relationship were presented as the institutions of law and insurance which represented the powers of new markets to the mobile phone economy which appeared to help compensate the user who was positioned as vulnerable. New markets feed the endless economic needs of neoliberalism (Roberts, 2015). The institutions of law and medicine were also positioned as powers which protect the user and help to shape a healthy and safe conceptualisation of the mobile phone.

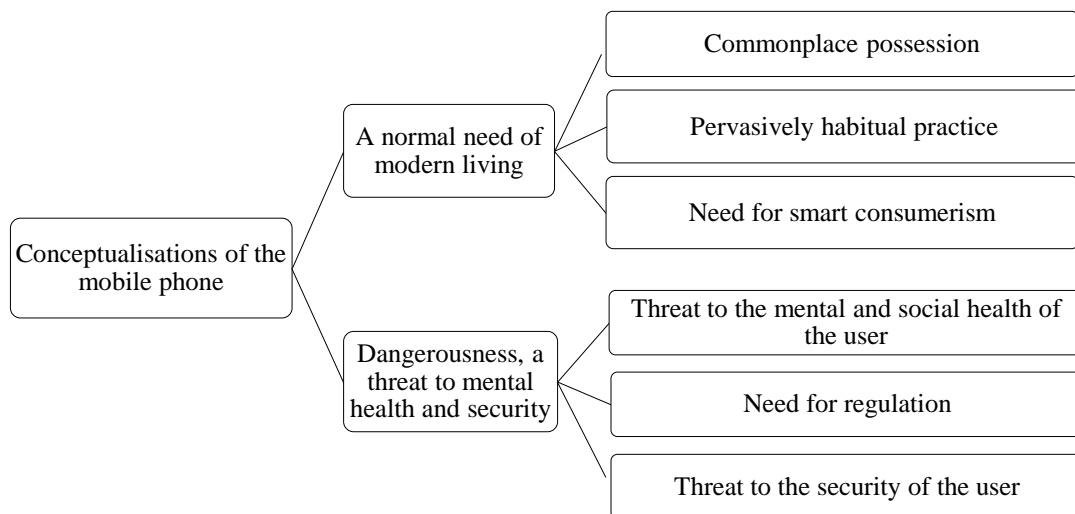
5.3.3 Analysis of the late period: Popularisation of the smartphone in the UK (09/11/2007 – 15/03/2019).

The analysis of newspaper news articles about mobile phones published during the late period developed two main themes which related to a normal need of modern living and dangerousness, a threat to mental health. The different aspects of the theme which related to a need of modern living were illustrated through three subthemes which related to commonplace possession, pervasively habitual practice and need for smart consumerism. The different aspects of the dangerousness theme were illustrated through three subthemes which related to threat to the mental and social health of the user, need for regulation and threat to the security

of the user. Figure 5.3 shows a thematic map that represents the two themes and their subthemes.

Figure 5.3

Thematic map of the themes and subthemes which relate to conceptualisations of the mobile phone developed during the analysis of newspaper news articles about mobile phones published during the late period.



5.3.3.1 A normal need of modern living.

A need of modern living was one of the main themes developed during the late period. This theme is explored through three subthemes which related to a commonplace possession, pervasively habitual practice and need for smart consumerism. The mobile phone was conceptualised as a normal and ever-present habitual need of modern living which was tied to the user’s identity.

Extract one of the late period: Taken from an article titled ‘Kayleigh Haywood missing: Body found in field in hunt for 15-year-old schoolgirl; The body was discovered in Ibstock after the teenager’s mobile phone and clothes were earlier found by officers’ (Martin Fricker).

The first extract of the late period exemplifies the subtheme which related to a commonplace possession. The mobile phone is conceptualisation as a commonplace possession.

1. Kayleigh was last seen by her family as they dropped her off outside a school not
2. far from her home.
3. Her mobile phone and items of her clothing were found by police in different areas.
4. The 15-year-old was dropped outside Ibstock Community College in Leicestershire
5. on Friday evening.
6. She called her family on the phone the following morning, but no trace of her has
7. been seen since.
8. Since she was reported missing, police have found Kayleigh's mobile phone and
9. other items belonging to her.

(Daily Mirror, London, England, 19 November 2015. © Mirrorpix)

In this report of a police investigation into the disappearance of a teenage girl, the mobile phone is conceptualised as a commonplace possession. This is first evident in line 3 which construed the mobile phone as commonplace as clothing. The commonplace construction of the device is further presented in lines 8-9. The phrase 'Kayleigh's mobile phone other items belonging to her' construed the device as belonging to Kayleigh and emphasised the position of the device as a key signifier which is not expected to be separate from the user, in this case Kayleigh. Separation, as in this case, signals that there is something seriously wrong. The text positions the separation of the young woman from her mobile phone as a cause for concern. Further to this, line 6 positions Kayleigh as a member of family with whom she desired to maintain a connection when she was mobile and apart from their security. From this perspective, the mobile phone not only keeps you connected to others but is a means of security. It also tells us something about normative values about connection in that we must be connected to our family in which a break signals danger.

This narrative positioned the practice of carrying a mobile phone as a routine need of modern living. The conceptualisation of the mobile phone as a commonplace and ever-present personal possession served to connect the mobile phone to the identity of the user who is positioned as a normal member of connected society.

Extract two of the late period: Taken from an article titled 'Smartphones are feeding us junk. Is it time for a digital diet?'

Building on the previous subtheme which related to a commonplace possession, this extract illustrates the subtheme of pervasively habitual practice. The mobile phone is conceptualised as an ever-present and singular habitual need which is tied to the user's experience of their identity.

News article extract is unavailable due to copyright restrictions.

Extract 2 of the late period: Focused on the commonplace and habitual use of smartphones.

(Daily Telegraph, London, England, 11 March 2019)

Throughout the extract, the mundane focus of the narrative served to construct mobile phone practices as a singular routine need which had become habitual rather than novel, selective or separate practices. Line 1 constructed the notion of an innate and permanent change within the user to form an 'iPhone brain' and create mobile phone thinking processes which had become an integrated part of the user. The phrase 'supercomputer lives at my fingertips' (line 3) conceptualised the mobile phone as an ever-present personal companion. Further to the ever-present companion, lines 1-3 positioned mobile phone practices as a pervasive distraction to events outside of the mobile phone. This highlighted notions of limited attention span and inability to maintain focus outside of the 'iPhone brain' thinking processes. The notion that the practices had become habitual and merged into a single practice to achieve satisfaction is represented in lines 3-4. This text also constructed an integrated connection between the device and the user's 'monkey mind' which suggests the user's mind has become downgraded through its connection and reliance on the device to feed the user ideas and activities. The text also served to position the habitual practice as the user's need to act upon every thought that enters their 'monkey mind' or 'iPhone brain'.

The mobile phone was constructed as an ever-present and singular habitual need which was tied to the user's experience of their identity. The narrative positioned the user as an integral part of their habitual practice while their habitual practice was positioned as a single continuous connection.

Extract three of the late period: Taken from an article titled 'Stores in scramble for smartphone salvation'.

Developing from the previous two subthemes which conceptualised the mobile phone and practices as routine needs of modern living, this extract illustrates the subtheme related to a need for smart consumerism. The mobile phone was conceptualised as a need of modern consumerism.

News article extract is unavailable due to copyright restrictions.
Extract 3 of the late period: Discussed the rise in popularity of convenient online shopping through the smartphone which is described as lifting high street sales.

(The Times, London, England, 31 May 2011)

The representation of the mobile phone as a portal to purchasing products beyond the service provider and apps to function the smartphone is presented in lines 3-4. The phrase 'from sofas to sandals' positioned the goods to be purchased by the smartphone user as beyond the network subscription and the purchase of technology services related to the mobile device. This suggests the opening of a portal to new markets through the mobile phone. Data use is conceptualised as a tool to consume other goods through 'apps or websites' rather than focusing on the data as a product for consumption. In this context of online shopping, the turn to data positioned mobile phone practices as a continual connection to the shop that never closes which can feed the neoliberal need for consumerism and continual consumption. The user's constant connection to the opportunity for continual consumption may serve to satisfy their empty self and experience an identity that is linked to their mobile phone through their consuming habits which assembles their lifestyle choices. Lines 1-2 further constructed the data connected 'mobiles' as a power behind 'a shopping revolution'. This construct is also illustrated in lines 5-8 which discussed the adaption and growth of the high street retailers' economy due to 'dizzying surge in sales via mobiles' (line 8). The constant connection of the consumer to shopping is positioned as a need of modern consumerism for high street stores. The turn to data

opened the new markets of the high street stores which had become accessible through the internet connected mobile phones.

This narrative which constructed the smartphone as portal to online shopping and a normal need of modern consumerism positioned the user as a consumer saving the high street retailers' economy. The practices of online shopping through the smartphone is positioned as normal and much needed consumption which fulfils the empty self of the user and regenerates an analogue economy.

5.3.3.2 Dangerousness, a threat to mental health and security.

Progressing from the need of modern living theme, A further theme developed during the late period related to dangerousness, a threat to mental health. This theme is explored through three subthemes which related to a threat to the mental and social health of the user, need for regulation and threat to the security of the user. The mobile phone was conceptualised as a threat to mental health and security.

Extract four of the late period: Taken from an article titled 'SLAVES TO THEIR SMART PHONES.

This extract illustrates the subtheme which related to a threat to the mental and social health of the user. The mobile phone was constructed as a threat to the mental and social health of the user who was positioned as vulnerable, connected to their smartphone and infiltrated by the external powers of smartphone capabilities and addiction.

<p>News article extract is unavailable due to copyright restrictions.</p> <p>Extract 4 of the late period: Reported on research which considered that teenagers are becoming addicted to their smartphones which some find preferable to interacting with their family.</p>

(Daily Mail, London, England, 6 October 2015)

In this extract the mobile phone is conceptualised as a threat to mental health in line 1. The term 'addicted' is used to emphasise the threat that 'their smartphones' have to the mental health of the user in the form of the user's dependency on their device. The word 'becoming'

construes that the threat to mental health is in progress from a time before there was a risk as if the users were becoming infected with addiction. This notion positions addiction as an external power which infiltrates the user's way of being and connects the user to their smartphone. The conceptualised threat to mental health is focused toward young people by the use of the term 'teenager' who are positioned as vulnerable to mental health issues by this narrative. The focus on positioning young people as the vulnerable parties in this narrative which related to a threat to mental health is further illustrated in in line 4, 'schoolchildren, especially girls' which also construed 'girls' as more vulnerable than other genders.

Lines 1-2 positioned the physical social connection of face-to-face family life as normal which should be encouraged. This text further positioned smartphone practices as competing with the normal organic social connection which threatens relationships. This contrasts with the contention that mobile phones enhance social relationships. Lines 3-4 positioned the pervasive nature of the device and its internet access capability as the blame for the threat to organic social connection. The use of the word 'luring' further positions the smartphone's capabilities as an external power which infiltrated the vulnerable users' way of being and connected them with their smartphone through 'hours' of online activity. The 'researcher' is positioned as the authority of knowledge on this topic which served to provide the credibility of the information presented in the article.

The construct of the mobile phone as a threat to mental and social health pathologised mobile phone practices and positioned the user as vulnerable. The smartphone's capabilities and addiction were positioned as external powers which infiltrated the vulnerable users' way of being to connect them to their smartphone and isolate them from healthy face-to-face relationships.

Extract five of the late period: Taken from an article titled 'Ban mobile phone use in schools; Minister warns of dangers to children'.

Building on the subtheme related to the mobile phone as a threat to mental health and social wellbeing of the user, this extract demonstrates the subtheme which related to a need of regulation. Mobile phone practices are portrayed as harmful to the mental and social health of the user and in need of regulation.

News article extract is unavailable due to copyright restrictions.

Extract 5 of the late period: Discussed the harmful effects of mobile phone use on children's development, as well as their and mental and social health, and the need for children to be taught about the dangers of excessive use.

(The Times, London, England, 2 February 2019)

Evidence that mobile phone practices are positioned as harmful to users' mental health is first presented in lines 1-2. The text used the term 'negative effect' to describe the type of effect that mobile phone use had on 'children's development and mental health'. This suggests that the development of children will be corrupted, which will negatively impact on the type of people they will become. This position is also represented in lines 9-10 in which smartphone practices are blamed for the 'lack of sleep that research is showing can have a damaging effect on a child's mental health'. The construed relationship between mobile phone practices and harm to mental health is a point of concern because mobile phone use is accessible to everyone. Further to this, in lines 7-8, smartphone practices are positioned as competing with the normal and healthy face-to-face relationships and activities which are implied as a means for mental well-being and development. These competing connections pose a further concern for the disconnection and isolation of the user from the organic world through their connection to their smartphone.

The harmful effect of smartphone practices on young people's mental health was positioned as dangerous by the 'Department for Education' (line 2), an authority figure, who were reported to be drawing up guidance for students. The 'guidance' (line 2) was positioned as a type of therapy for the student to understand 'the dangers of excessive use' (line 3). This position of dangerous leads to the notion of regulation of smartphone practices which is evidenced in lines 3-7. This text positioned the regulation of smartphone practices as self-improvement strategies which would be beneficial to the user. This need for beneficial regulation served to emphasise the construct of mobile phone practices as harmful to the user's mental health. The user is positioned as vulnerable and in need of protection from their connection to their smartphone through regulation. The position of smartphone practices as

harmful to mental health and in need of regulation further served to introduce the notion of rehabilitation through therapy to return to a previous healthy way of being.

Credibility for the claims about the relationship between smartphone practices and mental health made in the extract was attributed to ‘evidence’ (line 1) and ‘research’ (line 9). The notion that evidence is ‘mounting’ (line 2) portrayed the idea that research, was an ongoing process and increasing in strength to verify the claims presented in the article which shaped the conceptualisation of the mobile phone.

The narrative constructed the mobile phone as a connection to the user which disconnects the user from their organic world. This construct positioned mobile phone practices as harmful to the user’s mental health and in need of regulation. The user is positioned as vulnerable and in need of support through therapy, self-improvement strategies and regulation of their mobile phone practices to maintain the beneficial connection with their organic world. The notion of the need for therapy, self-improvement and regulation of mobile phone practices posed blame for the harmful effects of mobile phone use with the user.

Form a broader perspective of society this subtheme brings to the fore the notion of self-improvement strategies to strive for a ‘better’ self is being implicitly taught to students in preparation for their adult life and striving for an enterprising self in a neoliberal world. This notion also opens new markets within the mobile phone economy which relate to therapy and self-improvement strategies. Therapy may help to heal from the damage which resulted from user’s connection to their mobile phone and self-improvement strategies to optimise the user’s self in the context of their mobile phone practices.

Extract six of the late period: Taken from a brief article titled ‘Personal data harvesting by mobile phone apps is ‘out of control’’.

Developing further the theme related to dangerousness, this extract illustrates the subtheme which related to the threat to the security of the user. The final extract of this late period demonstrates the construction of the mobile phone as a threat to the security of the user through the collection data about the of the user’s mobile phone activities.

News article extract is unavailable due to copyright restrictions.

Extract 6 of the late period: Discussed the collecting and sharing of users personal data through their smartphones by mobile apps that can track user activities, without their consent, which could be used to construct detailed profiles and targeted advertising.

(The Times, London, England, 24 October 2018)

The concept of the connected mobile phone as a tool to collect data from the user was illustrated in line 1. The phrase positions ‘mobile apps’ as a two-way portal which allowed personal data to be transferred out of the smartphone. The phrase “’out of control’” was used to emphasise the growing pervasiveness of personal data collection. The construction of the mobile phone as a users’ data collector is further demonstrated in Lines 8-10 which presented the notions about the mechanism by which the mobile apps can track mobile phone users’ online activity. The phrase ‘keep track of users’ activities’ (lines 8-9) positioned the user as observed and their mobile practices as activities of interest to the observers, hence the phone is positioned as a security risk as there are others looking in on us. Line 11 constructs further the smartphone as a tool through which the processed online activity data of the observed user can be reconstructed by the observer to encourage further user consumption which suited the demands of neoliberalism. Lines 11-13 discussed privacy campaigners’ views about mobile phone app surveillance which positioned the user as a non-consenting and exploited participant in the data collection game.

Further to this, line 2 served to position ‘experts’ and their ‘study of almost a million programs’ as the authority of knowledge which provided credibility for the information presented in the article. This credibility of the article is further emphasised in lines 3-7 during which the details of the study were discussed.

The construction of the mobile phone as a threat to the security of the user through the collection of data about the user’s mobile phone activities positioned the user as an exploited victim of surveillance. Mobile phone practices were construed as a data generation activity which allowed the observer to redirect the reconstructed data toward the user to encourage further user consumption which suited the needs of neoliberalism. Through this narrative the

user's mobile phone activities represented their identity which was positioned as a valued product to be consumed by the observer. From this perspective, the mobile phone was intrinsic to the user's identity.

5.4 Discussion

This analysis explored the historical development of conceptualisations of the mobile phone presented by UK national newspapers between 1985 and 2019 through three distinct thematic analyses each of which represented a distinct time period: early period (1 January 1985 to 31 December 1998), middle period (1 January 1999 to 8 November 2007) and late period (9 November 2007 to 15 March 2019). The thematic analysis of newspaper articles about the mobile phone which were published during the early period developed two main themes which related to innovation and continuous personal connection. The thematic analysis of the middle period developed themes that related to inclusivity and dangerousness, a threat to health and security. Finally, the thematic analysis of the late period developed themes related to a normal need of modern living and dangerousness, a threat to mental health.

The themes illustrated that the conceptualisation of the mobile phone during the late period had shifted from the external business tool and preserve of the wealthy represented during the early period, and the popular and meaningful lifestyle activity represented during the middle period to a normal and ever-present habitual need of modern living used by the masses which was tied to the user's identity. This relates to suggestions that the mobile phone has become a compulsory device within industrialised cultures and an essential part of modern living (Kwon et al., 2013; Panova & Carbonell, 2018). The conceptualisation of the mobile phone has shifted from an external innovative tool to an internal experience which is integrated the lifestyle and identity of the user which aligns with the ideas of Campbell (2006), Walsh et al. (2008) and Walsh et al. (2011). The graduation from external tool to internal experience is also illustrated through the position of the user and their mobile phone practices. During the late period the user was positioned as an integral part of their habitual mobile phone practice which shifted from the position limited to business user and company resource represented during the early period and a member of an inclusive mobile phone lifestyle represented during the middle period. During the late period the position of mobile phone practices had shifted from the productive business practices represented during the early period and the lifestyle choices during the middle period to a single continuous connection of modern living.

The dangerousness narrative represented during the middle and late periods had shifted focus from a threat to physical health during the middle period to a threat to mental health during the late period. The late period narrative related to dangerousness pathologised the mobile phone which was constructed as a dangerous connection which could threaten users' mental and social health. This is in line with the shift in the focus of dominant research about the relationship between health and mobile phones. The focus on the link between cancer and mobile phone use (e.g. Hardell et al., 2003; Kundi et al., 2004; Lin, 2007) was superseded by research which focused on the relationship between mobile phone practices and mental health (e.g. Chóliz, 2012; Kwon et al., 2013; Merlo et al., 2013). Such studies aimed to identify those at risk of problematic mobile phone practices (e.g. addiction, dependence, problem use) who could be targeted for interventions. While research commenced earlier (e.g. Bianchi & Phillips, 2005), studies which pathologised mobile phone practices began to dominate mainstream psychology literature during the late period. These studies followed the trend of pathologising common daily activities such as internet use (Young, 2009), studying (Atroszko et al., 2015), working (Andreassen et al., 2010) and shopping (Clark & Calleja, 2008).

Through the pathologising narrative, mobile phone practices were positioned as a disconnection of the user from their real world which was a harmful threat to their mental and social health. This notion was supported by Elhai, Dvorak, et al. (2017) who found a positive relationship between depression and problematic mobile phone use, and Bian and Leung (2014) who found a positive relationship with feelings of loneliness. Through this theme the user was positioned as vulnerable and could benefit from regulation of practices to maintain their connection with their real world which was positioned as keeping the user healthy. Blame for these risks to mental health of the user were posed with the external powers of addiction and smartphone capabilities which infiltrated the mobile phone user's way of being to connect them to their smartphone and isolate them from healthy face-to-face relationships. However, the notions of regulation of mobile phone practices posed blame with the user and their connection with their mobile phone.

The narrative related to the security threat during the middle period focused on mobile phone theft and presented the phone as the valued object of desire which was separate from the user. The security narrative in the late period shifted focus to the collection of mobile phone activity data (online activity and consumer choices) which represented the identity of the user and the valued object of desire by the markets of consumerism. Cheney-Lippold (2017) highlighted the shift in value of the mobile phone toward the data of a user which can generate their profile. Service providers (e.g. Facebook, Google, advertisers) view the consumers as data

generators who continually update such details as their app behaviour, demographic, purchases, comments, social associations, political orientation and interests. The data generated can be used to assign the consumer to a group (e.g. fashion consumer, technology consumer) and repackaged in the form of targeted advertising. From this perspective the security theme positioned the mobile phone as intrinsic to the user's identity.

During the late period, the conceptualised relationship between the societal powers discussed during the early and middle periods was infiltrated further by the new markets of self-improvement strategies and therapy to assist self-regulation. These notions of self-improvement relate to an achievement-orientated enterprising self who strives for satisfaction by acting on their self to become that which it wishes (Rose, 1998). Further to this Cushman (1990) viewed self-improvement as the consumption of a range of marketable products and psychotherapies which healed an empty self.

The analyses of the three periods construct the notion that societal powers related to neoliberalism (user demands, technology development, service provision, insurance, self-improvement strategies, therapy, high street consumerism) and regulation (law, medicine, police and scientific research) articulated to meet institutional goals of regulation, economic goals of the mobile phone economy within neoliberalism and shape the current cultural conceptualisations of the mobile phone.

In summary, the conceptualisation of the mobile phone shifted from an external business tool reserved for a privileged few for productive business practices, to an internal experience of an ever-present and normal habitual need of modern living for anyone to use as a single continuous connection to their lifestyle. Also, the continual development of the mobile phone as a consumable product was portrayed as normal. The current conceptualisation links the user's mobile phone to their identity and positions practices as in need of regulation. Societal powers related to neoliberalism and regulation are positioned as shaping the current cultural conceptualisations of the mobile phone.

5.5 Chapter Summary

This chapter presented the findings of three distinct thematic analyses informed by social constructionism which explored the historical development of the conceptualisation of the mobile phone by newspaper articles published between 1985 and 2019 which focused on the mobile phone. The analyses highlighted the ways in which these conceptualisations positioned mobile phone practices and the user as well as proposed the societal powers which

may have shaped the conceptualisations over time. The analysis presented in this chapter represents the broad cultural conceptualisation of the mobile phone portrayed by a culturally established dominant forum for trusted information on lifestyle, technology and new products. The next chapter will turn to the culturally established forum of persuasive advertising and explore the ways in which conceptualisations of the mobile phone were used to market the mobile phone to people during 2019. This will build on the historical shifts in the conceptualisation of the mobile phone in the news media to added further weight to the wider cultural context examined by the thesis.

Chapter 6
Study 2:
**Exploring Conceptualisations of the Mobile Phone Promoted by Website-
Based Advertising of Mobile Phones Which is Accessible to the UK
Population.**

The analysis presented in this chapter is the second analysis of the thesis to explore the broad cultural conceptualisations of the mobile phone disseminated across UK society via Mass Media. Specifically, this chapter explores the ways in which conceptualisations of the mobile phone were used to market the mobile phone to people during 2019 which builds on the previous chapter's examination of the historical shifts in the conceptualisation of the mobile phone portrayed in the news media. The culturally established forum of persuasive advertising can play an instrumental role in shaping people's understanding of new technology and so the portrayals of the mobile phone promoted by advertising is of interest to this thesis. An inductive thematic analysis informed by social constructionism was used to explore conceptualisations of the mobile phone promoted by website-based advertising of mobile phones accessible during 2019 by people living in the UK. The analysis considered the ways in which the conceptualisations positioned mobile phone practices and the user. It was argued that the conceptualisation of the mobile phone served to promote a normal, essential and contemporary tool of self-improvement, empowerment, independence, control, social connection and identity development. The continual development of the mobile phone and the enterprising user was portrayed as normal lifestyle and identity development.

6.1 The Persuasion Context

The mobile phone is the most popular consumer digital communication technology in the UK with an estimated 79.5 million mobile phone subscriptions being supported by 94% of adults during 2018 (Ofcom, 2019a). During 2019, an estimated 79% of UK adults use the feature rich and internet connected smartphone which was the preferred device for accessing the internet (Ofcom, 2019b). Current smartphones are highly personalisable and can operate an array of applications (e.g. play interactive games, play audio and video), provide mobile connectivity to the internet (e.g. access to social networking, information and purchase products online), include cameras (e.g. capture photo, video phone call), Global Positioning

System (e.g. satellite navigation when travelling, personal surveillance) and Bluetooth connection to transfer information to and from other devices (e.g. Apple, 2019; Huawei, 2019; Linge & Sutton, 2015; Ofcom, 2016; Samsung, 2019a).

However, mass media information can shape people's understanding of the latest technology (Rogers, 2003; Rooke & Amos, 2013). Rogers' (2003) diffusion of innovations theory highlights that the mass media, such as accessible websites and advertising, is an important component in the process of informing people of new innovations, such as technology, and shaping their understanding of it. The theory proposed five common stages to the decision-making process for a person to understand an innovation and decide whether or not to take it up: knowledge, persuasion, decision, implementation and confirmation. Accessible advertising is important to the *knowledge* and *persuasion* stages which focus on awareness, information and the person's attitude toward the innovation (Rogers, 2003). Rogers' description of the persuasion stage suggests that advertising functions to shape people's understanding and encourage a positive attitude toward new technology in order to inspire people to adopt the product. The science behind the persuasion industry focuses on the ways people can be manipulated to encourage purchasing of products (Lewis, 2013). Current conceptualisations of the mobile phone promoted by the culturally established forum of persuasive advertising needs to be explored to add further weight to the wider cultural context examined by the thesis because the ways in which mobile phones are currently marketed to people represents a further cultural source of knowledge about mobile phones to be investigated.

Campbell (2006) explored the relationship between teenage girls' discourses about mobile phones and advertising images which promoted mobile phones, or used the device as a prop, published in fashion and lifestyle magazines mostly targeted towards teenagers. The media discourses focused on idealisation of independence and image. The advertisements depicted the mobile phone in an idealised world as a fashion accessory that could keep the girls connected to their friends and independent of their parents while on the move. However, the girls' competing discourse of independence was shaped by safety and freedom limitations imposed by their parents. While this study provided insights into advertising media representations of the mobile phone, the study focused on a niche section of advertising published up to the year 2000 and targeted to a specific group. This thesis is interested in conceptualisations of the mobile phone promoted by current (2019) and widely accessible advertising of mobile phones.

6.2 An Overview of the Methodological Approach

The study aimed to explore conceptualisations of the mobile phone promoted by consumer-facing website-based advertising of mobile phones accessible during 2019 by people living in the UK. This represented the ways in which mobile phones are currently marketed to people. The analysis was interested in the ways in which the conceptualisations positioned mobile phone practices and the user.

The data of interest were branded consumer-facing website-based advertising of mobile phones because it is an advertising medium widely used by popular mobile phone brands (e.g. Apple, 2019; Samsung, 2019a; Huawei, 2019) and culturally accessible to the UK population through mobile phones and other popular digital technologies. The data was collected from 110 webpages accessible through the branded website-based advertising of mobile phones accessible in the UK between 27 July and 1 December 2019. The webpages related to 41 (accessible) of the 52 mobile phone models across 13 brands reported by the 164 review participants of *Study 3* (see *Chapter 7*) and the 20 interview participants of *Study 4* (see *Chapter 8*) of this thesis (see *Appendix C*). The mobile phone brands related to the brands reported to be popular in the UK during 2019 (see Kielty, 2019; O’Dea, 2019; YouGov, 2019). The data was considered a diverse sample which was relevant to this thesis and in line with the current diverse mobile phone culture.

The data collection process commenced by searching for the main promotional webpage of each of the 52 mobile phone models. The priority was to locate each model’s promotional webpage on the respective brand’s UK consumer website. If the webpage was not available on the UK website, then the brand’s global website was searched. If this yielded no results, then UK service provider consumer websites were searched for the mobile phone brand produced advertising used to promote the mobile phone model. This resulted in finding the brand produced advertising of 33 models on the brand’s UK consumer website (3 of which were the closest model in the related series), 4 models on the brand’s global website and 4 models on the *Vodafone UK* website. The brand produced advertising of 11 models were not accessible at the time of data collection which resulted in data collected from the website-based advertising for 41 of the 52 mobile phone models targeted. The text and image data of the main consumer-facing promotional webpages for the 41 mobile phone models were collected as well as the text and image data of linked webpages which led to further consumer information about the mobile phone model or brand (e.g. design, accessories and functions of the mobile phone

such as the camera, display and processor). See *Appendix C* for details of the 110 URLs retrieved for data collection.

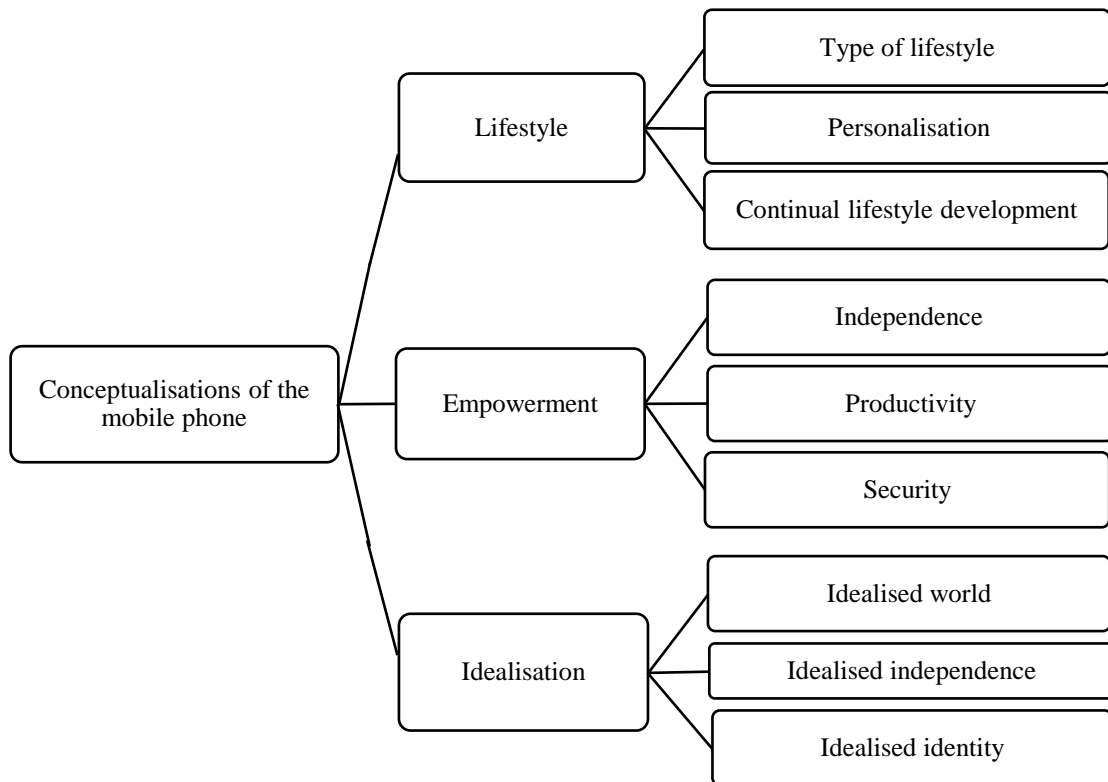
The images and text of the website-based advertising media were analysed using an inductive thematic analysis informed by social constructionism (see Braun & Clarke, 2006) to develop themes related to constructions of the mobile phone. Parker (1992) highlighted that images can be considered as a symbolic system which is suitable for social constructionist analysis. The analysis of advertising media images was supported by the process for polytextual thematic analysis for visual data (see Gleeson, 2011) which mapped on to the six phases of thematic analysis outlined by Braun and Clarke (2006). The analysis was initiated by exploring the ways in which mobile phone brand website-based advertising portrayed the mobile phone and positioned the mobile phone user and their practices (see Willig, 2013). See *Chapter 4* for further details of the data collection, management and analysis processes.

6.3 Analysis

The analytic process of website-based advertising of mobile phones which was accessible in the UK developed three main themes which related to lifestyle, empowerment and idealisation. The themes represent salient narratives through which the mobile phone appeared to be constructed as a lifestyle representation, a source of empowerment and a filter to idealise the user's lifestyle and identity. Each of the themes and their subthemes are explored in depth using supportive extracts in the form of images from the website-based advertising of mobile phones which typify the theme and the wider data. Figure 6.1 shows a thematic map that represents the three themes and their subthemes.

Figure 6.1

Thematic map of the themes and subthemes which relate to conceptualisations of the mobile phone developed during the analysis of website-based advertising of mobile phones which is accessible to the UK population.



6.3.1 Lifestyle.

One of the main themes that was developed related to lifestyle. This theme is explored through three subthemes which relate to type of lifestyle, personalisation and continual lifestyle development. Within this theme the mobile phone was conceptualised as an essential assistant which can help the user to enhance their experience of their lifestyle and sense of identity. Mobile phone practices were positioned as enhancing the lifestyle and identity experience of the user who were positioned within their lifestyle and identity. Further to this, the mobile phone and practices can be seen as a representation of the user's lifestyle and identity.

6.3.1.1 *Type of lifestyle.*

This subtheme illustrates that the mobile phone was constructed as a meaningful tool within the representation of different lifestyle choices. This construction positioned the user within a specific lifestyle and positioned their mobile phone practices as a representation of their lifestyle and identity.

Extract one: Taken from the Apple UK webpage advertising the IOS 12 operating system for the Apple iPhone smartphones.

The first extract shows the conceptualisation of the mobile phone as a social hub which represents a social lifestyle.

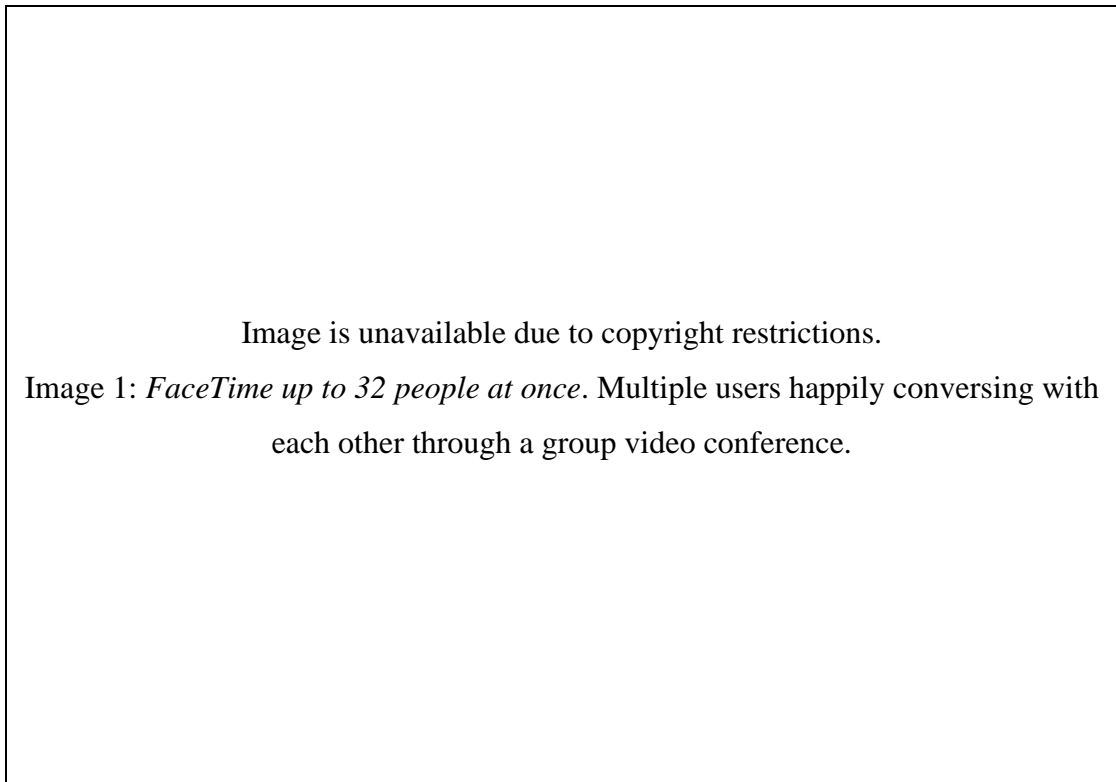


Image is unavailable due to copyright restrictions.

Image 1: *FaceTime up to 32 people at once.* Multiple users happily conversing with each other through a group video conference.

(Retrieved on 27 July 2019 from <https://www.apple.com/uk/ios/ios-12/>)

In this image the mobile phone and the content of its display was the central focus. The content of the display conceptualised the function of the mobile phone as a social hub and illustrated that the users on display were located in a network of social relations. The user of this mobile phone is positioned as a relational being who is located within their social network through their mobile phone which acted as a social hub to connect his social network digitally. Even though the people displayed may be in different geographical locations, the function of the mobile phone is portrayed as breaking down traditional organic barriers to social connection and bring the social interaction quality of people together within the space of the display. The users are depicted as smiling which represented the health and happiness evoked when they were connected to their social network and maintaining the health of their relationships. This positioned all users in the image as relational beings who enjoyed being located in their network

of social relations. Consequently, the function of the mobile phone is portrayed as an essential enhancement to a healthy social lifestyle which is central to the user's happiness because it provides the user with access to social networks at all times and can connect with one other or a group.

The construction of the mobile phone as an enhancement to a social lifestyle is further represented in the headline phrase 'FaceTime up to 32 people at once' which emphasises the potential volume of connectedness. This conceptualised the social potential of a wide network of relations this mobile phone can provide that may not be practical or desirable with face-to-face interactions. The reference to 'video and audio' suggested that the representations of the people are live moving images speaking as if in the same place as the user to enhance the human connection experience by simulating face-to-face interaction within the boundaries of the display. The text further conceptualised the accessibility of getting connected to other user's and the convenience of social interactions. The user's social relations appear to be contained within the device through which they can be continuously connected and maintained without the inconvenience of geographical location and time.

From this perspective the mobile phone can be construed as an enhancement to and representation of the user's social lifestyle. The user is positioned as a relational being who is sociable and can be continually connected and immersed in a network of social relations conveniently through their mobile phone. Mobile phone practices are positioned as breaking down barriers to social connection such as the practicalities of a group of people interacting face-to-face at the same geographical location. This implies that the user would be socially isolated and less sociable without their convenient social device.

Extract two: Taken from the Google Store UK webpage advertising the Google Pixel 3 and Pixel 3 XL smartphone memory.

The second extract shows the conceptualisation of the mobile phone as a travel assistant which represents an adventurous lifestyle involving the outdoors and travel.

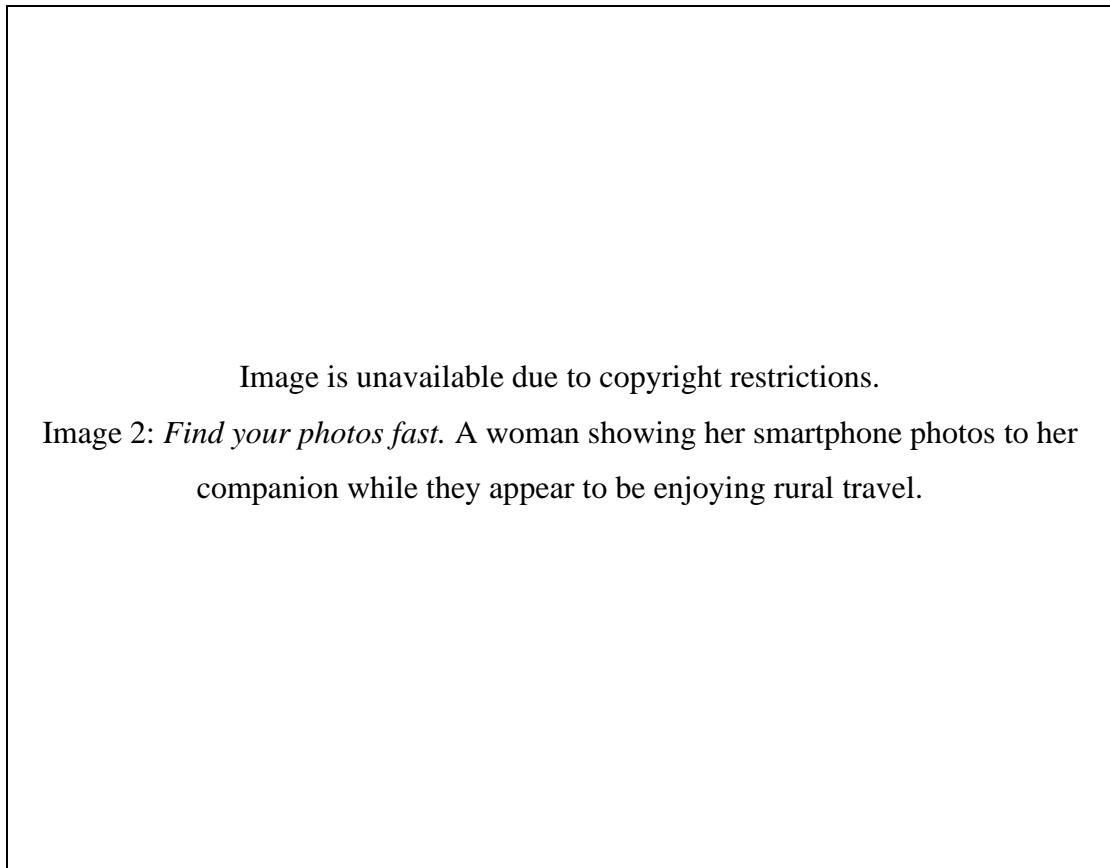


Image is unavailable due to copyright restrictions.

Image 2: *Find your photos fast.* A woman showing her smartphone photos to her companion while they appear to be enjoying rural travel.

(Retrieved on 27 July 2019 from https://store.google.com/gb/product/pixel_3)

This image displayed the mobile phone in the context of outdoor and countryside travel experience. The location of the user within the rural travel sphere positioned the user as an adventurous person connected with the organic world. The user is portrayed as happily using her mobile phone during her travel experience which conceptualised the device as a useful personal assistant which appeared to enhance her adventurous travel lifestyle experiences. The image of the mobile phone display revealed that, in this case, the mobile technology was being used to capture the user's selected experiences and to record her travel adventure as a photo diary. The photo diary record of her selected travel experiences portrays her in a variety of locations with other people. This depicts the photo diary as a record of the user's activities, places and relationships that she chose to record and can relive or remain situated within

through her mobile phone. This further suggests enjoyment can be derived from access to experiences and that not all lifestyle experiences are worthy of record.

The text highlighted the convenience of organising and finding photos with this device which represents organising and editing recorded experiences. The user is positioned as being enabled to organise her activities, relationships and places visited the way she chooses which may represent her lifestyle and identity. This suggests that lifestyle experiences and representations of identity may be placed in a hierarchy of priority. The user's adventurous lifestyle and identity appears to be contained and selectively organised within the device through photos of her experiences. The sharing of her edited experiences with her travel companion in the image represents the broader notion of sharing her edited lifestyle and identity more widely with other friends and people.

From this perspective the mobile phone is conceptualised as a representation of the user's adventurous travel lifestyle through which the user can relive or remain situated within their lifestyle experiences. The user is positioned as an adventurous person who has varied travel experiences and is happy and relational. Mobile phone practices are positioned as the ability to record, edit, and enhance the user's adventurousness lifestyle and identity which they can revisit with others to share their enhanced identity. This may be seen as satisfying the user's sense of self, enhancing their relationships within their social networks and building further relationships with others who share a similar lifestyle.

Extract three: Taken from the Samsung UK webpage advertising the Samsung Galaxy Note 9 smartphone performance.

This extract illustrates the conceptualisation of the mobile phone as an entertainment centre which represents an entertainment orientated lifestyle.

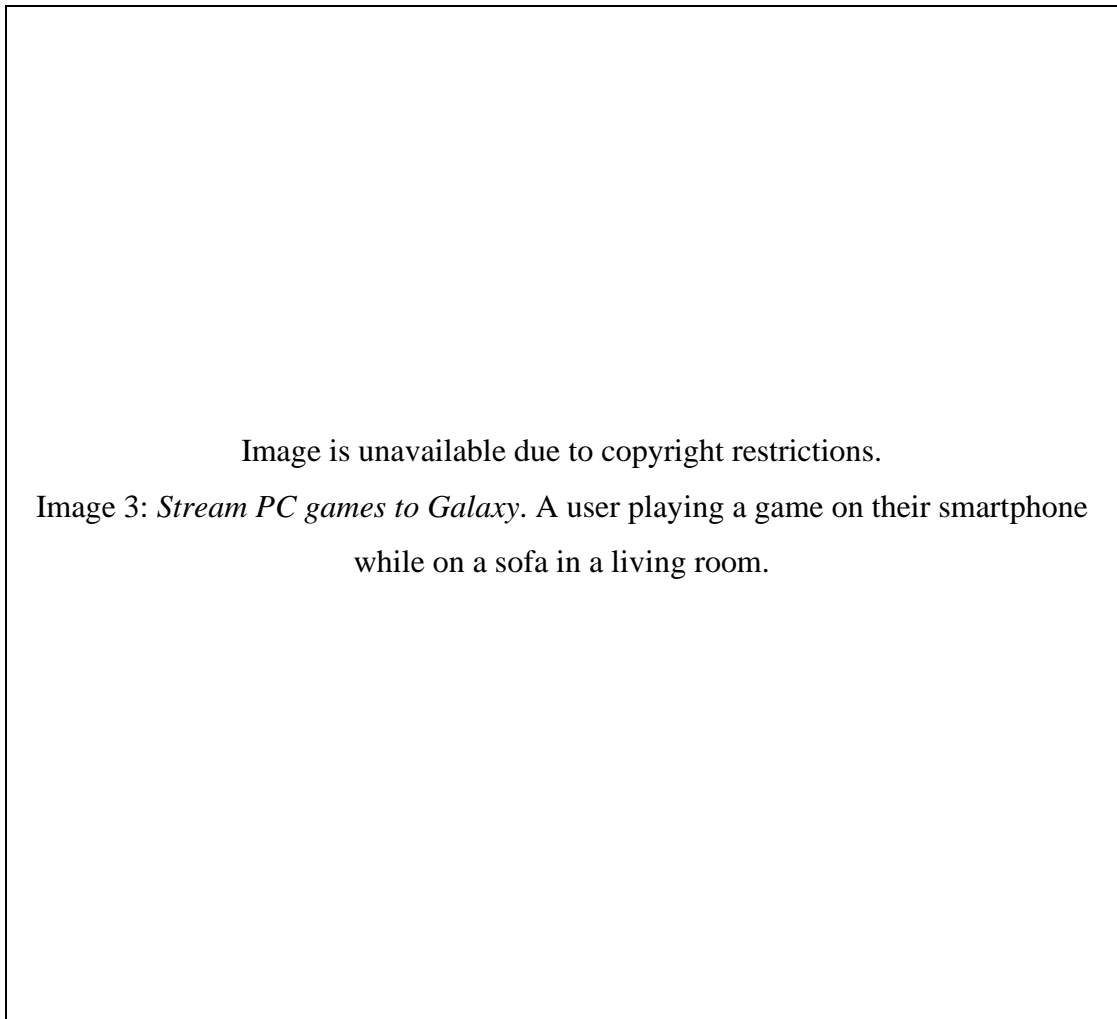


Image is unavailable due to copyright restrictions.

Image 3: *Stream PC games to Galaxy.* A user playing a game on their smartphone while on a sofa in a living room.

(Retrieved on 1 December 2019 from

<https://www.samsung.com/uk/smartphones/galaxy-note9/performance/>)

In contrast to the previous image, this image is located in the domestic sphere where the user is isolated and safely playing a game on their mobile phone. This illustration conceptualised the device as a handheld and portable entertainment centre, specifically a handheld gaming console in this case. This is representative of the pleasure and privacy the user can experience from using their mobile phone for convenient entertainment. The laptop on the table in the soft focused background portrayed the notion that the mobile phone can

replace the laptop for gaming. The notion of liberation from the tethers of the computer and being able to game where ever and whenever the user choses is further illustrated in the text above the image particularly with the phrase ‘get your game on without being tied to your desk’. A disconnect from the tethers of the laptop could also represent a difference in functionality between the work orientated laptop and the play orientated mobile phone which emphasises a separation between work and play. As such, the disconnection from the laptop represents a liberation form work and the responsibility of productivity in order to experience the pleasure associated with entertainment through the mobile phone conceptualised in the image. The safety of the comfortable environment and the user’s attention focused on the mobile phone display depicted a notion of freedom to become absorbed without distraction. The freedom and fun this offered presented the device as an opportunity to experience a lifestyle punctuated with the pleasure of convenient and absorbing entertainment experiences which were contained within the device.

The mobile phone is conceptualised as a representation of the user’s pleasure-seeking entertainment orientated lifestyle which liberated the user from work and responsibility and offers the user more choice. This conceptualisation positions the user as someone who is free to safely experience the pleasure of entertainment without distraction form real world responsibilities. This solitary position of the user contrasts with the previous extracts within this subtheme related to lifestyle type which emphasised the user’s position as socially connected and being out in the world.

6.3.1.2 Personalisation.

Further to the subtheme related to type of lifestyle, this subtheme illustrates that the mobile phone was constructed as a personalisable device which can be a representation of the user’s identity and self-improvement through their choices of device and accessories.

Extract four: Taken from the Apple UK webpage comparing the iPhone XS, XS max and XR smartphone models.

Extract four demonstrates the conceptualisation of the mobile phone as a range of personal choices for the prospective user which can represent their lifestyle and identity.

Image is unavailable due to copyright restrictions.

Image 4: A comparison of the Apple iPhone X range.

(Retrieved on 27 July 2019 from <https://www.apple.com/uk/iphone/compare/>)

This image displays a range of mobile phone models, in this case the range of iPhone X models, from which the prospective user can choose. This image, in the context of the Apple iPhone marketplace, conceptualises the mobile phone as a range of personal choices for the prospective user. The prospective user has the opportunity to select the model that suits their lifestyle requirements and their identity. The prospective user could align their identity with the Apple family rather than another brand and also align their self in relation to a number of time-typical trends of style and capabilities of the device range. Broadly, the range of mobile phones highlights the hierarchy in society which the user could use to represent their social status identity and aspirations through their mobile phone choice.

From this perspective the mobile phone is conceptualised as a potential representation of the user's lifestyle and identity through their choice of mobile phone within the range offered. The practice of choosing a mobile phone can represent selecting a lifestyle and identity statement. This positions the user as a member of a social hierarchy with the option to select a statement to represent their social status, lifestyle and identity.

Extract five: Taken from the Samsung UK webpage advertising the accessories for the Samsung Galaxy S8 and S8 Plus smartphones.

This extract shows the conceptualisation of the mobile phone as a personalisable component within a system of accessories which the user can use to construct a representation of their identity.

Image is unavailable due to copyright restrictions.

Image 5: *Accessories*. A range of mobile phone accessories for the Samsung Galaxy S8 range.

(Retrieved on 1 December 2019 from

<https://www.samsung.com/uk/smartphones/galaxy-s8/accessories/>)

This image displays a range of mobile phone accessories available to personalise the user's mobile phone and mobile phone experiences. This conceptualisation of the mobile phone as a component within an ocean of personalisable opportunities opens the notion of a new market from which the user can consume. From this perspective, the user has selected their mobile phone which best suits their lifestyle and identity, and then can personalise it further through additional purchases of accessories to make their mobile phone an even closer representation of their identity.

The text highlights the details of aesthetics and colour in the phrase 'colourful cases'. This conceptualises the mobile phone as a personalisable fashion accessory which could represent the user's identity through their aesthetic, fashion and style choices. This is distinct from the phrase 'keep charged on the go' which conceptualises the mobile phone as a source of freedom through an accessory which could represent the user's identity of busy and on the go. The notion of extended charge capabilities also suggests that a user needs to have their mobile phone to be with them and active at all times as if an indispensable extension to their lifestyle and identity. Further to this, the mobile phone with the relevant accessories was further conceptualised as a tool of productivity in the phrase 'level up your productivity with a range of tools'. The purchase of this accessory could represent the user's productive and enterprising

identity which further eludes to the mobile phone as a tool for self-improvement. The phrase ‘from protection to power’ promotes the notion that the mobile phone case could also represent a user who values protection of their mobile phone and so their unscathed identity. Also, the notion of ‘power’ could represent the empowerment of the user through the mobile charging capability offered by the purchase of the relevant accessory. The new market of mobile phone accessories clearly offers the tools to construct distinct identities which, in this case, relate to interests in aesthetics, independence, productivity and protection and self-improvement.

The mobile phone is conceptualised as a personalisable and indispensable component within a system of accessories which the user can consume from the new markets to construct their identity. From this perspective the practices of selecting a mobile phone and accessorising it are represented as constructing the user’s identity which reflects their social status and lifestyle. Broadly, the subtheme related to personalisation portrays the mobile phone as an extension to self.

6.3.1.3 Continual lifestyle development.

Progressing from the subthemes related to type of lifestyle and personalisation, this subtheme illustrates that the mobile phone was constructed as a continually developing technology which could represent the continual development of the user’s lifestyle and identity.

Extract six: Taken from the Apple UK webpage advertising the iPhone XR smartphone.

The sixth extract demonstrates the conceptualisation of the mobile phone as a continually developing technology which represents the continual development of the user’s lifestyle and identity.

Image is unavailable due to copyright restrictions.

Image 6: *Brilliant. In every way.* The latest technology developments of the iPhone XR.

(Retrieved on 27 July 2019 from <https://www.apple.com/uk/iphone-xr/>)

The conceptualisation of the mobile phone as continually developing technology is the focus of the text in this image. The phrase ‘longest battery life ever’ portrayed the notion that this version of the Apple iPhone has a longer battery life than previous versions of the iPhone. Previous extracts in this theme related to lifestyle portrayed the technology of a mobile phone as static within a hierarchical range of mobile phones and accessories. This phrase portrays battery technology as shifting rather than static. In the context of the advertisement, the concept of longer battery life is presumed to be more useful to the user in the form of extended social interactions, more travel experiences recorded and prolonged entertainment experience. The extended battery life may be useful to a user who wants to extend their independence and freedom from the tethers of power outlets within their developing on the go lifestyle. This construes this version of the iPhone was more useful to the user’s lifestyle than previous versions. The concept of technology development beyond previous versions of the iPhone is also represented in the phrase ‘Fastest performance’ which may be useful to enterprising users whose lifestyle requires more productivity to achieve their goals. The phrase ‘more security’

further promoted the concept of technology development which may be of use to users whose lifestyle has shifted to include more sensitive data accessible through their phone.

The continual development of mobile phone technology can be related to neoliberalism which demands continual consumption by the consumer, in this case the mobile phone user. The main technology developments promoted by the advertisement text are focused on independence, productivity and security which suggests that the manufacturer, Apple, considers these elements as important market demands by their users. This indicates that the mobile phone users who seek to maintain and improve their independence, productivity and/or security are the focus of the advertisement. From this perspective the continual development of mobile phone technology can be seen to align with the developing needs of the user's lifestyle. The phrase 'It's a brilliant upgrade' conceptualises the technology development as improvements which can align with the improvements in the brilliance of the user of this new mobile phone technology. Also, the concept of continual development and upgrades brings to the fore the need for upgrades or else older technology may hold back the user's lifestyle and identity if they do not subscribe to the capitalist mechanism of upgrades.

Through this type of advertisement about upgrades and technology development, the mobile phone is conceptualised as a continually developing technology which represents the continual development of the user's lifestyle and identity. The user is positioned as being able to maintain and upgrade the brilliance of their lifestyle and identity through the practice of upgrading their mobile phone. The neoliberal mechanism appears to capitalise on mobile phone user's continual construction and maintenance of their developing lifestyle and identity.

6.3.2 Empowerment.

A further theme that was developed related to empowerment. This theme is explored through three subthemes which relate to independence, productivity and security. Within this theme the mobile phone was conceptualised as an essential tool for the empowerment of the user. Mobile phone practices were positioned as enhancing the lifestyle and identity of the user who was positioned as empowered when using their mobile phone.

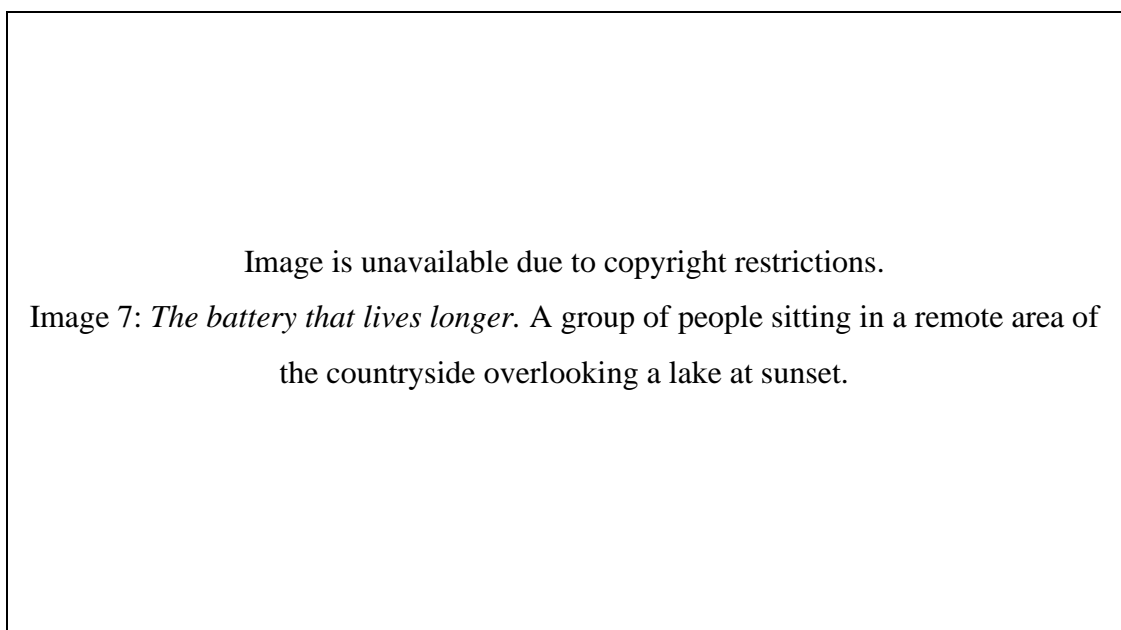
6.3.2.1 Independence.

The subtheme related to independence demonstrates that the mobile phone was constructed as a meaningful personal assistant within the user's experience of freedom from

the tethers of a conventional life without a mobile phone. This construction positioned mobile phone practices as a path to the user's independence and positioned the user as empowered to be independent.

Extract seven: Taken from the Sony mobile UK webpage advertising the Sony Xperia XZ Premium smartphone battery capacity.

The seventh extract shows the conceptualisation of the mobile phone as a personal assistant which can liberate the user from the tethers of conventional life.



(Retrieved on 27 July 2019 from

<https://www.sonymobile.com/gb/products/phones/xperia-xz-premium/battery/>)

The outdoor and remote context of the image served to illustrate the notion of independence and the extended freedom from the tethers of power supply and fixed location. The text referred to longer battery life which would allow the user 'to stay powered up throughout the day' and so remain connected to their world longer while experiencing their independent lifestyle and freedom. The text and image together represent the notion that a mobile phone, particularly with a long battery life, can facilitate the user's extended experience of independence and freedom from conventional life while remaining connected to their world. The peace and tranquillity of the image contrasts with the notion of a hectic life of schedules and responsibilities from which the user is liberated when using this mobile phone with an

extended battery life. The image of the group further represented a reconnection to a physical social lifestyle which can be stifled by the conventions of the current digital world. The distant the group have appeared to have travelled emphasises the extended freedom experience offered by this mobile phone. In the world portrayed here, the user can experience their propensity to be social and nomadic while remaining in contact with everything that their mobile phone connection has to offer them anywhere they choose. This also portrays the mobile phone as offering freedom to control connection and disconnection to conventional life.

The mobile is constructed as a meaningful assistant within the user's experience of their independence and freedom which can liberate the user from the tethers of conventional life. This construction positioned the user as empowered to be independent and free to roam while controlling their connection through their phone wherever they are.

Extract eight: Taken from the Apple UK webpage advertising the display of the iPhone XR and XS smartphones.

Extract eight illustrates the conceptualisation of the mobile phone as a personal assistant which enhances the user's experience of their independence.

Image is unavailable due to copyright restrictions.

Image 8: *A new level of water resistance.* A woman using her mobile phone at night located in an urban environment while sheltering from the rain under her umbrella.

(Retrieved on 27 July 2019 from <https://www.apple.com/uk/iphone-xr/display/>)

Further to the previous image, this image is located outdoors but at night during rain where the user is physically isolated within this uninviting context from which she appears to need protection. The isolation of the user represents her independence untethered from the constraints of a fixed location and the face-to-face company of others. However, the apparent absence of the protection offered by the user being inside a lit home or office and being in the company of others represents the vulnerability that an independent lifestyle can expose. The image shows that the user's protection from the rain is offered by her umbrella and the mobile phone's protection is offered by the phrase 'a new level of water resistance' which highlights their similarity. The function of the robust mobile phone is portrayed to be reliable in any condition and can support the user during the demands of their lifestyle. Further to this, the light of the mobile phone, in contrast to the dark environment, and the user's connection to her mobile phone through her gaze constructed the mobile phone as the meaningful protection which assisted the user to experience her independence with reassurance. The image and text represent the robust function of this mobile phone which is related to the robustness of the independent mobile phone user who is supported and protected by the connection through this reliable mobile phone. In the world portrayed here, the user is free to remain connected to their world whatever their lifestyle demands without the constraints of a fixed and secure locations and the physical company of others.

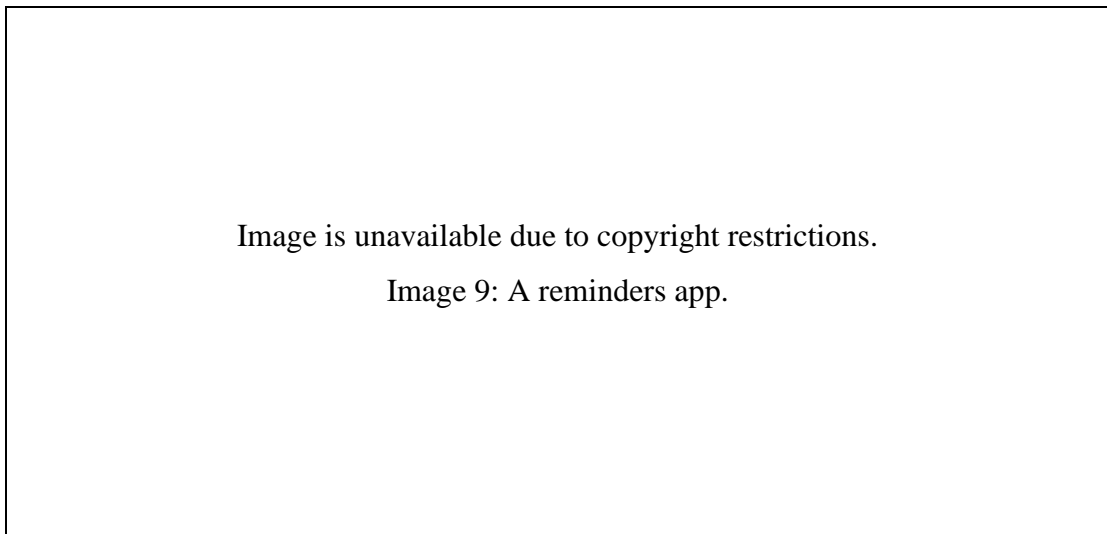
From this perspective the mobile phone is conceptualised as a meaningful assistant which enhances the user's experience of their independent lifestyle. The user is positioned as independent, free to roam and able to use public space as she would use her personal space due to the reassuring protection that the reliable mobile phone connection is conceptualised to offer.

6.3.2.2 Productivity.

Further to the subtheme related to independence, this subtheme illustrates that the mobile phone was constructed as a personal assistant which can enhance the user's productivity and self-improvement. Mobile phone practices were positioned as productivity enhancement and the user was positioned as empowered to be efficiently productive.

Extract nine: Taken from the Samsung UK webpage advertising the intelligence of Samsung Galaxy S8 and S8 plus smartphones.

This extract demonstrates the conceptualisation of the mobile phone as a personal assistant which can enhance the life management productivity of the user.



(Retrieved on 1 December 2019 from

<https://www.samsung.com/uk/smartphones/galaxy-s8/intelligence/>)

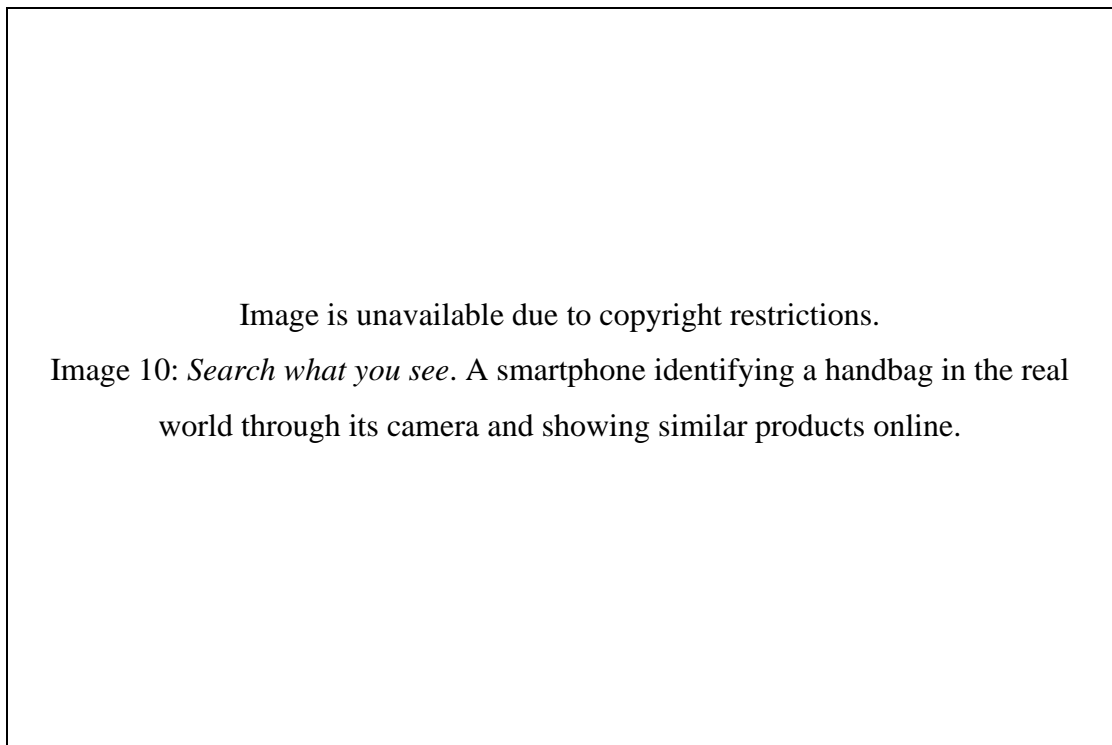
This image and text illustrate the productive power of the mobile phone enhanced by apps, in this case an app related to reminders. The phrase ‘all your reminders are just a swipe away’ portrayed the notion that the user had a schedule of tasks to achieve and their mobile phone provided a convenient method to record and access their schedule of activities. This located the user in a productive lifestyle and constructed the function of the mobile phone as the personal assistant that can help organise the user’s life tasks of their busy life portrayed in the advertisement. The productivity enhancement conceptualisation of the mobile phone is further illustrated by the phrase ‘so you don’t forget anything important’. This text positioned the user as potentially forgetful and unproductive without their mobile phone enhanced with this app which can enhance the memory and productivity of the user and improve their life. The mobile phone, as the user’s personal assistant, is portrayed as offering services which can liberate the user from some of the cognitive demands of life management so that they can be free to focus on other activities they may enjoy. Their mobile phone practices were positioned as extending the reach of the user toward a satisfactory productive identity and enabling them to be free to enjoy other aspects of their lifestyle.

This illustration of the mobile phone constructed as the user’s personal assistant which can enhance their life management productivity locates the user within a productive life management lifestyle. This notion positions the user as empowered to be efficiently productive

in their life management when connected to their mobile phone which liberates them from some cognitive demands required for life management. Their mobile phone practices were positioned as the source of their productive life management productivity and productive identity.

Extract ten: Taken from the Google Store UK webpage advertising the Google Pixel 3 and Pixel 3 XL smartphone enhanced reality capabilities.

Extract ten illustrates the conceptualisation of the mobile phone as a personal assistant which can enhance the user's information base productively.



(Retrieved on 27 July 2019 from

https://store.google.com/gb/product/pixel_3#overview-ar-story)

This image and text depict the productive power of the mobile phone in relation to information seeking. The image of the mobile phone and its display illustrated the mobile phone identifying a handbag and locating it on a shopping website. This conceptualises the mobile phone as a personal assistant which can identify an object, seek information about it and apply it to a product for sale. In this world the mobile phone can make the user's life easier by reducing the demands and stress on the user to achieve their goals efficiently and present

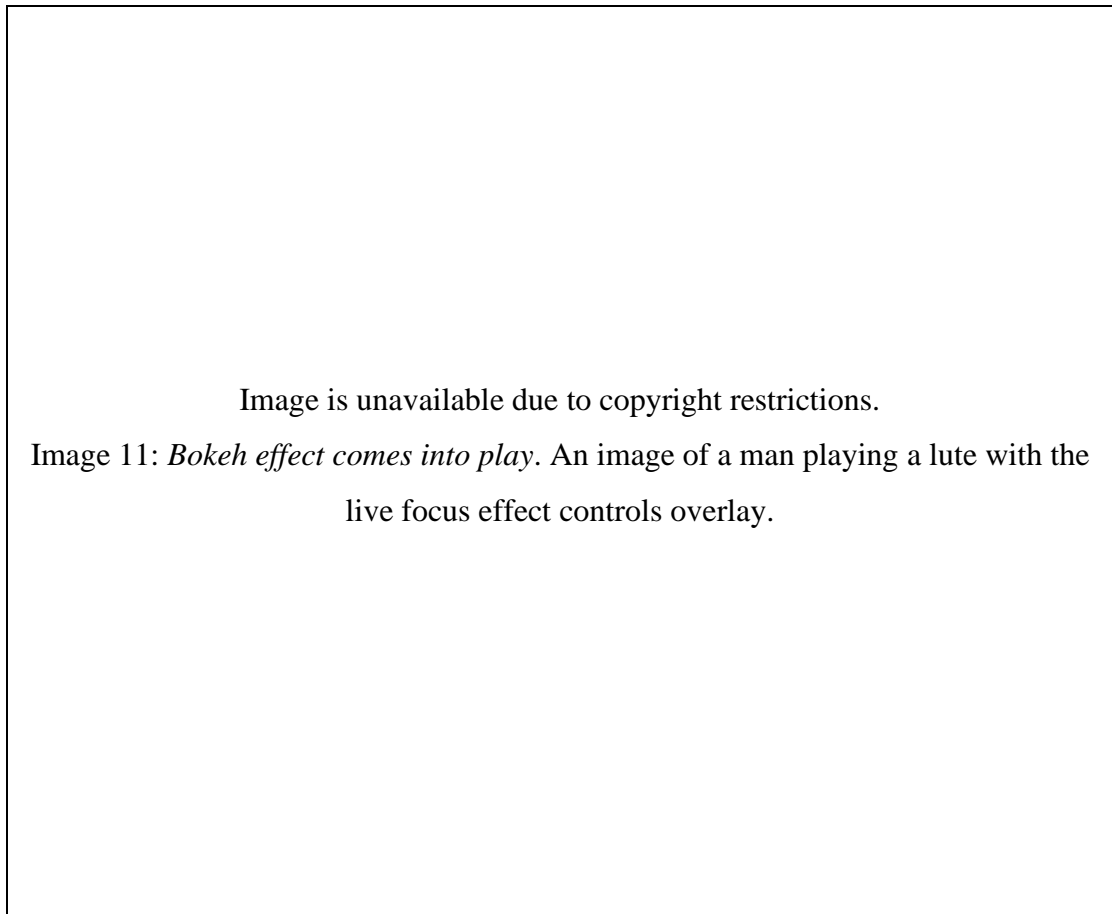
the reward of instant satisfaction. This efficiency buys the user time and capacity which they can spend on other activities. The concept presented in the image located the user within their lifestyle of fashion and consumerism. This positioned the user as a consumer who can assemble and maintain their identity through their efficient access to the marketplace provided by their mobile phone. The productive and efficient form of shopping portrayed in the image could be mutually beneficial to the needs of the consumer and the continual consumption needs of neoliberal capitalism. This highlights the function of the mobile phone as a means of self improvement

Further to this, the phrase 'identify landmarks, plants and animals' portrays the wider range of information seeking potential of the mobile phone. This conceptualisation of the mobile phone as a versatile information seeking personal assistant positioned the user as potentially ignorant without their mobile phone which could enhance their information base and identity as knowledgeable. From this perspective, the mobile phone functioned to support the user's brain in order to reduce the cognitive demands on the user and process the world for the user to understand it efficiently.

The mobile phone is conceptualised as a personal assistant which can enhance the user's information base. The user is located within a productive information seeking lifestyle and positioned as empowered to enhance their information base productively when connected to their mobile phone. Their mobile phone practices are positioned as the source of their information base and knowledgeable identity.

Extract eleven: Taken from the Samsung UK webpage advertising the Samsung Galaxy Note 8 smartphone camera.

The eleventh extract shows the conceptualisation of the mobile phone as a personal assistant which can amplify the user's level of expertise and productivity.



(Retrieved on 1 December 2019 from <https://www.samsung.com/uk/smartphones/galaxy-note8/camera/>)

This image represents the enhanced capture of the user's experience of a guitarist. The text reveals that the 'live focus' feature of the mobile phone camera allowed the user to enhance their photo through blurring the background to make the 'subject stand out'. The image and text conceptualised the mobile phone as a personal assistant which can enhance the user's creative work and amplify their apparent level of photography expertise. This construct located the user within a creative lifestyle which involved expertise and positioned them as potentially lacking the relevant level of skill to create such an image without their mobile phone. From

this perspective the function of the mobile phone is to extend the creative skill of the user toward creative satisfaction and enhance the user's identity and marketability as a skilled photographer.

Further to this, the concept of photo enhancement relates to the user enhancing and editing their captured experiences. The photo enhancement can allow the user to highlight aspects of their experience and blur other aspects which hold less interest. This suggests that it is not only the user's access to their experiences that gives enjoyment, but also the selected focus of their experiences. These edited experiences can be shared with others to construct an enhanced view of the experience and the identity of the user.

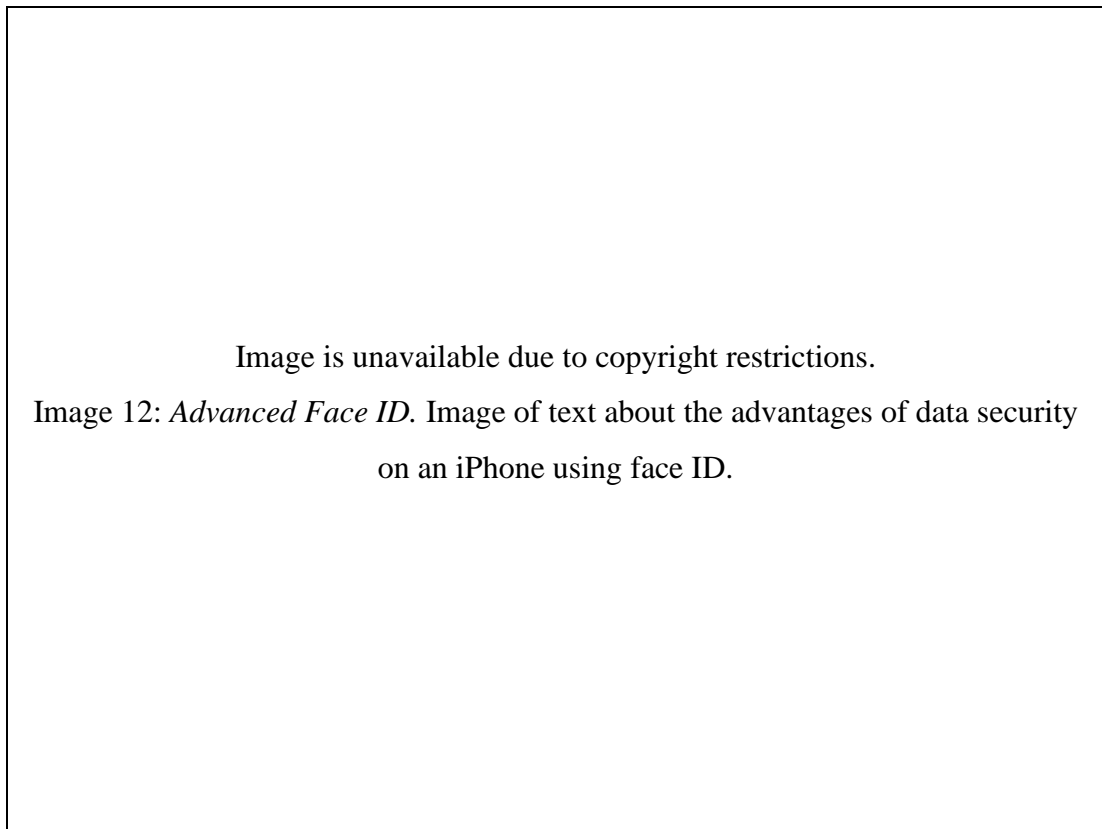
This illustration constructs the mobile phone as a personal assistant which can amplify the user's level of expertise. This concept positions mobile phone practices as the source of the user's creative skill and enhanced experiences. From this perspective the user is positioned as empowered to experience and market their enhanced expertise and creative identity when connected to their mobile phone.

6.3.2.3 Security.

Progressing from the subthemes related to independence and productivity, this subtheme illustrates the mobile phone constructed as a personal assistant which can enhance the security of the user's data stored on their mobile phone. Mobile phone practices related to security were positioned as an enhancement to the security of the user's data. The user was positioned as empowered to control accessibility to their secure data stored on their mobile phone through their identity which was integral to their mobile phone.

Extract twelve: Taken from the Apple UK webpage advertising the iPhone XS smartphone.

This extract demonstrates the conceptualisation of the mobile phone as a personal assistant which can enhance the security of the user's data stored on their mobile phone which is conveniently accessible to the user through their identity.



(Retrieved on 27 July 2019 from <https://www.apple.com/uk/iphone-xs/>)

The text promoted the notion of security for a mobile phone and that the user was empowered to control the security of their data. The phrase 'You can unlock your iPhone' constructed the function of the mobile phone as a lockable safe which can keep content secure. This positioned the user as empowered to keep their data safe when it is contained within, or accessible through, their mobile phone. Further to this, the user is empowered to securely 'pay for things' through their mobile phone which portrayed the notion that their bank details would be secure also. This representation of a secure mobile phone emphasised by the phrase 'Advanced Face ID' can reassure the user that their personal data and content is in safe hands.

However, the notion of security which keeps others out brings to the fore accessibility for the user. The reference to 'your face is your password' positioned the user as uniquely

empowered to access the content and portals accessible through their mobile phone. The concept of 'Face ID' represents a notion of convenience for the user in the form of freedom from remembering passwords and associated time and cognitive demands. The portrayal of maximum security with minimum effort from the user facilitates a busy and fast-paced lifestyle in which the user is empowered to go about their life with less distractions associated with the security of their mobile data.

Further to this, the notion of accessibility through 'Face ID' links the identity of the user to their mobile phone which can operate only in the presence of the user's identity to whom the mobile phone is linked. From this perspective, the individuality of the user's personalised mobile phone and content is emphasised and can be seen as a reflection of the user. By locking others out, the user is empowered to stake a claim on their unique mobile phone and gain recognition from others for this distinction.

The mobile phone is constructed as a personal assistant which can enhance the security of the user's data and portals accessible through their mobile phone. This concept positioned the user as empowered to control accessibility to their secure data stored on their mobile phone through their identity which is integral to their mobile phone. This relates to the user's self-improvement.

6.3.3 Idealisation.

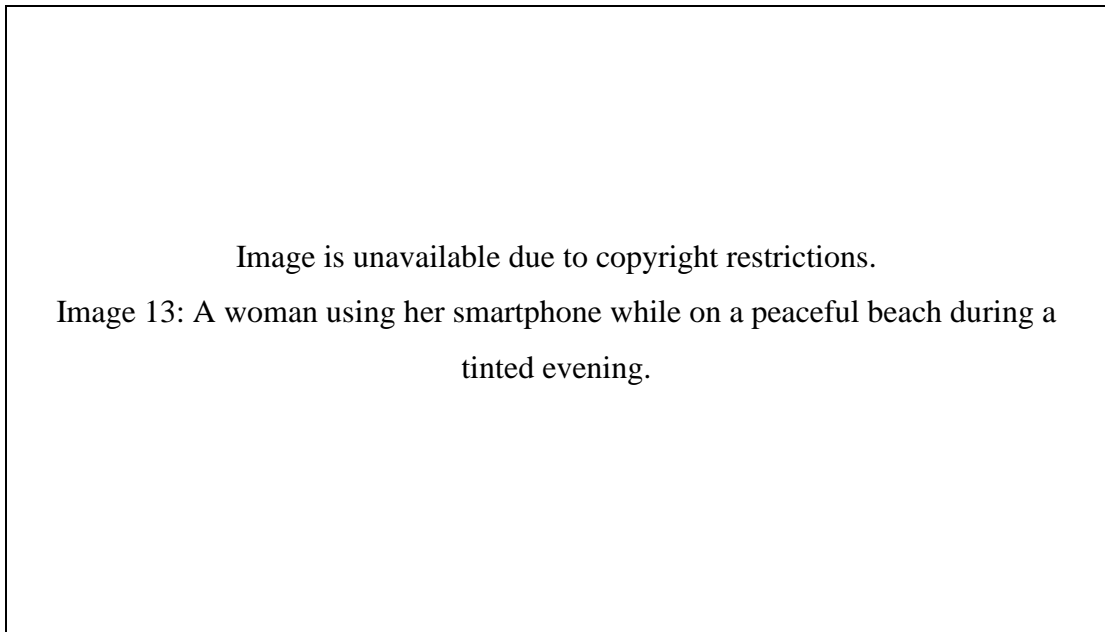
The final theme presented in this analysis is related to idealisation. This theme is explored through three subthemes which relate to idealised world, idealised independence and idealised identity. Within this theme the mobile phone was conceptualised as a personal filter through which the user could idealise their lifestyle and identity experience. The user was positioned as the central focus of their idealised experience.

6.3.3.1 Idealised world.

This subtheme demonstrates that the mobile phone was constructed as a personal filter through which the user could be immersed in an idealised version of their world. The user was positioned as central to their idealised experience of their world.

Extract thirteen: Taken from the Huawei UK webpage advertising the Huawei P20 smartphone.

This extract shows the conceptualisation of the mobile phone as a personal filter through which the user can be immersed in an enhanced environment.



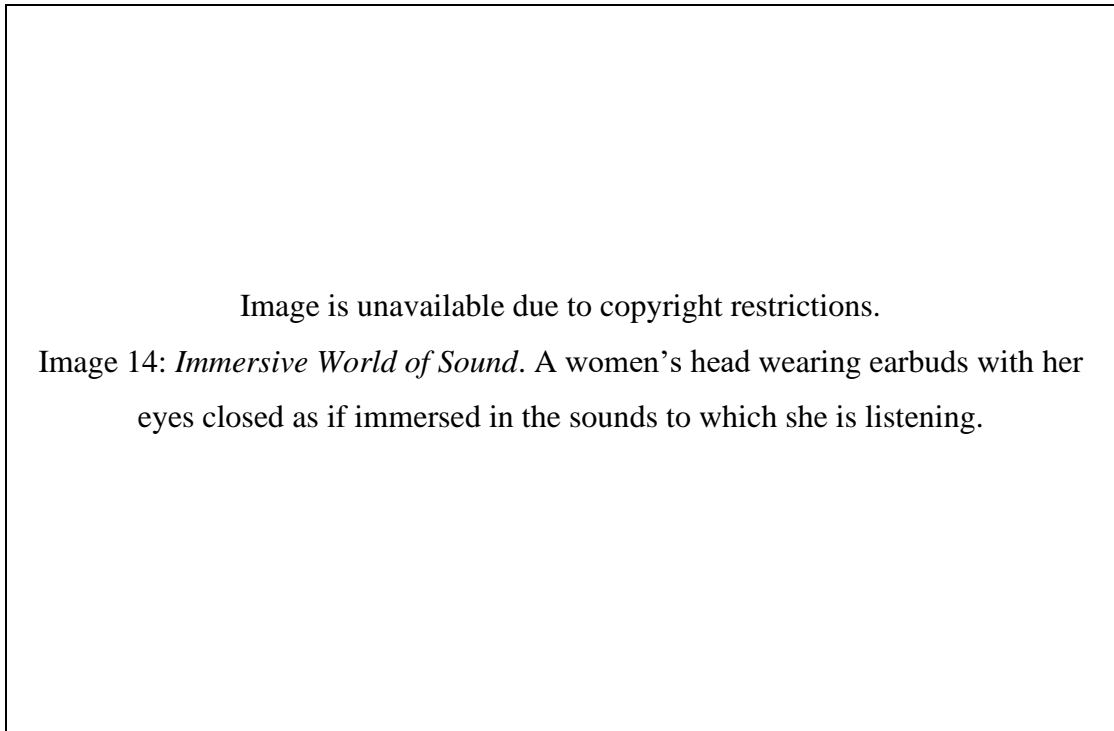
(Retrieved on 27 July 2019 from <https://consumer.huawei.com/uk/phones/p20/>)

This image focused on a mobile phone user who is immersed within the idyllic setting of a peaceful beach in the cool of a tinted evening. The mobile phone user is located in this idealised environment free from the hustle of crowds and free from the tethers of responsibilities and distractions of conventional life. Her isolation and her focus on her mobile phone in this idealised context conceptualised the function of the mobile phone as her travel companion that was the central source of this idealised moment by filtering out conventional obligations. From this perspective the user is positioned as independent and free to be present in this ideal public space as she would be in her personal space due to her connection with her mobile phone.

Through this augmented perspective, the mobile phone is constructed as a personal filter for the provision of independence within an idealised world which can eliminate the responsibilities of conventional life. The user is positioned as the focus of their experience which can be idealised through their mobile phone as a travel companion.

Extract fourteen: Taken from the Honor UK webpage advertising the Honor 20 smartphone.

Extract fourteen illustrates the conceptualisation of the mobile phone as a personal filter through which the user can be immersed into enhanced entertainment which liberates the user from the distractions of their conventional life.



(Retrieved on 24 August 2019 from <https://www.hihonor.com/uk/product/honor-20>)

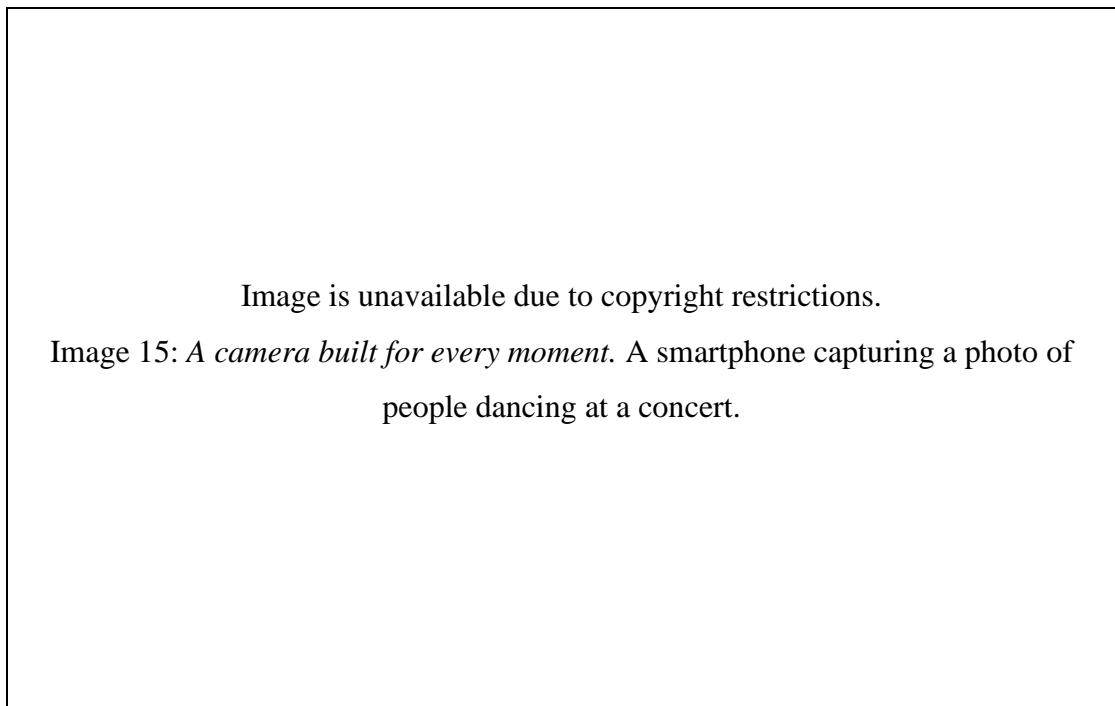
This image and text focused on the idealised sound quality sourced through the Honor 20 smartphone. The headline phrase of 'Immersive world of sound' conceptualised the sound quality sourced through the mobile phone as an immersive experience. This is further supported by the phrase 'Immerse yourself in a world of sound like never before' which portrayed the notion that the sound quality is uniquely immersive, and that sound is its own environment. The immersive environment of sound is symbolised in the image by the use of the light orbs which surround the user who is wearing her earphones. Her closed eyes represents further immersion in her personal world of sound through the elimination of visual distractions. In this world of sound portrayed here, the focus is on the individual user reaching within to be transported to their personal space and cut off from the hassles and connections of the conventional world which is located outside of the user. From this perspective technology and

the user can be seen as integrated through the deep connection of the technology with the user's senses. The idealised immersion into a world of sound by the user conceptualises the sound experience as beyond real which enables the user to escape from the responsibilities and distraction of the user's conventional world.

From this enhanced perspective, the mobile phone is constructed as a personal filter through which the user can be immersed into a world of enhanced entertainment. The user is positioned as integrated with the technology which enhanced their inward immersive entertainment experience and enabled escape from the distractions of the user's conventional life located outside of the user.

Extract fifteen: Taken from the Samsung UK webpage advertising the Samsung Galaxy S8 and S8 plus smartphones.

The fifteenth extract demonstrates the conceptualisation of the mobile phone as a personal filter through which the user can capture an idealised version of their experiences.



(Retrieved on 1 December 2019 from <https://www.samsung.com/uk/smartphones/galaxy-s8/>)

This image presents an idealised record of an emotionally charged experience captured by the user on their mobile phone. The captured experience within the boundaries of the mobile phone display is sharply focused and well-lit which is contrasted with the hazy and dimmer

representation of real life presented outside of the display boundaries. The fleeting experience of elation is ideally framed and frozen in time. The image represents the focus on the user's brief but meaningful experience and the elimination of ordinary life distractions. The advertisement portrays lifestyle experiences as worthy of capture and that pleasure can be derived from reliving these experiences through access to the frozen moment. The portrayal further suggests that only select moments of experiences are worthy of capture and these moments need to be enhanced to distinguish these special moments from ordinary life experiences. This enhanced capture of the user's world can represent the enhanced lifestyle and identity of the user which can be projected to others through sharing. The function of the mobile phone is conceptualised as the filter which can capture, edit and present the perfect moment of an ideal experience frozen as visual memory which can be viewed repeatedly over time and shared with others without distortion. The text 'Capture life as it happens with the Galaxy S8 and S8+ cameras', conceptualised the idealised capture of fleeting experiences by the user as possible with this mobile phone which implied that it was not possible without this mobile phone.

From this perspective the mobile phone is conceptualised as a personal filter which enables the user to capture and idealise their meaningful experiences. This concept positioned the user as immersed within an idealised world on the condition that they are empowered to edit and enhance selected life experiences. The idealised version of the user's world can represent idealised versions of their lifestyle and identity which can be shared with others.

6.3.3.2 Idealised independence.

Further to the subtheme related to idealised world, this subtheme shows that the mobile phone was constructed as a personal filter through which the user could be liberated from the practical tethers of life and consequences. The user was positioned as the focus of their idealised experience of independence and as freely achieving their goal without practical hindrances or consequences.

Extract sixteen: Taken from the Samsung UK webpage advertising the Samsung Galaxy Note 8 smartphone camera.

This extract illustrates the conceptualisation of the mobile phone as a personal filter through which the user can be liberated from the practical constraints which can hinder their achievements.



(Retrieved on 1 December 2019 from <https://www.samsung.com/uk/smartphones/galaxy-note8/camera/>)

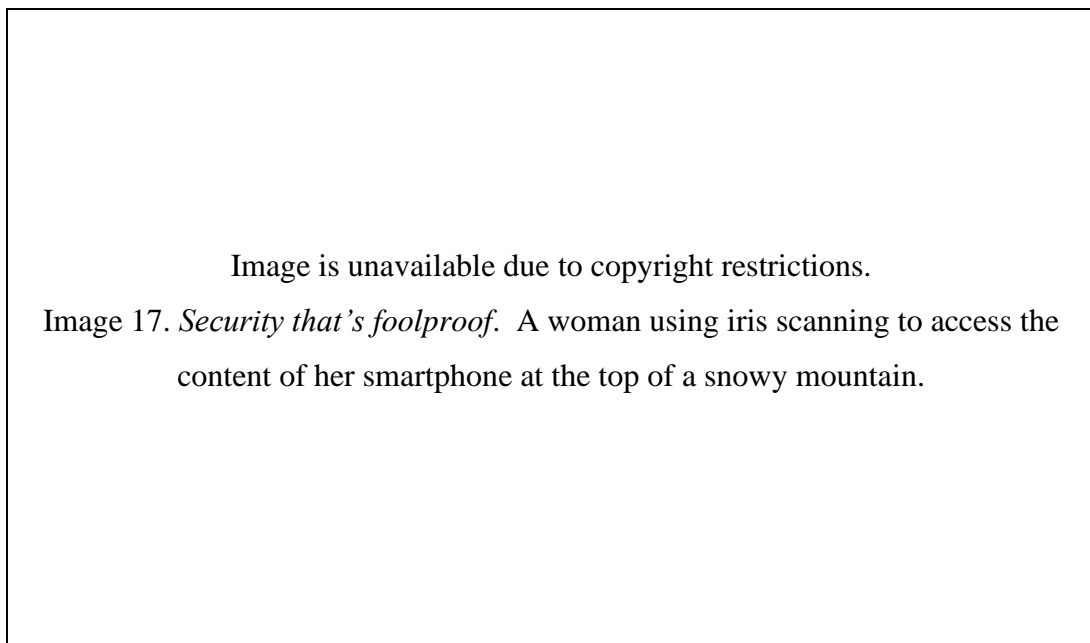
This image focuses on the content of the mobile phone display which depicts the capture of a happy experience of the user with friends while enjoying the freedom of a cycling trip. The freedom experience is idealised through the representation of perfect weather, which frees the cyclists from discomfort, and no representation of how the cyclists got to this point, which frees the group from practical responsibilities. Also, they appear to be free from the practicalities of the fitness training required to achieve this moment and liberated from the tethers of the schedule of conventional life. Only the moment of enjoyment and achievement is associated with the mobile phone. This suggests that the unrealistic notion of instant goal achievement is desirable while the practical investments of time and effort are undesirable and need to be edited out of the user's idealised lifestyle which should be independent of these tethers. This representation of the user's idealised experience of freedom and independence associates the mobile phone with the user's liberation from the practical tethers of getting to their moment of achievement. In the world portrayed here, the mobile phone can function as a

personal filter through which the user can experience the satisfaction of achievement instantly and edit out the practical investment of time and effort from their lifestyle.

Through this idealised perspective, the mobile phone is constructed as a personal filter in the provision of independence and freedom which can liberate the user from the practical constraints to achieving their goals. This conceptualisation of the mobile phone positions the user as the focus of their idealised experience of independence. They are free to achieve their desirable goals and empowered to edit out the undesirable elements of their lifestyle. This position can serve to enhance their independent and goal achieving identity.

Extract seventeen: Taken from the Samsung UK webpage advertising the Samsung Galaxy S8 and S8 plus smartphones.

Extract seventeen shows the conceptualisation of the mobile phone as a personal filter through which the user can be liberated from the risk to safety and security.



(Retrieved on 1 December 2019 from <https://www.samsung.com/uk/smartphones/galaxy-s8/>)

Further to the previous image which represented idealised goal achievement without investment, this image represents idealised goal achievement without consequences. This image focused on a mobile phone user who has achieved their goal but is physically isolated in a breath-taking environment of mountainous altitude and extreme cold temperature. The dangerous environment represents a threat to the user's safety who requires protection.

However, the user is represented as confidently smiling at their success within the extreme situation but with disregard for the consequences of risk. This portrayal of independence and goal achievement is underpinned by the unrealistic notion that goals can be achieved without consequences such as risk. This suggests that the unrealistic notion of goal achievement without the hindrance of risk is desirable and risks associated with goal achievement need to be edited out of the user's idealised lifestyle which should be free of undesirable consequences. This portrayal of the user's idealised experience of independence and freedom associates the mobile phone with the user's liberation from the consequences of goal achievement. From this perspective, the mobile phone can function as a personal filter through which the user can experience the satisfaction of goal achievement and edit out undesirable consequences such as risk and concerns of safety. Removal of these distractions can appear to reduce the cognitive load of the user. Of course, this is an idealised portrayal of independence and goal achievement which is unrealistically suggesting that the user can disregard their safety in the real world.

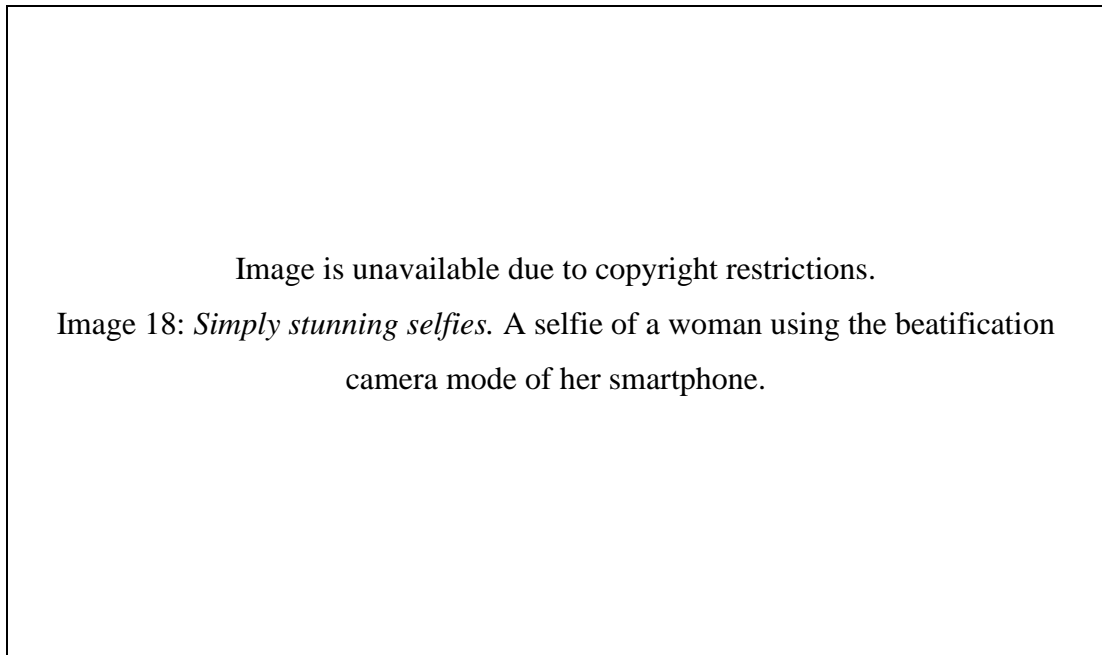
From this extreme perspective, the mobile phone is conceptualised as a personal filter in the provision of independence and freedom through which the user can be liberated from the consequences of goal achievement. This concept positioned the user as free to achieve their desirable goals and empowered to edit out the undesirable consequences of their lifestyle. This position can enable the user to enhance their independent and goal achieving identity.

6.3.3.3 Idealised identity.

Progressing from the subthemes related to idealised world and idealised independence, this subtheme shows that the mobile phone was constructed as a personal filter through which the user could enhance their identity. The user was positioned as an entrepreneur of the self who is empowered to enhance their inadequate identity to be marketable in the neoliberal digital age.

Extract eighteen: Taken from the Motorola US webpage advertising the Motorola Moto G6 play smartphone.

The eighteenth extract shows the conceptualisation of the mobile phone as a personal filter through which the user can idealise their visual identity.



(Retrieved on 27 July 2019 from <https://www.motorola.com/us/products/moto-g-play-gen-6>)

This image represents the idealised portrait of the user. Within the text, the phrase ‘simply stunning selfies’ constructs the notion that the user could appear ‘stunning’ with the use of this mobile phone to create an idealised identity in the form of an idealised self-portrait. This notion of an idealised self-portrait is represented further in the phrase ‘beautification mode, which smooths skin and reduces blemishes and wrinkles’. The text conceptualises wrinkles and blemishes as imperfections which can interfere with the desirable image of beauty. This positions people with blemishes and wrinkles as inadequate and in need of beautifying. The notion of a need for ‘beautification’ locates the user in a modern social world which is aesthetically orientated. The function of the mobile phone is portrayed as the solution to the constructed problem of a less than beautiful image of identity. The mobile phone can provide a process of ‘beautification’ to edit and idealise the user’s identity which they can display and share with others. This empowers the user to have control of their appearance at all times to project a marketable identity within an aesthetically orientated social world.

Through this beautifying perspective, the mobile phone is constructed as a personal filter through which the user can enhance their visual identity for display. Through this construct, mobile phone practices are positioned as improving the visual identity of the user who is positioned as an entrepreneur of the self empowered to enhance their inadequate identity to be marketable in the aesthetic orientated neoliberal digital age.

Extract nineteen: Taken from the HTC US webpage advertising the HTC 10 smartphone camera.

The final extract demonstrates the conceptualisation of the mobile phone as a personal filter through which the user can idealise their social identity.

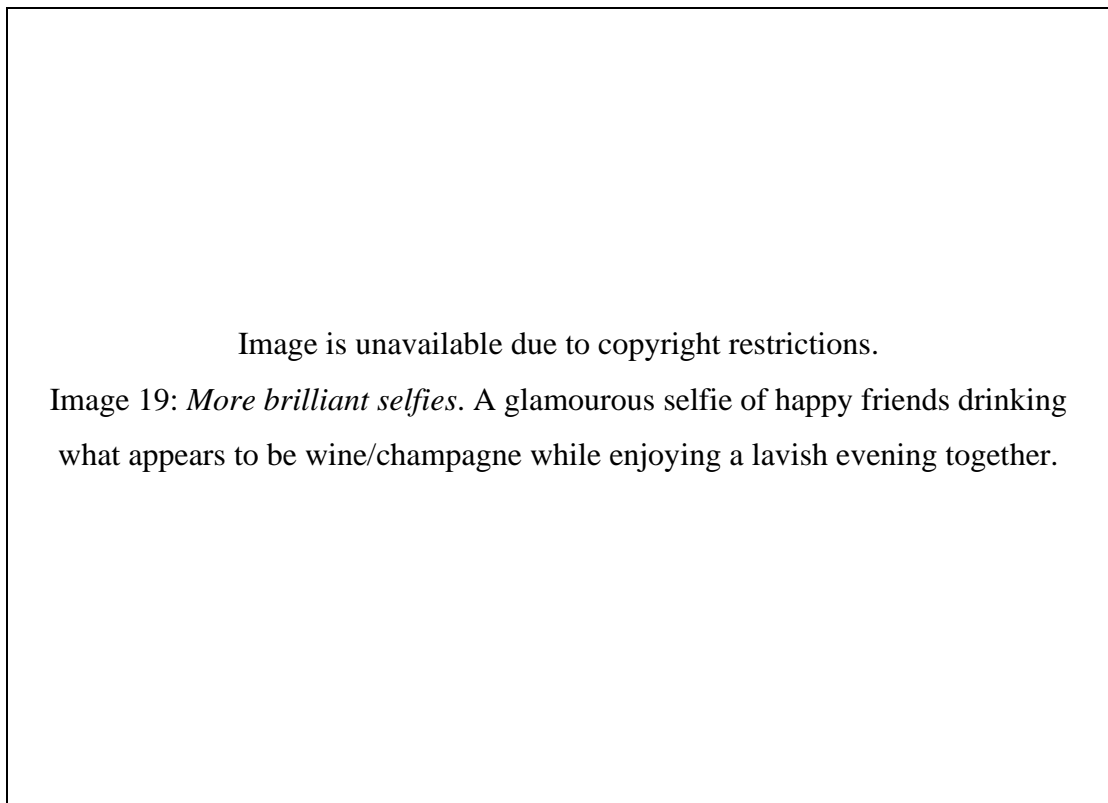


Image is unavailable due to copyright restrictions.

Image 19: *More brilliant selfies.* A glamorous selfie of happy friends drinking what appears to be wine/champagne while enjoying a lavish evening together.

(Retrieved on 24 August 2019 <https://www.htc.com/us/smartphones/htc-10-camera/>)

Further to the previous image which represented the idealised visual identity of the individual user, this image represents the idealised social identity of the user. The image locates the user within a glamorous setting and an opulent social lifestyle. Within this idealised context the user is positioned as glamorous, affluent and socially successful. The notion of an opulent social identity is positioned as desirable by the image and further supported by the

headline phrase ‘More brilliant selfies’. This suggests a relationship between the opulence and brilliance such that a less opulent social life may represent a less ‘brilliant’ social identity. The portrayed relationship between opulence and brilliance locates the user in a modern social world in which social success is wealth orientated. The function of the mobile phone in the image is conceptualised as to capture this moment of idealised social identity when the user is living a brilliant aspect of their life. Through the capture, selection and editing of the user living their best lifestyle, the user is empowered to share and promote a specific view of their social lifestyle which is marketable within a wealth orientated social world. Further to this, the phrase ‘better selfies every time’ constructs the notion that the user can be represented more brilliantly each self-portrait captured. The advertisement implies that if the user wants to portray or share an idealised version of their brilliant social identity then they will need this mobile phone.

From this perspective the mobile phone was constructed as a personal filter through which the user can enhance their social identity which can be displayed. This conceptualisation the mobile phone positioned mobile phone practices as selectively capturing and editing the best of the user’s lifestyle to promote and share an idealised version of their lifestyle and identity. The user is positioned as an entrepreneur of the self empowered to enhance their social identity to be marketable in a wealth orientated neoliberal digital age.

6.4 Discussion

The thematic analysis of website-based advertising of mobile phones accessible during 2019 by people living in the UK developed three main themes related to lifestyle, empowerment and idealisation. The themes represented salient narratives through which the mobile phone appeared to be broadly constructed as a lifestyle representation, an essential source of empowerment and a filter to idealise the user’s lifestyle and identity.

The advertisements’ conceptualisation of the mobile phone as an essential assistant which can help the user to enhance their experience of their lifestyle and sense of identity positioned mobile phone practices as enhancing the lifestyle and identity experience of the user. This could be achieved through social usage (e.g. social media) or process usage (e.g. recording life events, entertainment). Also, the mobile phone and practices were positioned as representations of the user’s lifestyle and identity. The conceptualisation as essential assistant positioned the user as free to inhabit and enhance a selection of lifestyles through their mobile phone and promote their identities such as those related to social, adventure and entertainment. The mobile phone not only represented freedom for the user to do the activities that suited

them, but also organise their memories of their experiences to write their own story and control how it is presented. From this perspective, the mobile phone was essential to constructing and maintaining the users desired identity. This can be seen to appeal to the notion of a relationship between identity and mobile phone practices proposed by studies such as Campbell (2006), Walsh and White (2007) and Walsh et al. (2011). The user was further portrayed as a social being who could be deeply connected to, and control, their social network through their phone more so than in their physical social world. The notion of social people in a network of relations was presented as normal and desirable for a happy and healthy life. The concept of being deeply embedded in a social network appeals to the notion that people are relational beings who construct their identity relative to others within a network of relations (Gergen, 2009). Further to this, the personalisable and continual development concepts of the mobile phone were portrayed as normal parts of contemporary self-improvement and identity development within a social hierarchy.

The conceptualisation of the mobile phone as an essential source of empowerment for the user positioned mobile phone practices as practices of empowerment which can be used to enhance the lifestyle and identity of the user. The user was positioned as empowered to be independent, productive and secure when using their mobile phone which were depicted as desirable and essential to modern living. This position relates to an enterprising self who strives for fulfilment through achievement and seeks to act on their self to become that which they desire (Rose, 1998). The notion of independence in relation to the mobile phone promoted by advertising was found by Campbell (2006) such that teen focused representations of this relationship depicted freedom to remain connected to friends while continuously mobile and independent of parents. The depiction of independence within this advertising moves beyond relational independence and emphasised the independence from physical tethers which suits the notion of the digital nomad proposed by Abbas (2011). The digital nomad is an aspect of the neo-nomad which represents peoples' natural tendency to be socially connected and obtain self affirmation while mobile and striving to move on which can be achieved through the use of mobile phones. Appealing to the digital nomad suits consumerism because of their continual demand for temporary consumable products such as data and upgrades (see Roberts, 2015). From the perspective of empowerment, the mobile phone was portrayed as a normal part of a modern lifestyle for self-improvement and identity development.

The advertisements' conceptualisation of the mobile phone as a personal filter through which the user could idealise their lifestyle and identity experience positioned the user as the central focus of their idealised experience of the environment, independence and identity.

These idealisations were attractively portrayed as having no consequences associated with real world experiences (e.g. inconvenience, cost, risk to personal safety) which was depicted as desirable and achievable with a mobile phone. The portrayal of the mobile phone in relation to an idealised world without risks or cost was also found by Campbell (2006). The notion of idealisation highlighted the function of the mobile phone as an essential tool in making the user's identity as more markable in the neoliberal digital age. This relates to the notion people are entrepreneurs of the self who act upon their self to make them self marketable and favourable in an economic system of power relations (Foucault, 2008).

In summary, the advertisements' conceptualisations of the mobile phone served to promote a normal, essential and contemporary tool of self-improvement, empowerment, independence, control, social connection and identity development. The continual development of the enterprising user and of the mobile phone was portrayed as normal and aligned with the users' normal lifestyle and identity development.

6.5 Chapter Summary

This chapter presented the findings of an inductive thematic analysis informed by social constructionism which explored the conceptualisations of the mobile phone promoted by website-based advertising of mobile phones accessible during 2019 by people living in the UK. This represented the ways in which mobile phones are currently marketed to people. The analysis highlighted the ways in which these conceptualisations positioned mobile phone practices and the user. The broad cultural conceptualisation of the mobile phone promoted by the culturally established forum of persuasive advertising adds further weight to the cultural conceptualisations portrayed by the news media examined in the previous chapter. These two chapters will serve to contextualise current mobile phone users' conceptual understanding of the mobile phone and their subjective experiences which are explored in the next chapter and chapters 8. The next chapter will turn to interface between the micro and macro context by exploring the contextualised conceptual understandings of the mobile phone presented by UK mobile phone users' reviews of their the mobile phone and consider how these understandings may shape their practices and subjectivity within the neoliberal digital age.

Chapter 7

Study 3:

Exploring Conceptualisations of the Mobile Phone Presented by UK Mobile Phone Users' Reviews of Their Mobile Phone.

This chapter explores the interface between the micro and macro context of conceptualisations of the mobile phone in the UK which builds on the previous two chapters which explored the broad cultural conceptualisations of the mobile phone promoted by mass media. This analysis explores the contextualised conceptual understanding of the mobile phone presented by UK mobile phone users' product reviews of their mobile phone which are an established cultural practice by consumers. Mobile phone users have lived experiences with their mobile phone as a consumable product and so their narratives related to their mobile phone experiences are of interest to the exploration of culturally contextualised understandings of the mobile phone. Also, their product reviews may highlight the ways in which their understanding may have been shaped by the media as well as the functionality of the phone. The analysis was achieved by using an inductive thematic analysis informed by social constructionism which further considered the ways in which their contextualised conceptual understandings of the mobile phone may have shaped their practices and subjectivity within the neoliberal digital age. It was argued that users' conceptualisation of the mobile phone related to the deep meaning that mobile phone practices had for them as essential and personal lifestyle enhancing activities which can shape their identity to which the user was attached in relation to others. The user was positioned as attached the identity and lifestyle they experience through their mobile phone. Keeping up with the continual development of technology was positioned as a normal practice of self-improvement.

7.1 The Consumer Context

The mobile phone is an essential part of modern living within industrialised cultures (Kwon et al., 2013; Panova & Carbonell, 2018; Yang et al., 2019). The lack of a mobile phone may have a negative impact on mobile phone users' relationships and daily activities (Pearson & Hussain, 2015). The feature rich and internet connected smartphone can play a diverse range of roles in the user's life including social (Pearson & Hussain, 2015; Hussain et al., 2017), information seeking, productivity enhancement, entertainment, relaxation, personal status

(Elhai, Dvorak, et al., 2017; Van Deursen et al., 2015) assisting with travel (Yang et al., 2019), safety and feeling secure (Balakrishnan & Raj, 2012; Fullwood et al., 2017) and escaping problems (Fullwood et al., 2017).

Qualitative studies have investigated why people use their mobile phones the way they do and their attitudes toward them (e.g. Pearson & Hussain, 2015; Fullwood et al., 2017; Walsh et al., 2008; Yang et al., 2019). Findings related to fear of missing messages, boredom (Yang et al., 2019), attachment to their mobile phone which was intrinsic to their life (Walsh et al., 2008), attachment to the affordances provided by their mobile phone (Fullwood et al., 2017) and self-serving personality of narcissism (Pearson & Hussain, 2015). However, the studies mostly focused on young people or undergraduate students in an educational context. Although Pearson and Hussain (2015) included a broader sample across the UK population (aged 17-68 years) from a range of occupations, the most common occupation was student and the study focused on the context of mobile phone use in banned areas. The studies collectively did not use their methodology to explore the underlying mechanisms which may have shaped their practices.

People's understanding of products, such as technology, can be shaped by mass media representations of the product (Rogers, 2003; Rooke & Amos, 2013). Mass media, such as accessible websites and advertising, is key to informing people and shaping their understanding of products (Rogers, 2003). This relates to the macro social constructionist perspective that constructed meanings of psychological objects (e.g. mobile phone) and personal identities are shaped by culturally available narratives which are governed by institutional practices and social structures (Burkitt, 1999; Burman & Parker, 1993). Also, according to Rogers' diffusion of innovations theory, the goal of persuasion is to shape peoples' understanding of a product to encourage an attitude which will inspire people to take action to adopt the product. This relationship between knowledge and action relates to the views of social constructionism which posits conceptual understanding of a psychological object shapes current social action (e.g. take up a mobile phone subscription and subsequent mobile phone practices) and normal ways of being within the current social context (e.g. identity; Gergen, 2015; Burr, 2015). This study adopted a critical perspective to explore the conceptual understanding of a wide sample of the mobile phone user population in the UK who were embedded in their personal consumer context and subjected to broad cultural narratives of neoliberal culture to inform a contextualised rationale for mobile phone practices.

7.2 An Overview of the Methodological Approach

The analysis aimed to explore the contextualised conceptual understanding of the mobile phone presented by UK mobile phone users through participant-generated reviews of their mobile phone and consider how these understandings may shape their practices and positions within the neoliberal digital age. In order to gain insight into general mobile phone users' subjective experiences related to their mobile phone, this study sought to capture data that mirrored the naturalistic data of real-world mobile phone product reviews which are an established cultural practice by consumers (see for example Amazon, 2019; Carphone Warehouse, 2019; Samsung, 2019b). Reviews of this style can offer insight into links between narratives promoted by advertising and how these promoted aspects of the mobile phone are conceptualised by general mobile users.

The mobile phone reviews were collected through a Qualtrics based online qualitative survey which was designed by the researcher to simulate a real world online mobile phone review process (see Samsung, 2019b). However, the review process was shaped by the ethical interests of the study and the interests in the demographic details of the anonymous participants. An online qualitative survey allowed the review survey to be widely accessible to a diverse sample of mobile phone users who could self-select to provide their response in their own words as they could a real-world mobile phone review (see Braun & Clarke, 2013). See *Appendix E* for an example of the *Mobile Phone Review Survey*.

164 self-selected mobile phone users participated in the online qualitative survey which asked the participants to write a review of their mobile phone as if they were writing an online product review. The age range of the participant group was 18 to 84 years, but one participant did not wish to disclose their age. 119 participants reported their gender as female, 39 as males, 5 as non-binary and 1 as gender non-conforming. At the time of their participation, all participants used a smartphone (a mobile phone with the ability to access the internet and support the use of apps; Linge & Sutton, 2015; Ofcom, 2016). One participant reported that they used a feature phone (a mobile phone with the ability to access the internet but lacks the advanced functionality of a smartphone; Ofcom, 2016) but the mobile phone brand and model that they reported, Samsung Galaxy Ace, met the criteria of a smartphone. The participant group reported using smartphones from a range of brands; Apple (100 participants), Samsung (34), Huawei (9), LG (3), Motorola (3), Sony (3), Google (2), HTC (2), Xiaomi (2), Alcatel (1), Honor (1), Nokia (1), OnePlus (1). However, two participants did not wish to disclose the brand and model of their mobile phone. As for rating their mobile phone, 68 participants rated

their mobile phone with 5 star, 77 with 4 star, 18 with 3 star and 1 with 2 star. See *Appendix R* for a table of participant reported demographic information, *Table R1*, and a summary of the participant information, *Table R2*.

Recruitment of participants was initiated through opportunistically sending an invitation email to known associates of the researcher and circulating invitations to participate through announcements to the students and staff at the University of Derby. In order to make the online mobile phone review process accessible to a wider spectrum of UK adult mobile phone users, an invitation to participate was promoted through the researchers professional Facebook social media page. The Facebook promotion campaign targeted mobile phone users in the UK aged 18 year or over. The invitations to participate in the study included brief details about the study, their voluntary participation, the contact details of the researcher for further information about the study and a link to the Qualtrics online mobile phone review process (see *Appendix D* for examples of the study's recruitment announcements).

The sample size was guided by the principle of data saturation. Beitin (2012) reported that data saturation was becoming a common approach to sample size decisions for qualitative research. Saturation is the phase of qualitative data analysis in which analysis no longer reveals new themes and so is used as a criterion for ceasing new data collection (Guest et al., 2006). With this in mind, the researcher conducted the analysis simultaneously with data collection which allowed data collection to continue until no new themes could be developed by the researcher and data saturation was assured. However, 164 reviews is a larger data corpus than Braun and Clarke's (2013) suggestion that between 50-100 qualitative surveys, which involved participant-generated textual data, was a suitable data corpus for a thematic analysis study within a larger project such as a PhD thesis. Braun and Clarke (2013) also highlighted that the richness and amount of data contributed by the participants should convincingly demonstrate patterns across the data corpus and so will shape sample size. The mobile phone review process for this study contained only one question that was meaningful for analysis and a number of the reviews collected were very brief. Examples of the brief responses include a single word (e.g. "yes", "Na") or a brief sentence (e.g. "The iPhone X is fantastic. The camera is awesome", "Great features. Easy to use. Large screen") which were considered to lack the rich details sought to generate themes for a deep analysis. However, the size and content of the 164 reviews generated by this online mobile phone review process were reasonably representative of typical real-world online mobile phone reviews (see for example Amazon, 2019; Carphone Warehouse, 2019; Samsung, 2019b). For this reason, the number of participants in this study,

which was guided by the principle of data saturation, was greater than the guide provided by Braun and Clarke (2013).

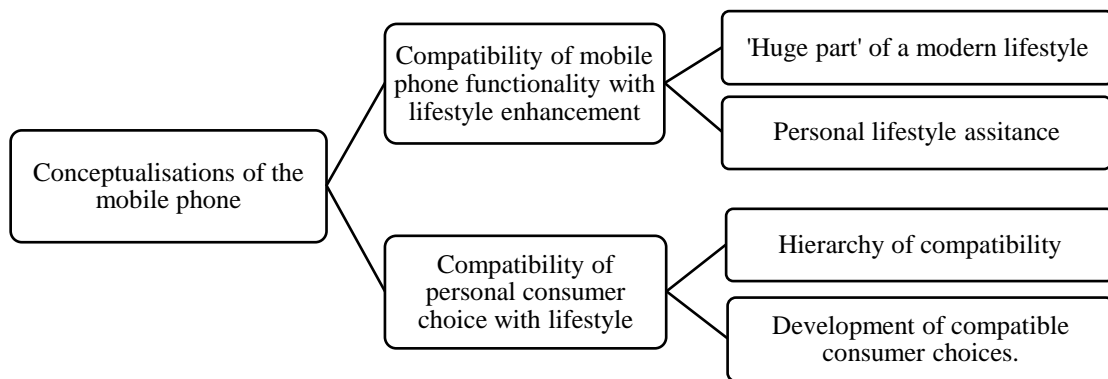
The mobile phone reviews were analysed by using an inductive thematic analysis informed by social constructionism to work with latent themes (see Braun & Clarke, 2006). The analysis developed themes which related to the conceptualisation of the mobile phone. The analytic process was initiated by exploring the ways in which the mobile phone users constructed the mobile phone, what these conceptualisations said about mobile phone practices and what positions the constructs made available for people (see Willig, 2013). See *Chapter 4* for further details of the data collection, management and analysis processes.

7.3 Analysis

The analytic process of mobile phone users' reviews of their mobile phone developed two main themes which related to compatibility of mobile phone functionality with lifestyle enhancement and compatibility of personal consumer choice with lifestyle. The themes represent salient narratives through which the mobile phone appeared to be constructed in terms of compatibility with the user's lifestyle and identity. The mobile phone was constructed as an essential and personal lifestyle enhancing multipurpose tool which assisted the user to enhance their experience of multiple facets of their lifestyle, and a continually developing hierarchy of personal choices which represented the user's lifestyle and identity development. The process also considered the ways in which these constructions and the positions they made available may have shaped mobile phone users' practices and self-formation within the context of the neoliberal digital age. In the following sections, each of the themes and their subthemes are explored in depth using supportive extracts from the mobile phone users' reviews of their mobile phones which typify the theme and the wider data. Figure 7.1 shows a thematic map that represents the two themes and their subthemes.

Figure 7.1

Thematic map of the themes and subthemes which relate to conceptualisations of the mobile phone developed during the analysis of UK mobile phone users' reviews of their mobile phone.



7.3.1 Compatibility of mobile phone functionality with lifestyle enhancement.

One of the main themes that was developed related to compatibility of mobile phone functionality with lifestyle enhancement. This theme is explored through two subthemes which related to a ‘huge part’ of a modern lifestyle and personal lifestyle assistance. Within this theme the mobile phone was constructed as an essential part of the user’s modern lifestyle and a personal lifestyle enhancing multipurpose tool which empowered the user to enhance their experience of multiple facets of their lifestyle. Mobile phone functionality was positioned as enhancements to and representations of the user’s lifestyle and identity. The user was positioned as dependent on their productive experiences of the various aspects of their multifaceted lifestyle.

7.3.1.1 ‘Huge part’ of a modern lifestyle.

This subtheme shows that the mobile phone was conceptualised as an essential part of a modern lifestyle which positioned mobile phone functionality as a necessity of the user’s productive lifestyle experience. The conceptualisation also functioned to position the user as dependent on the productivity of their lifestyle.

Extract one: Taken from the review by participant 92; a male aged 26 years who used an Apple iPhone X which he rated as 5 Star.

1. Having recently lost my mobile phone and spent two miserable days without it, I
2. can honestly say it is a huge part of my life. Not in the sense of it being an addiction,
3. but in the sense that the modern age has made its use as commonplace and necessary
4. as clothing. I use my device to stay in touch with family while I study (across the
5. water). I use my device to remotely manage a team of staff. I use my device while
6. studying to record important snippets of information or to quickly access data online.
7. With the introduction of Apple Pay (and such like arrangements) and contactless
8. payment, I cannot recall the last time I used a physical bank card to make payment
9. for something.

This extract illustrates the conceptualisation of the mobile phone as a ‘huge part’ (line 2) of the user’s life and integral to modern lifestyles. The user understands that his mobile phone ‘is a huge part of my life’ and that his lifestyle and emotions are unhelpfully impacted by the absence of his phone (lines 1-2). This conceptualises the user’s phone as an indispensable part of his lifestyle and satisfaction to which he is connected and dependent. Further to this, the user understands that mobile phone practices are integral to modern lifestyles, ‘as commonplace and necessary as clothing’ (lines 3-4), and a replacement of conventional practices of lifestyle management (lines 4-9). From this perspective mobile phone practices are positioned as integral to the user’s ability to conduct his modern lifestyle similarly to other common practices, such as wearing clothes. Consequently, when it comes to the user addressing the issue of addiction, his phone dependence is positioned as a useful and productive necessity of the ‘modern age’ (line 3). This serves to distance him from the position of pathological user who is controlled by their phone and defend his identity as one who has control over his essential and productive mobile phone practices. His mobile phone and practices signify acceptable, as well as necessary, practices to conduct a modern lifestyle which could not be achieved so efficiently without his mobile phone.

The conceptualisation of the mobile phone as an essential part of the user’s modern lifestyle positions the user as a target of the modern age and dependent on conducting and developing his lifestyle productively in the modern age. This productively dependent position may serve to satisfy his desire to identify with the modern age through exploiting the compatibility of his phone’s functionality with his lifestyle. Also, this position may afford

greater social power in relation to someone who does not depend on their mobile phone who may be positioned as less interested in adapting to the modern age and developing their lifestyle productively.

7.3.1.2 Personal lifestyle assistance.

Building on the previous subtheme which related to the mobile phone as an essential part of a modern lifestyle, this subtheme illustrates the conceptualisation of the mobile phone as a personal lifestyle enhancing multipurpose tool. Through this conceptualisation, mobile phone practices were positioned as a compatible enhancement to and representation of the user's lifestyle and identity. The user was positioned as enabled to enhance their experience of a productive multifaceted lifestyle.

Extract two: Taken from the review by participant 8; a female aged 25 years who used a Google Pixel 1 which she rated as 5 Star.

1. My phone is very important to my every day life and allows me to interact with
2. people who I wouldn't without my smartphone. I love how interactive my phone is
3. and with voice recognition it allows me to multitask better and be more productive
4. whilst saving time. My camera is very good and allows me to capture important
5. moments in my life so easily and plays an important role in connecting me to friends
6. and family as these live quite far away and in different countries. Although I am
8. aware of the potential negative side effects that may arise from increase levels of
9. technology use, I think it is important so assess the positives, and how it allows
10. connections to remain with people who without technology would not exist.

The main focus of this extract shows the conceptualisation of the mobile phone as a meaningful personal social assistant which empowers the user to enhance her desired social lifestyle and relationship maintenance through convenient social connection. The use of the possessive adjective in the phrase 'my phone' (line 1 and line 2) determines that the user understands that her mobile phone belongs to her uniquely rather than being a shared device such as a home landline telephone may be. This makes the user's mobile phone distinct from other people's and lets others know this mobile is the unique property of her as if integrated with her unique identity and lifestyle.

The conceptualisation of the mobile phone as a meaningful personal assistant for the user's valued social connection is evident in lines 1-2 in which she refers to her smartphone as an important means 'to interact with people'. The notion of interaction suggests that the user construes her social assistant as multidirectional through which people can connect, socialise and maintain relationships. The concept of the mobile phone as a social assistant to maintain her social relationships is further developed in lines 5-6 in which the user highlights that her smartphone is used to keep connected with 'friends and family' who 'live quite far away'. From this perspective, the mobile phone functions to overcome traditional organic barriers to social connection, such as distance, which enables the user to maintain relationships through the continual relational connection provided by her phone. Also brought to the fore is the concept of a distinction between an organic social life when together with friends and family, and a digital social life through the mobile phone which can enhance the user's ability to maintain digital and organic relationships. Further to this, in line 2 and line 10 the user emphasises the concept that the maintenance of her relationships is dependent on her mobile phone without which some relationships 'would not exist'. This implies that social interaction without the assistance of her mobile phone may not be as broad and exclude interaction with some people. The mobile phone can be seen to function as the user's personal social assistant which is essential for her social power to gain social capital and maintain relationships. This allows the user to experience a greater level of social connection and relationship health which is compatible with her desired social lifestyle.

The conceptualisation of the mobile phone as a meaningful personal social assistant positions the user as a socially healthy person located within their network of relationships who desires to enhance her meaningful social lifestyle. The social functions of the mobile phone and the user's practices are positioned as compatible with and representative of her enhanced social lifestyle and identity. This social position implies that those who do not choose to engage with two-way social interaction through the mobile phone may not be viewed as sociable or relationally healthy within a network of healthy relations.

Extract three: Taken from the review by participant 72; a male aged 40 years who used an HTC U12 Plus which he rated as 5 Star.

1. It helps me to keep control of my schedule and things to do through my calendar,
2. manage my contacts and communication tools for keeping in touch with friends and
3. relatives.

Further to the previous extract which focused on the mobile phone as a personal social assistant, this extract illustrates the conceptualisation of the mobile phone as a personal organiser which empowers the user to enhance his capabilities to manage his lifestyle activities. Throughout the extract the user refers to his life management tasks that his mobile phone helps him to accomplish. From this perspective the mobile phone functions to enhance the user's capabilities to 'control' (line 1) and 'manage' (line 2) his lifestyle activities and keep connected to his relational network which would be diminished without the use of his mobile phone. This implies that the user has several meaningful facets to his lifestyle that require organisation and his mobile phone has the functionality to manage his lifestyle productively. The organisational function of the user's phone is positioned as compatible with his desires to manage his life tasks and a representation of his productively organised lifestyle. From this perspective, the user's mobile phone practices allow him to experience a greater level of valued lifestyle management which enables him to be more productive through the management efficiency it provides.

The conceptualisation of the mobile phone as a meaningful personal organiser positions the user as an enterprising person who is looking for opportunities to manage his lifestyle efficiently. The organisational functions of the mobile phone and the user's practices are positioned as compatible with and representative of his desired control over the management of his lifestyle. From this position he can experience efficiency and productivity in multiple areas of his lifestyle which implies that those who do not choose to engage with lifestyle management through their phone may be less organised and less productive.

Extract four: Taken from the review by participant 134; a female aged 45 years who used an Apple iPhone 8 which she rated as 4 Star.

1. I use my phone as an alarm. When I wake up I will see notifications on the screen
2. about new messages, emails etc so I may check them before getting out of bed or I
3. might wait until I'm a bit more awake! I run my own business so many times the
4. messages are work related, emails from customer or updates on deliveries etc. I use
5. my phone to find pictures and info to help with my work, then to take photos and
6. share my work on various social media. While I'm there I will browse personal SM
7. sites too, for a bit of relaxation. I sometimes use my phone to play music while I
8. work and to keep in touch with my partner while he's out too.

Building on the previous extracts, this extract demonstrates the conceptualisation of the mobile phone as a multifunction personal assistant which empowers the user to enhance the productivity and experience of her multifaceted lifestyle. This conceptualisation is first evident in lines 1-4 in which the user portrays her mobile phone as her alarm to initiate her day and her source of messages and emails from her clients and colleagues. From this perspective the mobile phone functions as a convenient method to enhance the user's capabilities to maintain connection with her relational network and be alerted to new information. The user is enabled to be informed instantly, respond promptly and achieve a competitive level of productivity which assists the marketability of the user in her lifestyle. Lines 4-6 further highlights the multipurpose productivity depiction of her mobile phone through its information search capabilities and camera features. The notion suggests that the user is enabled to search, produce and share information about her work with others to extend her level of productivity which could be impeded without her mobile phone.

As well as offering the user a marketable identity related to productivity, this portrayal of multitasking and convenient productivity offers the user time and freedom to enjoy other aspects of her lifestyle. This is evident in lines 6-8 which presents the notion that the user can use her mobile phone to maintain a balance between productive work activities, emotional management, leisure activities and relational connection. The distinction between social connection, leisure activities and professional productivity portrays the mobile phone as a multipurpose tool with the functional capacity to be considered as the single tool required to enhance each facet of a multifaceted lifestyle. From this perspective, the user's mobile phone allows her to extend her reach toward a satisfactory balance between the relational, leisure and productive aspects of her lifestyle so she may experience a deeper level of connection to these multiple facets of her lifestyle.

The conceptualisation of the mobile phone as a multifunctional personal assistant positions the user as an enterprising and multidimensional person who is looking for opportunities to enhance the productivity and experience of her multifaceted lifestyle. The multiple functions of the mobile phone and the user's diverse practices are positioned as compatible with and representative of her enhanced multifaceted lifestyle and identity. From this position the user can experience greater productivity and deeper connection with their multifaceted lifestyle which implies that those who do not choose to engage with the mobile phone as a multipurpose tool may be less productive and have less dimensions to their lifestyle and identity.

Extract five: Taken from the review by participant 65; a male aged 45 years who used a Samsung Galaxy S8 which he rated as 4 Star.

1. Everything I need in one place. I can be out and about with all technology I need on
2. hand. Phone, WhatsApp, Facebook, calendar, internet. Alarm is my memory prompt.
3. Camera for memorable moments. Battery life could be longer.

Further to the previous extracts, this extract shows the construction of the mobile phone as a portable multifunction personal assistant which empowers the user to manage multiple aspects of his lifestyle continuously even while liberated from the physical tethers a fixed geographical location. This concept is evident in lines 1-2 in which the user refers to having ‘all technology I need on hand’ when he is ‘out and about’. This implies that when he is disconnected from the tethers of a fixed geographical location, such as home or office, the user can remain connected to his social network and maintain management of multiple aspects of his lifestyle (lines 2-3). From this perspective the mobile phone functions to replace conventional lifestyle management tools, such as fixed telephone lines, location-based Wi-Fi and paper-based calendar. It provides a portable multi-function personal assistant which liberates the user from a static world to a world of roaming freedom and continuous connection which offers maximum availability in a busy world. The user’s experience of continuous connection to the multiple facets of his lifestyle and enhanced productivity would be diminished without his mobile phone. The reference to ‘battery life could be longer’ in line 3 emphasises that the user positions his independence and continuous connection as desirable and that his independent lifestyle demands and independent identity are greater than the technology can provide. From this perspective, the portable functionality of the user’s mobile phones is generally compatible with his desirable lifestyle of continuous connection and productivity while roaming.

This conceptualisation of the mobile phone positions the user as an enterprising and multidimensional person empowered to maintain the management of multiple facets of his multifaceted lifestyle while independent of fixed physical tethers. The portability of the multiple functions of the mobile phone are positioned as compatible with and representative of the user’s independent and multifaceted lifestyle and identity. From this position the user can experience greater connection and productivity with their multifaceted lifestyle which implies that those who do not choose to engage with the mobile phone as a portable multipurpose tool

may be viewed as less independent, less connected and restricted in their freedom to experience their desired lifestyle wherever they are.

7.3.2 Compatibility of personal consumer choice with lifestyle.

Progressing from the theme related to compatibility of mobile phone functionality with lifestyle enhancement, this theme is related to compatibility of personal consumer choice with lifestyle. The theme focuses on the mobile phone as a consumer choice and the compatibility of its capabilities, usability, design, affordability, brand and development with the users' desired lifestyle experience. This theme is explored through two subthemes which relate to a hierarchy of compatibility and development of compatible consumer choices. Within this theme the mobile phone was constructed as a continually developing hierarchy of personal choices which represented the user's lifestyle and identity development. The user was positioned as an active consumer who was invested in representing their lifestyle and identity through justifying their consumer choices related to their mobile phone.

7.3.2.1 Hierarchy of compatibility.

This subtheme illustrates that the mobile phone was conceptualised as a hierarchy of personal choices which represented the user's lifestyle and identity. This conceptualisation positioned mobile phone capabilities, usability, design, affordability and brand as personal lifestyle and consumer choices. Through this conceptualisation the user was positioned as an active consumer striving to select a representation of their lifestyle and identity through compatible consumer choices.

Extract six: Taken from the review by participant 151; a female aged 36 years who used a Samsung Galaxy A3 (2016) which she rated as 4 Star.

1. My phone is stylish and functional and I have rarely had any problems with it. I
2. chose this phone in particular as it was a slightly older model and therefore
3. cheaper, and also because it is a smaller size than most modern smartphones. I am
4. female and have small hands and struggle to use the larger smartphones with one
5. hand. The only slight downsides to this phone are the storage which gets very full I
6. sometimes don't have space to download apps I would like to - and the camera

7. sometimes isn't as good as more modern phones, especially in dim lighting.
8. Overall I would highly recommend the phone as a smaller and slightly cheaper
9. model but still stylish looking and has everything I need.

This extract focuses on the user's conceptualisation of her mobile phone as her choices of personal compatibility from a hierarchy of personalisable consumer choices. The user understands that her mobile phone choice is a balance between style, function, design, reliability and affordability which are located on hierarchical scales and are personalisable to be compatible with her lifestyle needs (lines 1-5). The first person and possessive language implies the user's personal involvement in her choice of phone and her understanding that her choice is autonomous rather than pressed upon her. Her choice of an 'older model' and her reference to 'modern smartphone' places the mobile phone on a continuum of technology development from which she can choose. The user further aligns the currency of the model with cost and so she can make a consumer choice based on compatibility with her unique financial capacity. Her financial commitment can place her on a socioeconomic status hierarchy which limits her choices. This potential limitation can be represented by her 'older model' of phone which can characterise her as lower on the socioeconomic scale and behind the times when compared to someone with a newer model. The notion of the user's phone being 'stylish and functional' indicates that the user considers her phone to be a representation of her aesthetic choices as well as a representation of her busy lifestyle which requires the support of phone functionality. Also, the user places the size of the phone on a scale from which she can choose to be compatible with the size of her hands for convenient use.

The capability of the phone is also addressed by the user in lines 5-7 in which the storage capacity of her phone is located on a scale from which she can choose to be compatible with her needs. In this case the user represents her desire for the functionality of apps as greater than the storage capacity of her phone which implies the productivity demands of her lifestyle is greater than the functionality of her phone. Also, the quality of the camera, as a feature of her phone, is located on a scale which she positions as lower than on 'more modern phones'. However, even with the incompatible capabilities of her phone, the user positions her phone as compatible with her lifestyle needs (line 9). From this perspective, consumer choices are shaped by a compromise between style, function, design, reliability and affordability to suit the priorities of lifestyle compatibility.

The concept of personalisation shows that the user understands that her phone can be a unique representation of her unique lifestyle and identity which is distinct from other peoples'

through consumer choices. From this perspective, the user has been actively invested in her consumer choices to select her phone, through a range of hierarchical scales, which is compatible with her unique lifestyle and identity needs. This is representative of the user striving to assemble her desired lifestyle and identity through compatible consumer choices.

The conceptualisation of the mobile phone as a collection of personalisable consumer choice positions the user as an active autonomous consumer who is invested in her personal choice of mobile phone. From this position the user is free to select her personal choice of phone from a hierarchy of consumer choices which suits her lifestyle needs and avoid those options that do not contribute to assembling her desired quality of lifestyle. The user's personal consumer choices are positioned as compatible with and representative of her lifestyle and identity. However, the limitations in her financial commitment may indicate that lifestyle choices can be shaped by the societal power of available finances rather than an unconstrained autonomous choice. This position of active consumer implies that those who do not choose to actively participate in their consumer choices may be viewed as less stylish and having less capacity to be productive.

Extract seven: Taken from the review by participant 113; a female aged 19 years who used a Samsung Galaxy S9 which she rated as 4 Star.

1. Lovely design and the performance is excellence. The battery could be better
2. compared to my friends which all have iPhones but I am glad I don't have an iPhone
3. because my phone has many features that aren't present in an iPhone such as multi
4. window use and one hand operation. Moreover, I own a variety of other Samsung
5. and Google products which are very compatible with this phone. I am able to have
6. cool technology set ups around the house that I would not achieve with an iPhone.

Building on the previous extract, this extract shows the conceptualisation of the mobile phone as the user's choice of a personally compatible brand from a hierarchy of mobile phone brands which can construct a hierarchy of identities. Throughout the extract the user places the battery capacity, features, usability and connectivity of her Samsung phone on a comparative scale with her friends' iPhones. In the case of battery capability, the user portrays her Samsung phone as lower on the scale than her friend's iPhones (lines 1-2) and suggests that higher battery capacity is desirable which position the iPhone as more compatible with her lifestyle. However, the comparison between brands continues and relates the superiority of the user's chosen

Samsung to 'many features that aren't present in an iPhone' and connectivity to compatible devices in the user's lifestyle 'that I would not achieve with an iPhone' (lines 3-6). This notion of comparison projects a sense of competition and justification. From this perspective, the user is comparing her choice of mobile phone brand to her friends' brand choices in order to justify the superiority of her mobile phone's brand and so the superiority of her consumer choice. Her mobile phone brand choice can be seen to emphasise the uniqueness of her identity within her social group and align her identity with the superior functionality and connectivity that she relates to the Samsung brand. In a similar way, a user could choose the same brand of phone as selected by their social group to align with a shared identity. It can be seen that this hierarchy of mobile phone brands constructs a hierarchy of identities that can be accessed through mobile phone brand choices which are compatible with the user's lifestyle.

This conceptualisation of the mobile phone positions the user as an active consumer who is invested in justifying her position within her social group and her position on a hierarchical scale of identity through her mobile phone brand choice. From this position the user is free to select her branded representation of her identity from a hierarchy of brand choices which suits her lifestyle needs and avoid those brands that do not contribute to building her desired lifestyle and identity. The user's brand choice is positioned as compatible with and representative of her lifestyle and identity. This position of active consumer implies that those who do not choose to actively consider the compatibility of their mobile phone's brand with their lifestyle may be positioned lower on a hierarchy of identities constructed through brand choices and justification.

7.3.2.2 Development of compatible consumer choices.

Further to the subtheme related to a hierarchy of compatibility, this subtheme shows that the mobile phone was conceptualised as a continually developing consumer choices which could represent the continual development of the user's lifestyle and identity through their consumer choices. Through this conceptualisation, mobile phone related consumer choices were positioned as aligning with lifestyle and identity development. The user was positioned as an active consumer striving to continually develop the compatibility of their mobile phone choice with their lifestyle and identity development.

Extract eight: Taken from the review by participant 124; a male aged 18 years who used a Motorola G6 Play which he rated as 5 Star.

1. This mobile phone is the best I have had so far. It has the capacity for 4G internet
2. connection and a large screen, but not too large so that it still fits into my pocket. It
3. came with a free phone case which is a bonus and it has provided the protection it
4. needs. I know this from dropping it many times and still works perfectly well. No
5. scratches and the screen hasn't been damaged. It also came with a TurboPower
6. charger - plug and lead, and charges faster than any of my previous phones. The
7. battery life is very good, and lasts a noticeable amount longer than my friends phones
8. on a night out. I've had this phone for 8 months and haven't found a fault!
9. Good phone overall, has up-to-date technology that my last phone (a Windows
10. phone) lacked so brilliant on the Internet, which is what I mostly use it for.

Further to the notion of the mobile phone as a collection of personalisable consumer choices, this extract focuses on the continual development of the consumer choices in which the user participates to maintain the compatibility of his mobile phone with the development of his lifestyle. Through comparing the capabilities of his current phone with previous phones he has had throughout the extract, the user conceptualises the mobile phone as continually developing technology and so continually developing consumer choices rather than a fixed hierarchy of consumer choices. The user portrays his mobile phone as a transitory device which suits his current lifestyle needs. The use of the superlative adjective 'best' in relation to mobile phones the user has 'had so far' suggests that the user locates technology development in a positive correlation with improvement in compatibility with his lifestyle relative to previous phones he has had (line 1). The user's notion of this positive correlation is emphasised throughout the extract in which the user refers to the improved capabilities of his current phone relative to his previous phones and the improved benefits the user enjoys. This positive correlation and the user's participation in upgrading his mobile phone choices implies that he is moving forward in his lifestyle and compatibility with his mobile phone choices is shifting as he develops new lifestyle strategies. This notion of upgrades and 'up-to-date technology' (line 9) brings to the fore that older technology may hold back the user's lifestyle and identity development. From this perspective, the user's mobile phone upgrade can function to represent his aspiration for self-improvement through developing his consumer choices to remain compatible with his lifestyle and identity development.

Through this conceptualisation of the mobile phone as a as continually developing consumer choices the user is positioned as an active consumer who is invested in the

development of his consumer choices. From this position the user can continually align his consumer choices with the developing needs of his lifestyle and identity. The user's development of consumer choices is positioned as compatible with his developing lifestyle needs. This position of active consumer who upgrades their mobile phone implies that the consumer needs to keep spending money to maintain their lifestyle development. Also, those who do not subscribe to the capitalist mechanism of upgrades may be viewed as held back from developing their lifestyle by out of date technology.

Extract nine: Taken from the review by participant 64; a male aged 32 years who used a Samsung Galaxy S9 which he rated as 5 Star.

1. Always use Samsung, a tried and tested brand. Just when to upgrade is the question.
2. I've been watching the reviews about the S10 but when the S9 came on offer I could
3. not resist. an array of features and the camera has rekindled my joy of photography.

Building on the previous extract which focused on the continual development of consumer choices, this extract highlights that the user positions the continual choice of upgrades as inevitable pleasure. The concept that upgrades are inevitable is evident in line 1 in which the user poses the question 'when to upgrade'. The use of the word 'when' rather than 'if' suggests that the user considers upgrading his mobile phone as part of his lifestyle. The notion of a decision-making process involved in the user's upgrade choice is indicated in lines 2-3. In this case the user positions mobile phone 'reviews', a special 'offer' and 'array of features' as factors which influenced his upgrade decision-making process. The user considered opinions of others, cost and features as dictators of when to upgrade rather than if to upgrade. Further to this, the user portrays their upgrade and the new technological advancements as a revitalisation of an aspect of his lifestyle. This rekindling of the user's 'joy of photography' may be considered as a positive reinforcement to encourage further upgrades and the concept that upgrades are an inevitable pleasure of the user's lifestyle and identity as a photographer. From this perspective, the user takes for granted that their lifestyle and the need of compatibility with their mobile phone continually develop.

The conceptualisation of the mobile phone as an inevitable pleasure of continual upgrades position the user as an active consumer who is trapped in the river of continual upgrade choices. From this position the user can maintain and upgrade the joy of his lifestyle and identity through the practice of upgrading his mobile phone. However, the neoliberal

capitalist mechanism which promotes a continual chain of consumer needs appears to capitalise on mobile phone user's inevitable and continual development of their lifestyle and identity through continual mobile phone upgrades.

7.4 Discussion

The thematic analysis of UK mobile phone users' product reviews of their mobile phone developed two main themes related to compatibility of mobile phone functionality with lifestyle enhancement and compatibility of personal consumer choice with lifestyle. The themes represent salient narratives through which the mobile phone appeared to be constructed as an essential and personal lifestyle enhancing multipurpose tool which assisted the user to enhance their experience of multiple facets of their lifestyle, and a continually developing hierarchy of personal choices which represented the user's lifestyle and identity development.

The users' conceptualisation of the mobile phone as an essential and personal lifestyle and identity enhancing multipurpose tool positioned mobile practices as enhancements to and representations of the multiple facets of the user's lifestyle. The notion of engaging with an array of productive activities through the mobile phone can be related to the range of users' usages of the mobile phone summarised by van Deursen (2015) and Elhai, Dvorak, et al. (2017). However, this analysis offers insights into the meaning that types of usage may have for the user which may shape their practices. The construct further portrayed the mobile phone as an essential tool to maintain control over their modern lifestyle activities, empowerment to be independent and maintain the health of their social relations. The notion that mobile phone is an essential part of the users modern lifestyle supports the idea that the mobile phone is a vital part of modern living and an essential tool to maintain social lives and conduct daily activities (e.g. Kwon et al., 2013; Panova & Carbonell, 2018; Pearson & Husain, 2015). Further to this, Campbell (2006) highlighted the importance of the mobile phone in relation to the identity of independence, but this was limited to teenage girls. The notion of the neo-nomad acknowledges the general human propensity to be socially connected while mobile and striving to move on (Abbas, 2011) which can be achieved through the use of mobile phones. Also, the notion of the user being of being deeply rooted in social networks relates to the notion that people are relational beings who construct their identity within a network of relations relative to others (Gergen, 2009).

The construct positioned the user as dependent on the rewards of their productive experiences within the different aspects of their multifaceted lifestyle rather than the device.

The notion that the user is attached to their experiences rather than the device partly supports the suggestions of Nie et al. (2020) and Fullwood et al. (2017) who considered the users attachment related to the affordances the mobile phone provided rather than the device. However, this analysis suggests that the attachment is deeper and relates to experiencing the rewards of being productive and achieving goals. The attachment may extend further to their enterprising self which is achievement orientated and strives for fulfilment (Rose, 1998) which suggests that the user may be attached to the identity they experience through the mobile phone.

The conceptualisation of the mobile phone as a continually developing hierarchy of personal choices which represented the user's lifestyle and identity development positioned the user as an active consumer who was invested in representing their lifestyle and identity through their consumer choices related to their mobile phone. This relates to Foucault's (2008) position of entrepreneur of the self who acts upon their self-improvement to adapt to the power relations within the economic system of neoliberal society. Through this conceptualisation, the meaning of mobile phone practices capabilities, usability, design, affordability and brand were positioned as personal lifestyle enhancement and consumer choices to suite the user's needs to represent their lifestyle and identity development. The conceptualisation of the mobile phone as continually developing technology was positioned as normal and related to the users practices of self-improvement and identity development. Rose (1998) further highlighted that the consumer could assemble their desired lifestyle through their choices of consumer goods. Cushman (1990) further highlighted that consumerism serves to soothe an empty self by filling it with consumer goods and services. Consumption can be viewed as a practice of self-improvement. However, this may not be an autonomous choice because Lewis (2013) claimed that marketing consumable products was a science of persuasion to manipulate the consumers choices for commercial profit. Sugarman (2012) suggested that consumable goods were made meaningful for the enterprising consumer to encourage them to continue with an endless chain of consumable choices as a practice for their endeavour to maximise their quality life.

In summary, the users' conceptualisation of the mobile phone related to the deep meaning that mobile phone practices had for them as essential and personal lifestyle enhancing activities which can shape their identity in relation to others. The user was positioned as attached to the identity and lifestyle they experience through their mobile phone. The continual development of technology was positioned as normal and continual consumption was positioned as a normal practice of self-improvement which implies links with the cultural conceptualisations of the mobile phone promoted by the advertising media in the previous chapter.

7.5 Chapter Summary

This chapter presented the findings of an inductive thematic analysis informed by social constructionism which explored contextualised conceptual understandings of the mobile phone presented by UK mobile phone users' product reviews of their mobile phone which are an established cultural practice. The analysis highlighted the ways in which the user positioned themselves through their conceptualisation of the mobile phone and the ways in which their understanding shaped their practices. The next chapter shifts focus from general mobile phone user's understanding of the mobile phone to exploring the conceptual understanding of the mobile phone by mobile phone users who are positioned as at risk of being categorised as problem mobile phone users by psychology literature.

Chapter 8

Study 4:

Exploring Conceptualisations of the Mobile Phone Presented by UK Mobile Phone Users Positioned as Problem Mobile Phone Users by Psychology Literature

The analysis presented in this chapter is the second analysis of the thesis to explore the contextualised conceptual understanding of the mobile phone by mobile phone users and their subjective experiences. This chapter shifts focus from general user's understanding of the mobile phone, the focus of the previous chapter, to exploring the conceptual understanding of the mobile phone by mobile phone users who are positioned as at risk of being categorised as problem mobile phone users by psychology literature. Psychology literature about mobile phone practices has been dominated by research which has aimed to distinguish between normal and unhealthy practices and identify risk factors of users who may be at risk of problematic practices. However, the voice of this group being subjugated to pathologised categories of mobile phone use is unapparent in the literature. In order to gain insights into the group's perspective, the analysis explored their conceptual understanding of the mobile phone and the ways in which their understandings shaped their mobile phone practices and subjective experience. This was achieved by using an inductive thematic analysis informed by social constructionism to analyse twenty dyadic interviews with members of this specific group. The analysis aimed to inform the distinction between normal and unhealthy practices. It was argued that the users' conceptualisations of the mobile phone related to their dependence on their deep emotional bond with their empowerment to continually develop their lifestyle and identity. Within this relationship, their culturally essential mobile phone served to provide emotional support and evoke emotional tensions which resulted in an emotionally complex object. The continual consumption of the continually developing mobile phone was positioned as a normal practice of self-improvement.

8.1 Problematic Mobile Phone Practices in Context

The rapid proliferation in mobile phone practices raised community concerns about problematic mobile phone use (e.g. excessive use, uncontrolled repetitive use, risky behaviours such as use when driving) which prompted psychology research to investigate risk factors and

identify those who could be targeted for interventions (Bianchi & Phillips, 2005; Billieux, Maurage, et al., 2015; Panova & Carbonell, 2018). The subsequent literature pathologised problematic mobile phone practices by developing new concepts of mobile phone addiction, mobile phone dependence and the problem mobile phone user (e.g. Bianchi & Phillips, 2005; Chóliz, 2012; Kwon et al., 2013).

Mainstream psychology research about mobile use has been dominated by quantitative studies aimed at identifying, quantifying and generalising risk factors of problematic mobile phone practices and who uses a mobile phone in order to provide rationales for differences between mobile phone users' practices. Many studies considered developing a socio-demographic profile of the problematic user. Age was considered a risk factor such that younger users were more inclined toward high levels and problematic habits relative to older users which may have been due to decrease self-control of younger users (e.g. Bianchi & Phillips, 2005; van Deursen et al., 2015; Walsh et al., 2011). However, problematic smartphone use has been shown to be prevalent throughout adults aged between 18-65 (Nahas et al., 2018) and text messaging dependence was not limited to adolescents (Lu et al., 2011). Also, little difference in mobile phone take up and increase in data consumption between adult age groups below 55 years was reported by Ofcom (2019a). The evidence shows that age is not a stable or definitive predictor of problematic mobile phone practices and may be evident of a cultural shift which includes all ages rather than a cut-off age.

Another unstable predictor of problematic mobile phone practices related to gender. Females were considered to demonstrate higher levels of mobile phone dependence and frequency of use compared to males (Beranuy et al., 2009; Chóliz, 2012; Jenaro et al., 2007). More recently, problem mobile phone use was not associated with gender (Beison & Rademacher, 2017; Mitchell & Hussain, 2018; Pearson & Hussain, 2015) which may indicate a cultural shift similar to the age factor.

Personality factors were also proposed as predictors of problematic mobile phone practices such that high scores of extroversion predicted problematic practices (e.g. Bianchi & Phillips, 2005; Lane & Manner, 2011). However, other studies did not find an association between extroversion and problematic mobile phone use (Mitchell & Hussain, 2018; Pearson & Hussain, 2015). Also, higher narcissism scores (self-serving personalities) were linked to smartphone addiction such that smartphones encouraged narcissism, even in non-narcissistic users (Pearson & Hussain, 2015). In contrast Hussain et al. (2017) did not find narcissism to be related to problematic smartphone use but increased time spent using a smartphone was

linked with narcissistic traits which suggests that the mobile phone social connection can encourage the self-serving promotion of the users identity.

With regards to emotion related factors higher levels of anxiety was related to increased time spent using a smartphone or problematic use (e.g. Elhai et al., 2016; Hawi & Samaha, 2017; Hussain et al., 2017). However, Harwood et al. (2014) found no association. Non-social process smartphone usage (e.g. entertainment, news) was strongly associated with higher levels of anxiety more so than social usage (e.g. messaging, social media) which is relevant because process usage was considered to be a stronger determinant of smartphone addiction than social usage (Van Deursen et al., 2015). Further to this, problematic mobile phone practices have been related to the fear of missing out (e.g. FoMO; Elhai, Levine, et al., 2018; Lo Coco et al., 2020) which represents a strong desire to remain constantly connected to other people's rewarding experiences (Przybylski et al., 2013). Elhai et al. (2020) suggested that the positive relationship between problematic smartphone use and anxiety may be mediated by FoMO which was positively related to process usage but not related to social use. It was suggested that process usage may be a way to reduce stress related to social interactions. This was considered by Giagkou et al. (2018) who found a positive relationship between FoMO and passive following on social media which highlighted that FoMO may also represent an interest in reducing stressful content of social interaction. The positive relationship between FoMO and problematic mobile phone practices may represent a strong desire for the rewards of knowing rather than addiction to the means of knowing (mobile phone).

This discussion on research investigating risk factors related to problematic mobile phone practices has shown that socio-demographic and personality factors are not stable predictors across studies. However, the studies on emotion related factors illuminated that mobile phone practices may be shaped by the deep emotional connection the user can have to their emotional regulation through the rich set of activities that their mobile phone offers and their constant connection to information and social networks. This brings to the fore the social context of users' mobile phone practices and why they use their mobile phone.

Further studies highlighted that the mobile phone has become a key part of a satisfying modern lifestyle (e.g. Panova & Carbonell, 2018; Pearson and Hussain, 2015) for a range of usage types including social, productivity enhancement, information seeking, entertainment and personal status (Elhai, Dvorak, et al., 2017). Social networking apps are the most popular use (Pearson & Hussain, 2015; Hussain et al., 2017; Textlocal, 2019). From a social perspective the mobile phone is associated with increasing social inclusion within a group (e.g. Srivastava, 2005), reinforcing relationships (e.g. Balakrishnan & Raj, 2012) and strengthen interpersonal

solidarity (Chung, 2011). The mobile phone offers continual contact with others which prompted suggestions that users may be addicted to being in contact with others (Walsh et al., 2008) or dependence on the social connection (Walsh et al., 2010).

Studies also focused on the relationship between mobile phone practices and identity such as Walsh and White (2007) who used qualitative focus groups and quantitative questionnaires to show that the opportunity for greater self-expressed identity within a social group increased the users frequency of mobile phone use. Walsh et al. (2011) qualitative study suggested that frequency of use and awareness was associated with the importance of identifying as a mobile phone user while Walsh et al. (2008) highlighted that users were attached to their mobile phone which played an integral role in their lives. Further to this, Campbell (2006) suggested that the mobile phone functioned as a tool within the practices used by teenage girls to shape their self and identity enactment.

The literature which has considered the typology of use and social accounts of why people use their mobile phone has assembled a perspective of practices related to users' contextual interests in their lifestyle and identity. This discussion has highlighted that a generalisable distinction between normal and problematic practices may not account for unique mobile phone users embedded in their personal context and digital culture. Much of the quantitative mainstream psychological research which has dominated the study of the mobile phone user and their practices used cross sectional correlations to make statistical inferences about differences between groups of mobile phone users and their practices (e.g. Arpaci & Kocadag Unver, 2020; Bianchi & Phillips, 2005; Kwon et al., 2013). The data collected through questionnaires and scales by such studies focused on identifying risk factors within the individual mobile phone user separated from their social context. The quantitative positivist perspective did not consider the complexity of socially integrated subjectivity and behaviour (Burr, 2015; Teo, 2012). Qualitative studies considered the influences of the social environment which may have shaped users practices (e.g. Pearson & Hussain, 2015; Fullwood et al., 2017; Walsh & White, 2007; Walsh et al., 2008) but did not fully explore the deeper mechanisms by which the types of practices were shaped such as the deep meaning the mobile phone had to the user and their lifestyle. Studies which adopt a critical perspective to consider the ways in which the deep meaning the mobile phone has to the user shapes their practices are sparse (e.g. Campbell, 2006). Further to this, studies from a critical perspective which have focused on the experiences of mobile phone users positioned as problematic users by the literature are unapparent. The current study adopted a critical perspective to provide a voice for this group of users embedded in their personal context and subjected to broad cultural

narratives of neoliberal digital culture to inform contextualised rationales for the distinction between normal and problematic mobile phone practices.

8.2 An Overview of the Methodological Approach

The study aimed to explore the conceptual understandings of the mobile phone by UK mobile phone users positioned as at risk of being categorised as problem mobile phone users by psychology literature (e.g. Bianchi & Phillips, 2005). The analysis was interested in in-depth accounts of this group's mobile phone experiences and considered how their contextualised understandings of the mobile phone may shape their practices and subjectivity within the neoliberal digital age. To achieve this, the study was designed as a two-phase research study which commenced with the selection phase to identify users positioned as problematic mobile phone users by the literature who could be invited to participate in the main interview phase without obligation. The *Mobile Phone Problem Use Scale* (MPPUS; Bianchi & Phillips, 2005) was used during the selection phase to identify problem mobile phone users because it was devised as a reliable self-report scale which was considered to be the gold standard in the measure of the adult problem mobile phone user (Goswami & Singh, 2016; Lopez-Fernandez et al., 2014).

8.2.1 Selection phase.

The 424 self-selected participants who completed the Qualtrics based online version of the 27 item MPPUS selection phase (see *Appendix H*) were adult mobile phone users aged between 18 and 61 years. With regard to gender, 354 participants reported their gender as female, 61 as male, 4 as non-binary, 3 as gender non-conforming and 2 participants did not wish to disclose their gender. The sample came from a variety of occupations and practiced an assortment of activities through their mobile phone. Smartphones were used by 421 participants, 1 participant reported that they used a feature phone and 4 participants reported that they used a basic mobile phone (talk and text only; Ofcom, 2016) but the mobile phone brand and model reported by two of these participants (Apple iPhone 7 and Samsung S6) met the criteria of a smartphone. The sample reported using mobile phones from a range of brands; Apple (266 participants), Samsung (83), Huawei (27), Sony (7), Honor (7), Motorola (6), Nokia (6), LG (5), Google (4), OnePlus (4), Xiaomi (3), Wileyfox (2), Blackberry (1), BLU (1), Fairphone (1), and ZTE (1). The service contract type reported were monthly contract (271

participants), SIM only contract (105), pay as you go (46). See *Appendix S* for a table of participant reported demographic information, *Table S1*, and a summary of the participant information, *Table S2*.

Recruitment of participants involved circulating invitations to participate through email to known associates of the researcher and through announcements to the students and staff at the University of Derby. Also, an invitation to participate was promoted through the researchers PhD research Facebook page in order to make the online version of the MPPUS widely accessible across the UK population. The Facebook promotion campaign targeted adult mobile phone users in the UK. Recruitment for the selection phase ceased at 424 participants because the aim of 20 interviews, proposed by Braun and Clarke (2013), had been successfully completed during the concurrent interview data collection phase. Further to this, in qualitative research the quality of the data is important and so data saturation was also a concern (Beitin, 2012; Guest et al., 2006). Data saturation had occurred before 20 interviews in which analysis no longer revealed new themes. The method of concurrent selection and interviewing avoided unnecessary participant recruitment and data collection during the selection phase.

8.2.2 Interview phase.

The interview participants were mobile phone users whose MPPUS score was higher than the cut-off score calculated as the 80th percentile of the scores resulting from the current sample of 424 participants who completed the MPPUS between 7 February and 19 August 2019 (171/270 or greater; see *Appendix T for the SPSS output table*). The upper quintile score range identified the most frequent users of their mobile phone who were more at risk of problematic use relative to the current sample of UK adult mobile phone users who participated in the selection phase. Due to the method of concurrent data collection for the selection and interview phases of the study, an initial cut-off score of was set to 174/270 which was derived from Lopez-Fernandez et al. (2014). This enabled interview data collection to commence while the MPPUS score data was building. The 80th percentile cut-off score was periodically monitored throughout the data collection process to observe the difference from the initial cut-off score and inform interview participant selection.

28 of 97 participants who were invited to take part in an interview replied to the invitation. Six invitees did not keep their phone interview appointment which resulted in 22 completed interviews with consenting participants. However, the data of two interviews were excluded because the participants' MPPUS scores were below the final cut-off score. This was

because they were recruited at a time when recruitment was struggling to yield participants and the cut-off score was related to the 75th percentile of the samples' scores at the time of their recruitment (153/270). After 20 interviews with participants whose MPPUS score was in the upper 20% of the final sample's scores (171/270 or above) data collection was ceased. The £10 amazon voucher recompense was accepted and received by the 22 interview participants.

Dyadic semi-structured interviews facilitated by the researcher were conducted with 20 purposively sampled mobile phone users who scored 171/270 or above on the MPPUS during the selection phase which related to the upper 20% of the 424 selection phase participants' scores. This cut-off score positioned 86 participants as frequent users of their mobile phone who were at greater risk of problematic use relative to the 338 lower scoring participants of the selection phase. The MPPUS scores of the interview participants ranged from 172 to 244 with 7 participants scoring above the 90th percentile (189/270 or above). Two interviews were conducted face-to-face and 18 conducted through the mobile phone. The participant group consisted of 18 females and 2 males aged between 18 to 39 years who practiced an assortment of activities through their mobile phone and came from a variety of occupations. At the time of their participation, the group reported using smartphones from a range of brands; Apple (13 participants) Samsung (4) Huawei (2) Google (1). The service contract type reported were monthly contract (16 participants), SIM only contract (3), pay as you go (1). See *Appendix U* for a table of participant reported demographic information, *Table U1*, and a summary of the participant information, *Table U2*.

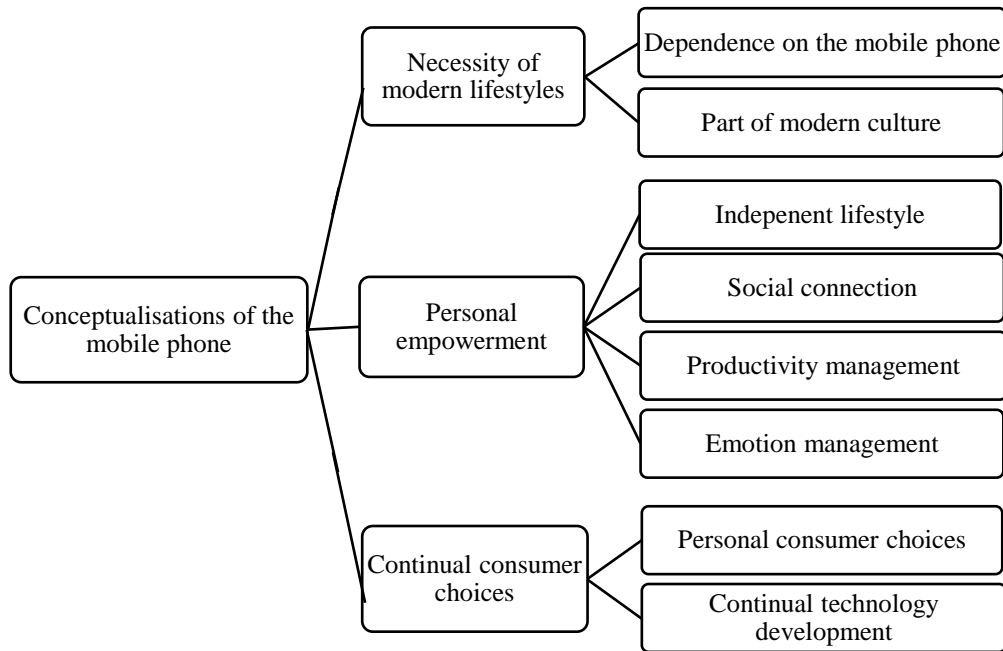
The duration of each interview was between 23 and 49 minutes with an average time of 35 minutes and an accumulated total time of approximately 697minutes (11 hours 37 minutes; excluding consent and debrief). The transcribed interviews were analysed by using an inductive thematic analysis informed by social constructionism to work with latent themes (see Braun & Clarke, 2006). The analytic process developed themes which related to the participants' narratives through which the mobile phone appeared to be constructed. The analysis was initiated by exploring the questions; What is the conceptualisation of the mobile phone? What does the construct say about mobile phone practices? What position does the construct make available for people? What can be practiced and experienced from this position? (see Willig, 2013). See *Chapter 4* for further details of the data collection, management and analysis processes.

8.3 Analysis

The analytic process of the interviews with mobile phone users positioned as at risk of being categorised as problem mobile phone users developed three main themes which related to necessity of modern lifestyles, personal empowerment and continual consumer choices. The themes represent salient narratives through which the mobile phone appeared to be constructed as a life enhancing bond needed to conduct a modern lifestyle, a facilitator of empowerment and a perpetual chain of consumable choices. The analysis also focused on the emotional contrasts experienced by the participants in relation to these conceptualisations of the mobile phone. Further to this, the process considered the ways in which these constructions and the positions they made available may have shaped mobile phone users' practices and self-formation within the context of the neoliberal digital age. In the following sections, each of the themes and their subthemes are explored in depth using supportive extracts from the data which typify the theme and the wider data. Figure 8.1 shows a thematic map that represents the three themes and their subthemes.

Figure 8.1

Thematic map of the themes and subthemes which relate to conceptualisations of the mobile phone developed during the analysis of interviews with UK mobile phone users positioned as problem mobile phone users by psychology literature.



8.3.1 Necessity of modern lifestyles.

One of the main themes that was developed related to a necessity of modern lifestyles. This theme is explored through two subthemes which related to dependence on the mobile phone and part of modern culture. Within this theme the mobile phone was constructed as a meaningful life enhancing bond which was depended on to conduct a modern lifestyle. Mobile phone practices were positioned as normal enhancements to the user's lifestyle and identity. The user was positioned as dependent on their lifestyle and the comforting support their bond with her mobile phone provided. The theme also explores the user's emotional struggle between comfort and anxiety related to their dependence on the bond with their mobile phone.

8.3.1.1 *Dependence on the mobile phone.*

Extract one: Taken from a discussion with Danni about her relationship with her mobile phone.

1. Pretty, pretty close. I must say, I'm really attached to my phone. So, most of the time,
2. wherever I go, my phone goes. It's, uh, I know some people say they have a love-
3. hate relationship with their, their phone, but I really don't, I, I do appreciate my
4. phone and everything that I can do through it. I have never once thought, 'Oh I w- I

5. wish I didn't have the mobile phone I do' or 'I wish I didn't have all the apps'
6. because at the end of the day, if I feel like that, I can delete an app. but, the phone
7. just gives me a lot more things that I never would have been able to do otherwise,
8. or I would have struggled to do otherwise.

This extract focuses on Danni's attachment to her mobile phone which is conceptualised as a life enhancing bond and positions her as an active user who is dependent on the continual benefits from this close relationship. Danni's deep bond with her phone is first evident in lines 1-2 which depicts Danni and her mobile phone as 'attached'. This 'close' relationship suggests that Danni is deeply embedded with her device and has formed a deep and meaningful connection with which she cannot be without. This deep connection indicates that Danni's phone is unique to her and distinct from other people's as if integrated with her unique lifestyle and identity. The relationship portrayed throughout the extract is continually positive and helpful, rather than a 'love-hate relationship' (lines 2-3) and can be likened to a deep and supportive personal relationship that Danni cannot be without. This is further evident in lines 6-8 which portrays the mobile phone as essential to conducting some of Danni's lifestyle activities which she 'would have struggled to do otherwise'. However, Danni positions herself as in control of her relationship with her phone through her control of the apps which indicates that she does not have a problematic relationship with her phone which does not have control over her. From this perspective, Danni's unique bond with her phone expands the range of lifestyle activities available to her and supports her capabilities to conduct her chosen activities with greater ease. This bond functions as essential support for Danni's unique lifestyle and identity development which could be diminished without her deep bond with her mobile phone.

The conceptualisation of the mobile phone as a life enhancing bond which is an essential tool for Danni to conduct and develop her lifestyle positions her as dependent on her lifestyle and in control of the support her bond with her mobile phone provides. Speaking from a position of dependence on her bond and her lifestyle development may afford greater social power in relation to someone who does not bond with their mobile phone who may be positioned as less interested in developing their lifestyle and identity.

Extract two: Taken from a discussion with Louise about her relationship with her mobile phone.

1. I would say I'm quite dependent on it, if I had to use a word to describe it. So yeah
2. I'm dependent on it, um in the sense that I feel like I need it to- I couldn't go through
3. a day without checking my phone, definitely not. Even when I was halfway across
4. the world, I had to check my phone regularly when I should really have just been
5. enjoying the fact that I was away from home, Um. So yeah, over, over-dependent
6. on it. Um. But it is something that (.) I don't know, I feel like I battle with my phone
7. because it's something that gives you a sense of security because you know that you
8. can message anybody or find out something there and then, but also sometimes I
9. hate the fact that I'm so dependent on it. So kind of a battle between I need my phone
10. but also I'm conscious of how much time I spend on it and my reliance on it

In contrast to the positive and controlled emotional connection with the mobile phone depicted in the previous extract, this extract focuses on the struggle and conflict that Louise experiences due to her dependence on her bond with her lifestyle practiced through her mobile phone. The extract illustrates that Louise is deeply attached to her phone through the repeated use of the words 'dependent' (lines 1, 2, 5 and 9) and 'need' (lines 2 and 9) in relation to her relationship with her phone which suggests she is not in control of her dependence. This bond is contextualised through the 'sense of security' (line 7) and the connection to other people (lines 7-8) that she enjoys through her bond with her phone. However, Louise's 'battle' (line 6 and 9) between relying on the comforting security that the productive connection provides and her sense of undesirable dependence (line 9) on the tasks that she can do through her phone generates a continuous emotional struggle between comfort and discomfort. Louise emphasises the 'hate' (line 9) that she feels toward her dependence on her bond with her phone which is presented as continuously conflicting with the comfort that reliance on her bond provides. Further to this, her dependence is positioned as a distraction from real-world activities (lines 2-5) which contrasts with the desirable support that her mobile phone offers. From this perspective, an unhelpful consequence of the mobile phone as a life enhancing bond is that it can create a competing and undesirable notion of dependence which generates a continuous emotional struggle between comfort and anxiety, or joy and pain.

The construct which generates a continuous emotional 'battle' demonstrates that Louise has the agency to position herself as secure and productive when using her mobile phone to

conduct her lifestyle. However, Louise simultaneously positions herself as undesirably dependent on her bond with her phone practices which results in her experience of tension and emotional struggle between the two juxtapositions. This conflict may diminish her pleasure of her phone experiences which suggests that someone who does not bond with their mobile phone may be positioned as less emotionally conflicted when conducting their lifestyle.

8.3.1.2 Part of modern culture.

Extract three: Taken from a discussion with Rose about her views on how the mobile phone is represented in the news.

1. So they- they've changed so much in such a short space of time, it, it's almost like a
2. new, a new part of our culture now, isn't it? To have the mobile phone. So, like,
3. because it's been such a rapid- rapid shift, it feels quite unnatural to quite a lot of
4. people. But where the younger people have grown up with them, it's that- they- it's
5. their norm.

This extract shows the construction of the mobile phone as an integral part of modern culture which is dependent on the mobile phone to function. This construct is evident in line 2 in which the possession of a mobile phone is positioned as 'a new part of our culture now' which conceptualises the mobile phone as a normal part of modern society and a modern lifestyle. The mobile phone being integral to modern culture is attributed to the rapid development of the mobile technology (line1) and its alignment with the rapid development of modern culture (lines 2-3) rather than user's free choice. This suggests that Rose understands the need for a mobile phone in order to function was created by processes involved in the development of modern culture. Further to this, in lines 3-4 Rose understands the new culture, which involves mobile phones, as 'unnatural' to many people which portrays a cultural shift away from a culture to which people were naturally aligned. This constructs a divide between people who have grown up in a technological culture and those who existed before the technology boom. Consequently, the mobile phone is viewed as an invader to a culture which has destabilised the intuitive human experience and to which some people have difficulty in responding.

Rose's reference to 'younger people' (line 4) suggests her understanding that different generations have been exposed to different digital cultures. Rose positions young people as

instinctive users of technology because they have grown up in the digital culture which she portrays as the current normal. Further to this the reference to youth can be seen as a metaphor for the youth of the developing culture and the youth of mobile phone technology which paints a picture of development and rejuvenation. Those who can participate in this modern digital culture are positioned as youthful or rejuvenated and developing along with the revitalised culture. Further to this, mobile phone practices are positioned as normal practices in a modern lifestyle within this new digital culture (line 5). This normalisation of mobile phone practices positions mobile phone users as normal members of society and integrated into the fabric of modern digitally orientated culture. This position may serve to satisfy her desire to identify with the modern culture. This position implies that those who do not adapt to the practices of the modern digital society may be viewed as not integrated and out of place. From this perspective it can be construed that modern culture is dependent on the mobile phone to function normally.

8.3.2 Personal empowerment.

Building on the broad theme related to a necessity of modern lifestyles, this theme focuses on specific aspects of the users' lifestyle that are shaped by their understanding of the mobile phone in the modern digital culture. The theme is explored through four subthemes which relate to independent lifestyle, social management, productivity management and emotion management. Within this theme the mobile phone was constructed as a lifestyle enhancing tool which empowers the user to manage aspects of their lifestyle. Mobile phone practices were positioned as facilitators of the user's empowerment to enhance their lifestyle and identity. The user was positioned as empowered to enhance their lifestyle practices which were conducted through their mobile phone. The theme also explores the contrasts which relate to the user's experience of empowerment through their mobile phone.

8.3.2.1 Independent lifestyle.

Extract four: Taken from a discussion with Lillian about taking photos with her mobile phone.

1. ...obviously you've always got your phone with you, so it's nice to always have a
2. camera with you, um, and, yeah. Yeah. It's nice to be able to take photos as my son

3. grows up. Um, and music, this is convenient to always have a sort of a music player
4. with you with- where your phone is everything in one sort of thing. You haven't
5. gotta- I mean, when I was younger, you had to carry around like three different
6. things, so it's nice to- to have everything in one.

This extract illustrates the construction of the mobile phone as a multifunction tool which enhances Lillian's independent lifestyle because it empowers her to conduct desirable aspects of her lifestyle while liberated from the binds of a collection of devices and fixed geographical location. Lillian's conceptualisation of the mobile phone as 'everything in one sort of thing' is evidenced in lines 4-6 which she positions as a 'nice' freedom from the encumberment of multiple devices. This suggests that a multifunctioning tool is desirable, liberating and beneficial for enhancing her lifestyle experiences that she conducts using her phone.

Lillian's understanding that her multi-function mobile phone can be with her 'always' is considered in lines 2-3. From this perspective Lillian's mobile phone functions to provide her with the tools, such as camera and music player, which are meaningful to enhancing her lifestyle wherever she is. Lillian is free to conveniently experience her meaningful lifestyle activities such as record her son's development through the photographs she can take with her phone wherever and whenever she chooses. From this perspective, the trusted mobile phone is invited to participate in deeply meaningful aspects of Lillian's life which is representative of the deep meaning that the independence experienced through her mobile phone has for Lillian.

In this modern culture, Lillian's meaningful lifestyle experiences are not restricted to the times and places when she was able to carry all her devices as she did when she was young within an earlier culture. The load on Lillian's lifestyle is lightened and enhanced by her multi-purpose use of her phone which she can use wherever she roams.

This construction of the mobile phone positions Lillian as empowered to enhance meaningful aspects of her lifestyle through the multi-purpose use of her phone and her independence from the inconvenience of multiple devices and fixed geographical location. This independent position implies that those who do not employ a mobile phone in their lifestyle may be viewed as less independent and free to experience their desired lifestyle wherever they are in the modern 'everything in one' digital age.

Extract five: Taken from a discussion with Alison about the limitations of her mobile phone's battery.

1. Alison: it would be to have a battery that lasts the whole time I'm out of the house.
2. Interviewer: Yeah.
3. Alison: Because I have to carry a portable charger around with me, because
4. sometimes like I'll get to uni and it's about half eleven and they ask us to research
5. something. So I don't take a laptop to uni, I only take my phone, and then I'm using
6. my phone to research for things and my battery is dying, and obviously like, Like
7. I've said before, my bus pass is on the- my phone, so if my battery dies, then how
8. am I gonna get on the bus?

In contrast to the construct of the mobile phone as a liberation from the burden of multiple devices and fixed geographical location, this extract focuses on Alison's experience of the limitations of depending on her multi-faceted mobile phone as part of her independent lifestyle. The reference to battery life in line 1 suggests that Alison values the benefits of her extended independence from physical tethers such as power supply. However, Alison positions her mobile phone's support of her independence as transitory rather than permanent (lines 6-8). The use of the phrase 'my battery is dying' suggests that the battery is vital and has a level of life which is consumed through independent phone use such as 'research'. From this perspective the duration of the function of the phone is restricted by time like an egg timer draining rather than a book which is comfortably always on to serve its function without depleting. The benefits and assistance that her mobile phone offers, such as remote working, are understood to be continuously depleting. The continuous threat of interruption to completing her meaningful and essential tasks generates an ever-present sense of urgency and tension such as continually thinking about 'how am I gonna get on the bus?' (lines 7-8).

Alison's understanding that her mobile phone's support for her independent lifestyle activities is transient positions Alison's empowerment to conduct her independent lifestyle through her phone as unstable. Alison's empowerment requires periodic recharging to maintain. While Alison understands that carrying a 'portable charger' (line 3) will extend her empowerment to be independence, this confines her to the burden of multiple devices which places a limitation on her independent lifestyle additional to the limitation of continual maintenance. Alison's use of her phone in a multi-faceted way to experience aspects of her independence generates limitations to this experience.

This conceptualisation of the mobile phone as transient support for an independent lifestyle which needs continual maintenance positions Alison as conditionally empowered to develop her independence through functions of her mobile phone. Alison's empowerment to experience her desired independent lifestyle through her phone continuously consumes the ability of her phone to function which can generate her experience of urgency and tension.

8.3.2.2 Social connection.

Extract six: Taken from a discussion with Sophia about how her mobile phone enhanced her life.

1. So it's definitely being able to share the pictures with my family members, being
2. able to stay in contact with my family members. Uh, we're having a group, uh, in
3. my daughter's class. Every single mom is included in the WhatsApp group. So if
4. anything is happening on the, on that day because the school is closed or, uh, it's
5. snowing and the school is shut and anything, anything that happening, they just, uh,
6. send the message and everyone is like aware of what is happening. So we definitely
7. stay, uh, aware of everything that's happening around you, what is happening with
8. your family. You can open the group chat with the friends that going to be invited
9. for your birthday. And it just help you to communicate, definitely, and to stay in
10. touch with your family members and friends.

This extract demonstrates the construction of the mobile phone as a personal social conduit through which Sophia is empowered to experience spontaneous social connection and maintain relationships. This construct is evident throughout the extract in which Sophia refers to 'being able to stay in contact with my family members' (lines 1-2), 'group chat with the friends' (line 8) and 'help you to communicate' (line 9). The extract implies that Sophia uses her mobile phone for social interactions which suggests that Sophia construes her social conduit as multidirectional through which she can make herself visible in the world, socialise and maintain her meaningful relationships. These spontaneous social interactions and continuous social connection with her relational groups allows Sophia to be informed instantly, multitask and become more productive. From this perspective, the function of the mobile phone is portrayed as breaking down traditional organic barriers to social connection, such as distance and availability, which enables Sophia to maintain healthy relationships and protect her child's

wellbeing through continual relational connection with her family, friends and her child's school teachers (lines 4-9). Sophia's phone allows her to experience a greater level of social connection and relationship health than she could experience without her phone.

The conceptualisation of the mobile phone as a personal social conduit for Sophia to manage the social aspects of her lifestyle positions her as a social person located within her network of meaningful social relations. This social and relational position implies that those who do not engage with two-way social interaction through their mobile phone may not be sociable or socially healthy within a network of healthy relations. Speaking from a position of a social person may afford greater relational and socialising power in relation to someone who is positioned as less socially successful because they do not use a mobile phone. Through this concept, the mobile phone can be seen to function as an essential social conduit which can empower Sophia to maintain the social power required to keep informed, gain social capital, maintain meaningful relationships and protect her family. However, this perspective also highlights the difficulty in avoiding these social connections.

Extract seven: Taken from a discussion with Emily about how social media on her mobile phone enhanced her life.

1. It lets, it lets me (.) know what my friends are up to. Uh if a friend hasn't messaged
2. me or I haven't heard from a friend in a while, that I'll go on social media and know
3. they've posted something, it, like, makes me know that they're still doing things, that
4. they're still alive in some cases. Um, so, it makes me feel that connection that I've
5. kind of lost. Even so, even without messaging them, I still know that they're part of
6. my life.

Further to the construction of the mobile phone as a conduit for two-way social interaction, this extract focuses on the passive social surveillance offered through the mobile phone. Emily's experiences with this passive layer of social connection constructs the mobile phone as a social visibility controller which empowers Emily to feed her need for continuous social connection by covertly monitor her friends' social media posts. This construct is evident in lines 2-3 in which Emily refers to viewing friends posts on social media and in line 5 in which Emily highlights 'even without messaging them'. From this perspective, Emily is empowered to monitor her friends without interaction while her friends are visible and unaware that she is viewing their posts. Emily emphasises the assumption that her friends post

to social media by positioning online presence as evidence of life and activity (lines 3-4) which justifies the validity of her monitoring social media for updates on her friends' status. However, this does not account for friends who choose to be socially invisible as Emily does. Further to this, Emily positions her surveillance of her friends as a one-way social interaction which 'makes me feel that connection that I've kind of lost' (lines 4-5). This notion further suggests that Emily desires to maintain control over her much-needed social connections with her friends that she feels she has lost if they have not contacted her for a while (lines 1-2). Her continuous passive use of social media through her ever-present mobile phone can be related to her expectation that people should contact her and her need for continuous social connection.

The construction of the mobile phone as a social visibility controller positions Emily as empowered to maintain her meaningful and needed social connections through passive social observation. This brings to the fore Emily's conceptualisation of social interaction and relationship which she feels can be maintained through one-way passive observation as a substitute for her deeply meaningful social interactions with her friends. From a broader perspective, this subtheme related to social connection has illustrated the conceptualisation of the mobile phone as a controller to connect or disconnect from the multiple layers of social connection in order to control privacy and public visibility as well as the meaningful emotions attached to social connection.

8.3.2.3 Productivity management.

Extract eight: Taken from a discussion with Rose about what her mobile phone represents to her.

1. I organise everything on my phone, so it's kind of ((pause)) It's like the gadget I need
2. to organise my life, really. My college is on there, my emails are on there, um, so it
3. represents, not, my life- Saying it represents my life, that, that's not correct. More (.)
4. Um (.) My organisation of my life, it kind of represents, if that makes sense.

This extract explores the relationship between productivity and the mobile phone through the notion of productive organisation as a representation of the broader productivity management subtheme developed during analysis. Rose conceptualises her phone as a trusted and deep connection to her valued organisation of her life which empowers her to be productively organised. This is highlighted through the phrase 'organise everything on my

phone' (line 1) which implies that Rose has many aspects to her lifestyle which require organisation and her mobile phone has the capacity to do this. Rose further emphasises her phone is 'the gadget I need to organise my life' (lines 1-2) which suggests that Rose values organisation of her life and has a deep connection to her reliance on her phone's capacity to assist. Rose trusts her phone with her personal details which is deeply rooted in the organisation of her 'college' information and 'emails' (line 2). The deep connection Rose experiences with her phone is highlighted further through her understanding that her phone represents the 'organisation of my life' (line 4). Not only is Rose deeply connected to her trusted phone through its capacity to assist her valued organisation of her life, but also Rose builds a picture of her phone as a representation of her organised lifestyle. Rose's phone allows her to experience a greater level of valued productive organisation than she could experience without her phone.

From the perspective of the mobile phone as a deep connection to, and representation of, productive organisation, Rose is positioned as enterprising and empowered to control the meaningful organisation of her life. From this position she can be more efficient and productive in multiple areas of her lifestyle. which implies that those who do not engage with productivity management through their phone may be less organised and less productive. Speaking from a position of an organised and productive life represented by her mobile phone practices may afford greater power in relation to someone who is positioned as less organised and less productive.

Extract nine: Taken from a discussion with Aisha about how apps hinder her life.

1. it's definitely my biggest distraction, um, because there's been times where I've tried
2. to focus on my assignments but I can't because I'm too busy, you know, I've got my
3. phone in one hand, scrolling through, I don't know, it could be Instagram, shopping,
4. anything, and, uh, trying to do my assignments on the other. And then I'll be like,
5. 'Okay, well, I need to take a break,' and then I, I, before you know it, I've realised
6. I've spent about an hour, two hours on my phone and only done about half an hour's
7. worth of work.

In contrast to the construction of the mobile phone as a deep connection to enhanced productive organisation explored in the previous extract, this extract focuses on the conceptualisation of the mobile phone as a deep connection which is a distraction to formal

productive activities. Aisha's experience of her phone as her 'biggest distraction' (line 1) to the productive development of her 'assignments' (line 2) suggests a notion of competing needs. The need to work on her assignment competes with her need to be 'busy' with other activities that are accessible through her phone such as 'Instagram' and 'shopping' (lines 2-3). The use of the phrase 'trying' in relation to doing her assignments suggests that she is giving priority to her distracting phone related activities. The emotional struggle generated through these competing needs implies that Aisha is more invested in her phone activities which distract her from formal productivity of assignments to which she appears to feel responsibility rather than desire. However, her distracting phone related activities may be productive to aspects of Aisha's lifestyle to which she is deeply connected. This deep connection is illustrated in her reference to the time distortion she experiences when she becomes absorbed into her phone activities (lines 5-7). This absorption adds to Aisha's picture of her deep connection with her phone which competes with her formal productivity responsibilities and generates an emotional struggle between responsibility and desire.

The construction of the mobile phone as a deep connection which can be distracting to formal productivity positions Aisha as a productive person who is disempowered to maintain her required level productivity through her deep connection with her phone. While she has the agency to position herself as productive, simultaneously she positions herself as lacking the level of self-control required to maintain effective formal productivity due to competing desires which generate an emotional struggle. This competition of desires may devalue her enjoyment of her phone experiences. The position of disempowerment suggests that someone who has a higher level of self-control and is less distracted by their connection to their mobile phone may be positioned as more empowered to be productive.

8.3.2.4 Emotion management.

Extract ten: Taken from a discussion with Danni about the role of her mobile phone in her life.

1. It's, hmm, in a way, it does serve as ((pause)) as a, as a crutch almost, I do feel safe
2. when I have my pho- mobile phone on me. So, while it does have all of these amazing
3. things, having it also makes me feel safer, so it's almost like a little teddy that you
4. bring around, I don't know. But, it does, it is almost like a crutch. I do have it with
5. me at all times because it makes me feel safer.

This extract explores Danni's understanding of her mobile phone as a deep emotional connection which can enhance comforting emotional support and empower her to experience her valued feeling of safety. Danni associates her feeling of safety with her mobile phone which she understands acts as an emotional 'crutch' when she has her mobile phone with her (lines 1-2 and 3-4). This implies that she could feel vulnerable, less safe and less emotionally supported when she is without her phone which can act as a coping strategy for her personal security. Danni's reference to 'little teddy that you bring around' (lines 3-4) acts as a metaphor for an ever-present comforter a child may have to feel secure and calm. This metaphor paints a picture of her phone as a trusted and emotionally supportive companion to whom she looks for a source of trusted emotional comfort. Through her deep connection to her feelings of security and comfort, Danni is emotionally connected to her mobile phone through which she experiences her valued emotions. Danni's deep emotional connection to her phone enables her to experience a greater level of emotion management than she could experience without her connection to her phone.

The conceptualisation of the mobile phone as a deep emotional connection to meaningful emotional support positions Danni as empowered to manage some of her valued emotional experiences to which she is deeply connected. From this position related to her deep emotional connection with her mobile phone she can feel protected which implies that those who do not connect with their mobile phone emotionally may be positioned as vulnerable and less emotionally supported.

Extract eleven: Taken from a discussion with Louise about how the apps and features of her mobile phone may enhance or hinder her life.

1. I think also it can, phones in general promote anxiety I think. If I've not, if I've not
2. checked my phone in like an hour- If I'm not at work and there's no reason for me
3. not to check my phone, if I haven't checked it in an hour, I will, I will start to feel a
4. slight sense of um anxiety as to (.) what if, what if a message has come through that's
5. important and I haven't had it or what if I've missed a phone call. Um, so I think it
6. promotes a lot of anxiety, definitely.

In contrast to the conceptualisation of the mobile phone as a deep emotional connection to meaningful emotional comfort, this extract focuses on Louise's experience of her mobile

phone as a source of anxiety. Louise understands that mobile ‘phones in general promote anxiety’ (line 1) which implies that she attributes her feelings of anxiety, at least in part, to her phone. More specifically, Louise ascribes her feelings of anxiety to not checking her phone for ‘an hour’ and her fear of missing out on an important ‘message ‘or ‘phone call’ (3-6) which suggests that she experiences comfort with social connection and that checking her phone for social connection temporarily quenches her anxiety related to social disconnection. In this way, Louise positions almost continuous social connection as a need to suppress her feelings of anxiety related social disconnection which can be seen to relate to separation anxiety from her relational network rather than her device. From this perspective, the mobile phone’s continuous access to social connection is conceptualised as creating the means for Louise to feel anxious due to the tension of disconnection from her familiar social connection and, simultaneous, the means to suppress her anxiety through spontaneous social connection. The function of Louise’s mobile phone is conceptualised as to provide comfort through continuous social connection which suppresses her anxiety related to the tension of social disconnection. She could not spontaneously suppress her anxiety related to social disconnection without her mobile phone being accessible. However, her continuous accessibility to social connection through her phone is positioned as an ingredient for the generation of her anxiety related to social disconnection.

The construction of the mobile phone as both generator and suppressor of anxiety related to social disconnection and connection positions Louise as both disempowered and empowered to manage her emotional experiences related to social connection through her phone.

8.3.3 Continual consumer choices.

Progressing from the themes related to necessity of modern lifestyles and personal empowerment, the final theme presented in this analysis is related to continual consumer choices. This theme is explored through two subthemes which relate to personal consumer choices and continual technology development. Within this theme the mobile phone was constructed as a never-ending chain of consumable choices which represented the development of the user’s lifestyle, identity and their self-improvement. The consumerist based conceptualisation positioned the user as a perpetual consumer who is active in the process of self-improvement.

8.3.3.1 Personal consumer choices.

Extract twelve: Taken from a discussion with Leah about her service provider.

1. I was with Three and then when I was looking for the phone that I've got, so it's the
2. iPhone XR. So it's like the newest one. Um, and when I was with Three they said
3. that they could give me what Sky was giving me for like sixty quid. And I was
4. looking through all the tariffs, and Sky was the cheapest one at forty-three, the rest
5. were sixty pounds plus. So I thought I'd go with Sky because it was the best deal.

This extract illustrates the construction of the mobile phone as a personal consumer choice which positions Leah as an active consumer who is deeply invested in her personal choice. The conceptualisation of the mobile phone as a personal choice is evident in lines 1-2 in which Leah refers to her 'iPhone XR' as the phone 'I was looking for' and it was 'the newest one'. This implies that Leah understands there are other phones available that she has not chosen, such as different brands or an older model, and her phone is her choice from a range of options. The first person and possessive language indicates Leah's personal involvement in her choice of mobile phone and that she understands that it is her personal autonomous choice rather than imposed upon her. The construction of the mobile phone as a personal *consumer* choice is evident in lines 3-5 in which Leah compares prices for the mobile phone that she has chosen from competing service provider offers. From this perspective, Leah is actively invested in her freedom to select her phone and tariff which suits her unique financial capacity and is representative of her striving to choose her desired lifestyle and identity that is the 'best deal' for her.

The conceptualisation of the mobile phone as a personal consumer choice positions Leah as an active autonomous consumer who is deeply invested in her personal choice of mobile phone and tariff. From this position, Leah is free to select her personal choice of phone and tariff to suit her lifestyle needs and avoid those that do not contribute to building her desired quality of life. Leah's active involvement in her autonomous consumer choices may serve to satisfy her personal power of personal lifestyle choices and self-governance to assemble her desired lifestyle and identity. However, the tariff hierarchy and limitations in financial capacity indicates that lifestyle choices are shaped by the societal power of financial constraints rather than an unconstrained autonomous choice.

Extract thirteen: Taken from a discussion with Aisha about which app she would miss the most.

1. ... shopping, you know, when you do some online shopping, like, I- I shop quite a
2. bit on um, uh, PrettyLittle Things and boohoo and Missguided, and they've all got
3. their own pages, so every time I go on Instagram, they always post, like, 'Oh, well,
4. we've got the- these latest clothes out', whether it's jeans, tops or whatever, and then
5. if I like anything, you know, just double tap and you buy it. So it's, um, it's really
6. convenient when it comes to spending money.

Further to the construction of the mobile phone as a meaningful personal consumer choice, this extract focuses on the construction of the mobile phone as a personal shopping assistant with a portal to meaningful consumer choices. Aisha views her mobile phone as a source of up to date information about fashions and 'latest clothes' for which she likes to shop (lines 2-3). This implies that Aisha is enabled to keep abreast of meaningful information which relates to maintaining and updating her lifestyle in relation to current trends. Aisha's fashion purchases are positioned as informed autonomous choices assisted by her phone. However, the continuous accessibility to persuasive advertising may manipulate her buying behaviour and encourage her consumption which indicates that the accessibility to information through her phone may reduce her consuming control. Further to this, Aisha conceptualises her phone as a convenient portal to 'spending money' to purchase her meaningful fashion choices, 'just double tap and you buy it' (line 1 and lines 5-6). From this perspective, Aisha's phone functions to help build and maintain her lifestyle and identity spontaneously through her meaningful consumer choices. The mobile phone as a continuous personal shopping portal may encourage Aisha to consume and so diminish her consumer control. However, her phone offers instant reward and satisfaction in the form of the latest fashions to which she is deeply connected.

This conceptualisation of the mobile phone positions Aisha as an active consumer who is deeply connected to her personal consumer choices of meaningful fashion. From this position Aisha can assemble and maintain her desired lifestyle and identity spontaneously through her meaningful consumer choices made available through her phone. Aisha's constant connection to meaningful consumer choices and the opportunity for continual and convenient consumption may serve to satisfy her empty self and help her chase an identity that is linked to meaningful fashion. This efficient form of consumption could be mutually beneficial to the needs of the consumer and the continual consumption needs of neoliberal capitalism.

8.3.3.2 Continual technology development.

Extract fourteen: Taken from a discussion with Lily about how her mobile phone use has changed since her first mobile phone.

1. Uh, it's, well it's drastically increased for a start. I use to barely use the phone but
2. then the first phone I had was pretty rubbish and it was like, it was literally only
3. good for, like, sending the odd text message. Whereas nowadays you've got suddenly
4. more apps, with them being touch screens and everything it's so much easier to
5. communicate with everyone. Especially as you get older everyone else gets phones
6. and gets the apps as well.

In contrast to the notion that the mobile phone as a singular consumer choice, this extract illustrates the conceptualisation of the mobile phone as a perpetual chain of technology development which Lily consumes to maintain the flow of her lifestyle development. Lily views her 'first phone' as 'rubbish' and she 'barely used the phone' due to limited functionality (lines 1-3). This contrasts with her view of modern phones which she construes as having more functions and 'much easier to communicate with everyone' (lines 3-5) which she attributes to her drastic increase in her mobile phone use (line 1). Through contrasting views about the functionality of her first mobile phone and modern phones, Lily conceptualises the mobile phone as a continually developing technology rather something that is unchanging within a fixed hierarchy. The mobile phone is represented as a transient device rather than a device which is stable over time, will retain its value or become a functioning family heirloom. Lily relates the upgrading of her mobile phone to her lifestyle development and that of her social group to whom she wants to align (lines 5-6). From this perspective, Lily's flow of her lifestyle development aligns with her consumption of mobile phone upgrades which may be continual in line with the pressures that continual technology development applies to the functioning of a growing digital culture. Lily's capacity to maintain meaningful connection with her social group may diminish without upgrading her mobile phone to align with the current needs of the digital culture.

The conceptualisation of the mobile phone as a perpetual chain of technology development positions Lily as an active consumer who continually consumes mobile phone upgrades. From this position Lily can maintain the flow of her lifestyle development and self-improvement through her upgrades in order to maintain meaningful connection with her social

group in a developing digital age. This notion of continual technology development and continually upgrades provides a fertile environment for neoliberal capitalism which feeds off an endless cycle of consumer needs. The consumer needs to keep consuming to develop their lifestyle in line with others and those who do not participate in the neoliberal mechanism of upgrades may be viewed as not aligned with others.

8.4 Discussion

The thematic analysis of interviews with mobile phone users positioned as at risk of being categorised as problem mobile phone users developed three main themes which related to a necessity of modern lifestyles, personal empowerment and continual consumer choices. The themes represented salient narratives through which the mobile phone appeared to be constructed as a meaningful life enhancing bond which was depended on to conduct a modern lifestyle, a facilitator of empowerment and a perpetual chain of consumable choices.

The users' conceptualisation of the mobile phone as a meaningful life enhancing bond which was depended on to conduct a modern lifestyle positioned mobile phone practices as normal enhancements to the user's lifestyle and identity. The user was positioned as dependent on their lifestyle and the comforting support their bond with her mobile phone provided. This conceptualisation indicated the user's attachment related to their lifestyle enhancement which the mobile phone provides rather than the device itself. This relates to the suggestions of Nie et al. (2020) and Fullwood et al. (2017) that the user was attached to the services provided by their mobile phone rather than the device, although this current analysis suggested that the user was attached to their lifestyle and identity which is experienced through their mobile phone. However, within this dependence related conceptualisation there was an emotional contrast between users who positioned themselves as in control of their dependence on their lifestyle practiced through their phone, and those who positioned themselves as emotionally conflicted about their uncontrolled dependence on their phone related lifestyle practices such as the need for checking their phone. This notion relates to the concept of the fear of missing out (FoMO) which is described as a perpetual desire to remain informed about other people's activities due to a pervasive apprehension that the user is absent from rewarding experiences (Przybylski et al., 2013). FoMO has been associated with problematic mobile phone practice (e.g. Elhai, Levine, et al., 2018; Lo Coco et al., 2020) which could represent an intense desire for the rewards of knowing rather than addiction to the means (mobile phone). Also, Walsh et al.

(2008) suggested mobile phone users can be addicted to being in contact with others and Walsh et al. (2010) considered a dependence on the social connection.

The notion of the mobile phone as a normal and integrated part of modern culture relates to the statements of Kwon et al. (2013) and Panova and Carbonell (2018). Also, Pearson and Hussain (2015) reported the claims of their participants that their life activities and relationships would be negatively impacted without their phone. But, for these participants of this study the mobile phone was constructed as a deep emotional bond which was positioned as normal in the current digital culture.

The conceptualisation of the mobile phone as a lifestyle enhancing tool which empowers the user to manage aspects of their lifestyle positioned mobile phone practices as facilitators of the user's empowerment to enhance their lifestyle and identity. The user was positioned as empowered to enhance their lifestyle practices and identity which were conducted through their mobile phone. The conceptualisation related to the practical uses of their mobile phone for social and process usage summarised by Van Deursen et al. (2015) and Elhai, Dvorak, et al. (2017) but moved beyond to relate to identity and the emotional empowerment it can offer. The position of empowerment relates to an achievement orientated enterprising self who strives for accomplishment to become that which they desire (Rose, 1998).

The empowerment of independence was highlighted as desirable by the construction which aligns with Campbell (2006) who found that the independence afforded by the mobile phone was desirable for teenage girls but concerns for their safety limited the device to a representation of their independent identity. Further to this, the notion of the neo-nomad proposed that people have a natural propensity to be socially continuous, gain self affirmation and be mobile which can be achieved through mobile technologies and relates to the aspect referred to as digital nomad (Abbas, 2011). The digital nomad fits well with the ever-consuming demands of neoliberalism (Roberts, 2015) because they live in continuous temporary states and so consume temporary, disposable and upgradable things while striving to move on without being held back. The notion of the digital nomad is a continuum rather than single event. However, the notion of independence could be hampered by practical issues such as battery life and loss of network connection which positioned digital independence as a continual maintenance to which emotions related to time pressures and social disconnection were attached.

The empowerment related construct positioned the users as relational and productive people who could extend their control of their social connection from social interaction to passive observing through social media on their phone. The relational position linked to the

notion that people are continuously relational beings and construct their identity relative to others while embedded in their social network. The passive position relates to the notion of the passive use of social media which is characterised by observing other people's profiles and comments on social media rather than actively communicating with others through messages, posts and profile updates (Giagkou et al., 2018). Giagkou et al. found a positive relationship between FoMO and passive following on social media. From this perspective, FoMO may represent an interest in reducing or avoiding the stressful content of social interaction. The construction of the mobile phone extended to a deep emotional connection for emotional management which aligns with the notion that mobile phone use could be a practice of emotion regulation such as a comforter in times of feeling stress (Panova & Lleras, 2016) or temporarily alleviating depressive mood (J.-H. Kim et al., 2015). However, this was contrasted by the notion that the mobile phone promoted anxiety which could link further to the anxiety related to FoMO (Przybylski et al., 2013), mobile phone separation anxiety (e.g. Cheever et al., 2014; Nie et al., 2020) or dependence on social connection (Walsh et al., 2008; Walsh et al., 2010).

The conceptualisation of the mobile phone as a perpetual chain of consumable choices represented the normal self-improvement and development of the user's lifestyle and identity. Rose (1998) described the consumer as "actors seeking to maximize their 'quality of life' by assembling a 'lifestyle' through acts of choice in a world of goods" (p.162). Also, consumable products and their representation, such as their financial value, are bound up with the construction of personal identity and social meaning while the individual is bound by ever increasing choices to express their identity (Blackman & Walkerdine, 2001). Further to this, Cushman (1990) highlighted that consumerism is a symptom of an empty self which can be filled with consumer goods and services. From this perspective consuming was positioned as an act of self-improvement whether upgrading their mobile phone or shopping online through their phone. Through this conceptualisation of the mobile phone the user was positioned as a perpetual consumer who was active in the process of their self-improvement through consumption. However, the notion of an autonomous self making free choices was contested by Lewis (2013) who proposed that the science-based persuasion industry of marketing products may have manipulated the consumers choices for commercial profit through processes such as creating needs for the consumer. The instrumentalised autonomy of the consumer serves the demands of neoliberal capitalism which feeds of an endless cycle of needs to drive the economy (Roberts, 2015) such as the cycle of needs offered by mobile phone upgrades for those investing in self-improvement. Rose (1998) proposed that an achievement-orientated enterprising self strives for fulfilment through self-improvement to become that which it

wishes. Through the governing process of the neoliberalism, the formation of the enterprising self may be conducted using beliefs about normal mobile phone practices to which to aspire as a tool within the practices of self-improvement and self-formation. The self-focus of the enterprising self and developing a marketable self may be interpreted by mainstream psychology as a self-serving aspect of narcissism which is associated with problematic mobile phone practices (e.g. Mitchel & Hussain, 2017).

In summary, the users' conceptualisations of the mobile phone by this group of users related to their dependence on their deep emotional bond with their empowerment to continually develop their lifestyle, social control, independence, productivity and identity which they could access through their culturally essential mobile phone. Within this relationship, the mobile phone functioned as an emotionally complex object which could provide emotional support (users who positioned themselves as in control of their dependence on their lifestyle practiced through their phone portrayed comfort in the security that the productive connection provided) and evoke emotional tensions (users who positioned themselves as emotionally conflicted about their uncontrolled dependence on their phone related lifestyle practices portrayed discomfort with their undesirable dependence). Emotional support and tensions were portrayed simultaneously at times (comforting productivity and the user's sense of undesirable dependence on tasks that could be done through their phone generated a continuous emotional struggle between comfort and discomfort). The continual consumption of the continually developing mobile phone was positioned as a normal practice of self-improvement.

8.5 Chapter Summary

This chapter presented the findings of an inductive thematic analysis informed by social constructionism which explored the contextualised conceptual understandings of the mobile phone by mobile phone users positioned as at risk of being categorised as problem mobile phone users. The analysis highlighted the ways in which the user positioned themselves through their conceptualisation of the mobile phone and the ways in which their understanding shaped their practices.

The analytic chapters have progressed from the mass media conceptualisations of the mobile phone explored through thematic analyses of UK national newspaper articles about the mobile phone published between 1985 and 2019 in Chapter 5 and current mobile phone advertising in Chapter 6. These chapters served to gain insights into the broad cultural

understanding of the mobile phone to contextualise mobile phone users' conceptualisations of the mobile phone and subjective experiences. This was explored through thematic analyses of mobile phone users reviews of mobile phones in Chapter 7 and in-depth interviews with mobile phone users who are at risk of being categorised as problem users in this chapter. The next chapter will present a synthesis of the findings of the four chapters.

Chapter 9

Discussion

The purpose of this thesis was to explore the ways in which mobile phone users' contextualised conceptual understanding of the mobile phone may have shaped their mobile phone practices and subjectivity within the cultural narratives of the neoliberal digital age in the UK. The thesis was informed by the critical perspective of social constructionism to offer a fresh perspective on the rationales for differences in mobile phone practices across users and inform the distinction between normal and problematic practices. In this chapter I will provide an overview of the key findings of the thesis and assess the contribution to knowledge. First, I will summarise the chapters of the thesis in turn. Next, I will discuss the findings in relation to previous literature and theory and reflect on the strengths and limitations of the thesis. Finally, I will make suggestions for future research and draw a conclusion.

9.1 Thesis Summary

The thesis is a collection of four distinct but interrelated studies which explored the conceptualisations of the mobile phone in the UK through inductive thematic analysis, informed by social constructionism, of broad cultural mass media narratives and mobile phone users experiential narratives. Through these layers of context, the relationship between the conceptualisations and mobile phone practices is explored. This section summarises the chapters and their contributions to this thesis.

Chapter one introduced the research topic and set the scene for the thesis. The chapter reflected on my interests in the thesis and provided a broad rationale as well as an overview of the aims, objectives and the chapters which followed.

Chapter two provided an overview of previous psychology literature related to mobile phone practices and critically evaluated the dominant mainstream perspective which served to pathologise mobile phone practices in order to distinguish between normal and problematic practices and users. It was argued that the focus on *who* is using the mobile phone and identifying risk factors did not provide definitive predictors of problematic practices and users. An evaluation of the scales used to measure problematic mobile phone practices, such as mobile phone addiction, argued that the addiction model on which they were built was not

suiting to the study of mobile phone use. The relationship between mobile phone practices and potential risk factors appeared to be shaped by personal contextual interests, desired style of social connection, identity or the user's deep emotional connection to their mobile phone practices. Fundamentally, mainstream individualist approaches did not account for the complexity of the contextually integrated behaviour. A review of literature which focused on *why* users use their mobile phone highlighted the importance of personal contextual interests and laid the foundation for a focused justification of a qualitative study drawing on a critical perspective to offer new contextualised perspectives on understanding mobile phone practices.

Chapter three argued the case for the critical perspective of social constructionism to underpin a thematic analysis to develop new insights into mobile phone practices in context. Critical psychology and social constructionism were discussed in terms of a critique of mainstream psychology's essentialist and individualist perspectives. It was argued that the macro and micro focuses of social constructionism would allow the exploration of layers of context from the broad cultural representations of the mobile phone to the user's contextualised experiential understanding of the mobile phone in relation to their subjectivity.

Chapter four reported the methodological procedures used by the four discrete but interrelated studies which constitute this thesis. The chapter introduced the relationship between the studies in terms of the social constructionist perspective and showed how their focus moved from the broad cultural context of the studies informing chapters five and six, to the subjective experiential context of the studies informing chapters seven and eight. The discussion highlighted the diverse range of data types, rich in representations of the mobile phone, that were used to represent the layers of context. The chapter justified and reported the methods of participant recruitment (relevant for participant-generated and participant-researcher interaction generated data only), data collection, data management and the thematic analysis processes. Relevant ethical considerations were integrated into the discussions.

Chapter five explored the historical development of current conceptualisations of the mobile phone presented by news media since 1985. Three distinct thematic analyses were used to build the analysis of this chapter, each one explored a different meaningful time period between 1985 and 2019. Analysis of the early period (01/01/1985 to 31/12/1998) developed two main themes related to innovation and continuous personal connection. Analysis of the middle period (01/01/1999 to 08/11/2007) developed themes related to inclusivity and dangerousness, a threat

to health and security. Finally, analysis of the late period (09/11/2007 to 15/03/2019) developed themes related to a normal need of modern living and dangerousness, a threat to mental health. These themes represented the salient narratives through which the mobile phone was constructed. The themes illustrated that the conceptualisation of the mobile phone shifted from a business tool accessible by a privileged few for productive business practices during the early period, to a popular and meaningful lifestyle activity for a wider spectrum of society which positioned the user as an included member of the mobile phone lifestyle during the middle period. The themes of the late period shifted the portrayal of the mobile phone to a normal and ever-present habitual need of modern living for the masses which was tied to the user's identity. The user was positioned as an integral part of their habitual mobile phone practices. Further to this, the continual development of the mobile phone as a consumable product was portrayed as normal and practices were positioned as in need of regulation. It was shown that societal powers related to neoliberalism and regulation shaped the current cultural conceptualisations of the mobile phone. This chapter illustrated that the cultural conceptualisations of the mobile phone presented in news media have changed over time shaped by institutional powers with interest in its trajectory. Also, the conceptualisations have portrayed what is currently considered normal in relation to the mobile phone and practices.

Chapter six explored current advertising media's conceptualisations of the mobile phone. Similar to the previous chapter, this chapter focused on the broad cultural context but centred on a current forum of persuasion rather than the historical shifts in the conceptualisation of the mobile phone portrayed in a forum of trusted news media. The thematic analysis developed three main themes related to lifestyle, empowerment, and idealisation. The themes illustrated that the mobile was broadly constructed as a lifestyle representation, an essential source of empowerment and a filter to idealise the user's lifestyle and identity. The construct as an essential assistant to help the user enhance their lifestyle experience and sense of identity, positioned the user as free to inhabit and enhance a selection of lifestyles through their mobile phone practices and promote their identities such as those related to social, adventure and entertainment. A further construct as an essential source of empowerment, positioned the user as empowered to be independent, productive and secure when using their mobile phone which were promoted as desirable and essential to modern living. The final construct as a personal filter through which the user could idealise their lifestyle and identity without the consequences associated with real world experiences (e.g. inconvenience, cost, risk to personal safety) was promoted as desirable and achievable with a mobile phone. It was argued that these

conceptualisations of the mobile phone served to promote a normal, essential and contemporary tool of self-improvement, empowerment, independence, control, social connection and identity development. The continual development of the mobile phone was positioned as normal and aligned with the users' normal lifestyle and identity development. This chapter illustrated that the mobile phone is culturally portrayed as a normal means of empowerment and self-improvement. The findings of this chapter and the previous chapter provided insights into the broad cultural context which may shape mobile phone users contextualised understanding of the mobile phone which were presented in the following two chapters.

Chapter seven explored mobile phone users' contextualised understanding of the mobile phone through their reviews of their mobile phone. This was the first chapter to explore the subjective experiential context of the mobile phone user. Product reviews are an established cultural practice by consumers, so this analysis was viewed as exploring the interface between the cultural and experiential contexts of conceptualisations of the mobile phone. The thematic analysis developed two main themes related to compatibility of mobile phone functionality with lifestyle enhancement and compatibility of personal consumer choice with lifestyle. Through these themes, the mobile phone was constructed as a normal, essential and personal lifestyle enhancing multipurpose tool which empowered the user to enhance their experience of multiple facets of their lifestyle. This construct further highlighted the mobile phone as an essential tool to maintain control over their modern lifestyle activities, empowerment to be independent and maintain the health of their social relations. Users positioned themselves as dependent on the rewards of their productive experiences within the different aspects of their multifaceted lifestyle rather than the device. Through a further construct as a continually developing hierarchy of personal choices which represented the user's lifestyle and identity development, users positioned themselves as an active consumer who was invested in representing their lifestyle and identity through their consumer choices related to their mobile phone. It was argued that the users' conceptualisation of the mobile phone related to the deep meaning that their mobile phone practices had for them as essential and personal lifestyle enhancing activities which can shape their identity in relation to others. Users positioned themselves as attached to the lifestyle and identity they experience through their mobile phone practices. Also, users positioned the continual consumption of the continually developing mobile phone as a normal practice of self-improvement. This chapter illustrated that the user was attached to the lifestyle and identity accessible through their mobile phone practices rather than the device itself. Also, the chapter showed links between the cultural conceptualisations

of the mobile phone (see chapters five and six) and the users' understanding of the mobile phone as culturally established normal practices of empowerment and self-improvement.

Chapter eight explored the conceptual understanding of the mobile phone by a specific group of mobile phone users who were positioned as at risk of being categorised as *problem user* by the mainstream psychology literature. This chapter added weight to informing the distinction between normal and problematic practices. The thematic analysis developed three main themes related to a necessity of modern lifestyles, personal empowerment and continual consumer choices. The themes illustrated that the mobile phone was broadly conceptualised as a meaningful life enhancing bond which was depended on to conduct a modern lifestyle, a facilitator of empowerment and a perpetual chain of consumable choices. The construct as a meaningful life enhancing bond which the user depended on to conduct a modern lifestyle, positioned mobile phone practices as normal enhancements to the user's lifestyle and identity. The user positioned their self as dependent on their lifestyle and the comforting support their bond with her mobile phone provided which indicated that the user's attachment related to their lifestyle enhancement which their mobile phone provided rather than the device itself. Related to a further construct as a lifestyle enhancing tool which empowers users to manage aspects of their lifestyle, users positioned themselves as relational, productive and empowered to enhance their lifestyle practices and identity through their mobile phone practices. Through the final construct as a perpetual chain of consumable choices, users positioned themselves as a perpetual consumer who was active in the process of their self-improvement through consumption which the users considered as normal self-improvement practices for the development of their lifestyle and identity. It was argued that users' conceptualisations of the mobile phone related to their dependence on their deep emotional bond with their empowerment to continually develop their lifestyle, social control, independence, productivity and identity which they could access through their culturally essential mobile phone practices. Further to this, the mobile phone functioned as an emotionally complex object within this relationship which could provide emotional support and evoke emotional tensions, in conflict at times. This chapter illustrated that the user was deeply and emotionally attached to their lifestyle, social connections, empowerment and identity that they experienced through their mobile phone rather than attached to the device itself which supports the findings of the previous chapter.

9.2 The Findings in Relation to Previous Literature and Theory

This section will draw together the findings of the thesis and discuss them in relation to previous literature and theory in order to assess their contribution to knowledge.

The historical perspective of the news media analysis showed that the conceptualisation of the mobile had shifted from an innovative business tool used by a wealthy few to a normal need of the masses which was integral to the user's identity. The analysis of the news media exposed the notion that the current conceptualisations of the mobile phone have been shaped over time by societal powers related to the goals of neoliberalism (user demands, technology development, service provision and new markets of insurance, self-improvement strategies, therapy, high street consumerism) articulated with the goals of regulation (law, medicine, police and scientific research). This influence of societal powers can be related to Siles' (2017) longitudinal study that showed that the concept of blogging as a practice to enact identity was shaped by societal powers such as conceptualisations of technology and identity within the interests of social, political, economic and cultural processes such as neoliberalisation.

Further to this, the concept of the mobile phone as a normal and essential part of modern living was developed in all four studies which includes the broad cultural conceptualisations as well as the users' understanding of the mobile phone. This suggests that the broad cultural (news and advertising) conceptualisations of the mobile phone as normal and essential have shaped the understanding of users. This relationship aligns with the assumptions of macro social constructionism which recognises that constructed meanings of the mobile phone by users are shaped by culturally available narratives, such as mass media, which are shaped by societal powers such as the economic processes of neoliberalism and demands for regulation (see Burkitt, 1999; Burman & Parker, 1993). Further to this, the user's conceptual understanding of the mobile phone shapes their mobile phone practices and normal ways of being, an identity, within a particular cultural context (Gergen, 2015; Willig, 2013). From this perspective, mobile phone users' understanding of the mobile phone, practices and identities are shaped by the socially and institutionally fashioned knowledge promoted through the cultural narratives of the mass media. This notion of the mobile phone as a normal and essential need of a modern lifestyle can be related to the ideas of Kwon et al. (2013), Panova and Carbonell (2018) and Yang et al. (2019) who suggested that the mobile phone is an essential part of modern living in industrialised society. The notion also supports Pearson and Hussain's (2015) participants who suggested that they could not live their desired life without their smartphone which would have a negative impact on their daily activities and relationships.

Although, for the users who participated in this thesis, the mobile phone was understood through a deep emotional bond which they considered normal in the current digital culture.

Additional to the cultural conceptualisations of the mobile phone that were developed, the advertising media promoted conceptualisations of mobile phone practices as normal practices of empowerment and self-improvement, as well as the continual development of the mobile phone as normal and aligned with the users' normal lifestyle and identity development. These conceptualisations were also developed with the mobile users who understood the continual consumption of the mobile phone as a culturally normal practice of self-improvement. This adds further weight to the argument that there is a relationship between the broad cultural conceptualisations of the mobile phone and contextualised experiential conceptual understanding by the user.

The relationship brings to the fore the notion of neoliberal capitalism as a free market economy which thrives on an endless cycle of needs (Kotz, 2015; Roberts, 2015) such as that offered by mobile phone upgrades for those investing in self-improvement. People are acted upon as consumers who are viewed as seeking to assemble their desired quality of lifestyle through acts of consuming products (Rose, 1998) which are linked to constructing identity (Blackman & Walkerdine, 2001). This relates to the achievement orientated enterprising self who strives for satisfaction through acts of self-improvement to become that which they desire (Rose, 1998). Also, Cushman (1990) emphasised that consumerism is a symptom of an empty self which can be treated through consumer goods and services. However, Lewis (2013) contested the notion of the autonomous active consumer freely making consumer choices because the persuasion industry, such as advertising, created needs for the consumer which manipulated their choices for commercial profit and meet the demands of neoliberalism. This was supported by Sugarman (2012) who suggested that consumable goods were made meaningful to the consumer's endeavour to maximise their quality life. From this perspective, the enterprising self is encouraged and governed through processes of neoliberalism such as promoting conceptualisations of normal mobile phone practices to which to aspire and practices of self-improvement. Mobile phone practices are a symptom of neoliberal society rather than the user. The self-focus of the achievement orientated enterprising self continually developing their lifestyle and identity may be interpreted as a self-serving aspect of narcissism which mainstream psychology associates with problematic mobile phone practices (e.g. Mitchel & Hussain, 2017).

The focus on the mobile phone as integral to the identity of the user throughout the findings of the thesis aligns with the research of Walsh et al. (2008) and Walsh et al. (2011)

who showed that mobile phones had become integrated into many users' lifestyle and a materialistic representation of their self. But further to this, the thesis has clearly illustrated that the users' mobile phone practices act as *technologies of the self* which encompass strategies and practices that people use to construct and represent themselves within society to achieve satisfaction (Foucault, 1988). These findings widen the group proposed by Campbell (2006) who showed that teenage girls used their mobile phone practices to construct their identity. Further to this, the findings extend the technology included in the claims of Abbas (2009), Aycock (1995) and Siles (2012) who related online activities to practices self-formation through Foucault's theories of subjectivity.

The users who participated in studies 3 and 4 (see chapters 7 and 8) consistently portrayed themselves and as social beings deeply connected to their social network through their phone which was considered normal and desirable for a happy and healthy life. This supports the notion that people are relational beings who construct their identity relative to others within a network of relations (Gergen, 2009). Campbell (2006) suggested that teenage girls used their mobile phone as a practice to construct their identity of independence mainly from their parents. This notion of independence was developed in the narratives of the users' and advertising media of this thesis but, for this thesis, the notion of independence moved beyond relational independence to being free from the tethers of geographical location. This related to Abbas' (2011) notion of the neo-nomad which characterised peoples' propensity to be socially connected and gain self affirmation while mobile and striving to move on which can be achieved through the use of mobile phones. The notion of independence and the neo-nomad suits the needs of neoliberalism because they continual demand temporary consumable products such as data and upgrades (see Roberts, 2015).

The analysis of the advertising media supports Campbell's (2006) analysis of advertising representations of the mobile phone in relation to independence and idealisation. *Study 2* (see *Chapter 6*) of this thesis extends and updates Campbell's study by broadening and updating the analysis of the mobile phone portrayals promoted by advertising to the current online and widely accessible media rather than limited to fashion and lifestyle magazines mostly published during the twentieth century. This analysis of this thesis developed the constructs related to independence and idealisation, but also considered further constructs related to self-improvement, empowerment, control over social connection which are alluded to in Campbell's research.

Users positioned themselves as attached or dependent on their lifestyle and identity experiences accessible through their mobile phone rather than the device itself. This supports

the findings of Nie et al. (2020) and Fullwood et al. (2017) that users' attachment related to the affordances the mobile phone provided rather than the device. However, this analysis suggests that the attachment is deeper and relates to experiencing the rewards of continual lifestyle and identity development, and an emotional attachment to knowing. The users who were positioned as at-risk problem users experienced the mobile phone as an emotionally complex object. The analysis clearly illustrated an emotional contrast between users who positioned themselves as in control of their dependence on their lifestyle practiced through their phone, and those who positioned themselves as emotionally conflicted about their uncontrolled dependence on their phone related lifestyle practices such as the need for checking their phone. The later notion can be related to the concept of the fear of missing out (FoMO) which is a continual desire to remain informed about other people's activities due to concerns of being absent from rewarding experiences (Przybylski et al., 2013). Problematic mobile phone practices have been associated with FoMO (e.g. Elhai, Levine, et al., 2018; Lo Coco et al., 2020) but these practices, positioned as problematic, could represent a dependence on being in contact with others (Walsh et al., 2008; Walsh et al., 2010) or an intense desire for the rewards of knowing rather than addiction to the means of knowing (mobile phone). From this perspective, it is important to consider the route of the user's attachment to their mobile phone practices and personal contextual interests because this will lead to supportive interventions rather non-relevant treatments of mobile phone addiction (see Billieux, Philippot, et al., 2015).

9.3 Future Research Suggestions

The core findings of this research show that mobile phone practices are shaped by the user's conceptual understanding of the mobile phone and the meaning that their mobile phone related activities, emotions, rewards, lifestyle and identity has for them within the interests of their personal context. The user's understanding of the mobile phone and the meaning that mobile phone practices have to the user is shaped by broad cultural narratives which are fashioned by societal powers. These findings strongly indicate that the individualist and essentialist perspective of mainstream psychology's pathologised rationales for differences between mobile phone users' practices oversimplify users' psychological functioning and does not account for contextualised personal interests. The thesis has provided strong evidence that the critical perspective of social constructionism offers useful perspectives on understanding contextualised mobile phone practices in order to inform the distinction between normal and problematic practices.

The research process is a continuum such that inquiry is never finished or even begun, but constantly hovers somewhere in the current middle (Koro-Ljungberg, 2015). Considering the findings of this thesis, future research must sustain the fresh light that the critical perspective of social constructionism can offer the study of technology practices to build further understanding of the ways in which practices are wrapped up in cultural and personal subjective contexts. Research should build upon the findings of the thesis to explore technological developments in mobile phones (or other social communication technologies) in relation to user's identity development and culture or explore the identities of those who actively resist using mobile phones and other social technologies. Also, there is a strong need for a longitudinal study of users positioned as problem users to investigate the relationship between shifts in the meaning their mobile phone and lifestyle has to them, and their practices. Such studies will provide insights into the contextualised trajectory of digital social culture.

In this vein, future research can be inspired, as I was, by studies such as Fullwood et al. (2017) who noticed the inviting rewards beyond the material device. Also, Billieux, Philippot, et al. (2015) who offered the idea of supporting the user's reasons for using their phone in their unique circumstance rather than simplifying the user's psychological functioning by subjecting them to generalised assessment and treatment of mobile phone overuse as a symptom. I encourage more research to move from the bounded gardens of individual users to the complex landscape of cultural meanings, contextualised personal interests and emotional subjectivity which shape users' desires and practices.

9.4 Conclusion

In this thesis I have presented the research processes and the findings of the studies which have explored the development of the meaning that the mobile phone has to mobile phone users, how meaning has been shaped by the wider social, historical and political context, and how meaning has shaped the practices, lifestyle and identity of the user. As a critique of the mainstream psychology's pathologised view of mobile phone practices and in support of research which considers the contextualised personal interests of the mobile user, this thesis aimed to inform the current rationales for differences in mobile phone practices. The argument has shown that that mobile phone users are attached to the continual development of their lifestyle, identity and knowing that they experience through their mobile phone rather than the device. Also, cultural narratives, fashioned by societal powers such as the needs of neoliberalism, shaped users' understanding of the mobile phone, their practices and identity.

The cultural narratives promoted by news and advertising media defined culturally normal practices, lifestyles and identities related to mobile phones. From this perspective, users' understanding of the mobile phone, their practices and identity are governed through the powers of the neoliberal mechanism and so can be seen as a symptom of neoliberal digital culture rather than a problem of the user. It is important to build a detailed picture of mobile phone practices and the powers which shape them in order to distinguish between healthy and problematic practices for the user in their personal contextual continuum. This will help support a concerned mobile phone user with interventions relevant to their contextualised personal interests and practices rather than generalised mobile phone overuse symptom management. Also, the trajectory of social technology practices and the cultural narratives defining *normal* practices in the neoliberal digital age need to be considered in relation to the wellbeing of people.

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Appendix A

Confirmation of Ethical Approval and Requests for Ethical Approval for the Four Studies of this Thesis

Studies 1 and 2: Ethics Reference 01-1617-MSp

Approval Letter: Human Sciences Research Ethics Committee

University of Derby

Date: 22nd September 2016

Dr Frances Maratos

Chair, Human Sciences Research Ethics Committee, University of Derby

Dear Michael,

Ethics Ref No: 01-1617-MSp

Thank you for submitting this application to the Psychology Research Ethics Committee. The application has now been reviewed and was considered at the ethics committee meeting of 20th September 2016.

The following documents have now been reviewed:

1. Ethics application form

The reviewers and panel feel this application was well written and adhered to appropriate BPS & University guidelines. Thus this application has been approved.

If any changes to the study described in the application is necessary, you must notify the committee and may be required to make a resubmission of the application.

Please note ethical approval for application 01-1617-MSp is valid for a period of 5 years i.e. 22nd Septemberth 2021.

Good luck with the study.

Yours sincerely

Signature removed for data protection
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Request For Ethical Approval For Individual Study / Programme Of Research

This form is for University members of staff and PhD students making applications to the Human Sciences Research Ethics Committee (HS REC). Complete this form and submit it by email to the Chair *and* Vice Chair of HS REC. Information about submission and approval processes, deadlines, and meeting dates is given at:

Once approval has been given, you will be eligible to commence data collection.

Your Name	Michael Smyth
Discipline	Psychology
Position	PhD Student
Staff ID	stf2260
Student ID	100149148
Email Address	m.smyth@derby.ac.uk
Institute/Research centre (if internal applicant)	Life and Natural sciences / Psychology

Title or topic of proposed research study

Constructing the Mobile Phone: A Genealogy

Background information

Should your research adhere to the British Psychology Society (BPS) code of ethics and conduct?	Yes
Has this research been funded by an external organisation (e.g. a research council or public sector body) or internally (such as the RLTF fund)? If yes, please provide details.	No
Have you submitted previous requests for ethical approval to the Committee that relate to this research project? If yes please provide details.	No
Are other research partners involved in the proposed research? If yes please provide details.	No

Signatures

The information supplied is, to the best of my knowledge and belief, accurate. I clearly understand my obligations and the rights of the participants. I agree to act at all times in accordance with University of Derby Policy and Code of Practice on Research Ethics: <http://www.derby.ac.uk/research/uod/ethics/>

Signature of applicant:	[Signature removed for data protection]
Date of submission by applicant	01/08/2016
If applicable name of supervisor (Director of Studies) if you are PhD student:	Supervisor (Director of Studies) signature of consent: <i>I have reviewed this application and approve its submission:</i> [Signature removed for data protection] (supervisor in lieu of DoS) Date: 31/07/2016

For Committee Use Reference Number (Subject area initials/year/ID number)

.....

Date received

Date considered

.....

Committee decision

Signed

1. What is the aim of your study? What are the objectives for your study?

Aim

Examine the historical circumstances within which current discourses about the mobile phone have come to be and consider the ways in which these discourses may have been used to govern the mobile phone practices and self formation of mobile phone users in the UK

Objectives

1. Critically examine the ways in which the mobile phone has been conceptualised within a range of knowledge sites in the UK over the last thirty years (law, medicine, psychology, media; see Foucault, 1977)
2. Explore the institutional powers and interests which may have shaped the historical evolution of the current conceptual understandings of the mobile phone into being.
3. Consider the ways in which the historical emergence of conceptual understandings of the mobile phone may have been regulated in order to govern the mobile phone practices and self formation of mobile phone users.

2. Brief review of relevant literature and rationale for study

The first handheld portable cellular phone became commercially available in 1984 for a wealthy few (Motorola, 2016a). However, "Every day we are moving closer to having almost as many mobile-cellular subscriptions as people on earth" (International Telecommunications Union; ITU, 2013, p.1). The immense scale of current mobile phone subscriptions globally stands at 96.8% of the world population, approximately 120% in developed countries and 95% in developing countries (ITU, 2015a). The number of mobile phone subscriptions globally has increased steadily since 1984 but more abundantly throughout the early years of the 21st century, rising from approximately 0.7 billion in 2000 to almost 7.1 billion in 2015 (ITU, 2015a; 2015b). The 6.4 billion growth in mobile phone subscription uptake was significantly greater than the 1.2 billion growth of the world population during the same period which is currently estimated to be 7.3 billion (United Nations, 2015).

The rapid proliferation of the mobile phone has clearly transcended global population growth rate, culture and social demographics. This indicates that mobile phones and associated practices have infected the current global populace rather than grew with the new population or was limited to a particular culture or social group. The ubiquitous mobile phone has become an integral part of contemporary socialisation globally. The dramatic increase in mobile phone practices may have been influenced by practical factors such as decreased cost, extended 4G high-speed mobile

network coverage and the introduction of capability rich smartphones (Ofcom, 2015) However, the evidence declares that the curious revolution of mobile phone practices over the last 30 years, a short period within the development of the global community, is clearly worthy of psychological exploration.

The mobile phone as a physical object is definable and has a recorded history of its development. The mobile phone as a psychological object, a conceptual understanding, is not universally definable nor stable but a fluid product of contextually and historically based discourses and so qualitatively different from the physical object (see Bunn, 2011). For example, community concerns about the rapid proliferation of mobile phones and resulting problematic mobile phone practices, such as excessive use and use while driving, stimulated research which linked problematic mobile phone practices to addictive behaviour and dependence (e.g. Bianchi & Phillips, 2005; Chóliz, 2012; Merlo, Stone & Bibbey, 2013; Pérez, Monje & De Leon, 2012). The literature which disseminated these studies discussed mobile phones in the context of a medical discourse in order to interpret findings and rationalise their conclusions. The constructive role of language in the production of knowledge was emphasised by Foucault (1972) who suggested that discourses are “practices that systematically form the objects of which they speak” (p. 49). That is to say, discourses are organised systems of meaning which construct and project an understanding of the phenomena of which they speak. Hook (2001) further emphasised that discourses have the power to shape our understanding of a psychological object, such as mobile phones, but are specific to a particular cultural and historical context. The literature which constructed the mobile phone within a medical discourse conceptualised the mobile phone as a tool associated with problematic behaviour potential. The medical discourse further constructed mobile phone practices as activities with limits to normal practices which were distinct from problematic practices which exceeded the limits of normal practices. Consequently, the mobile phone user who subscribe to the medical discourse may moderate their mobile phone practices rather than display problematic behaviours.

Discourses not only construct objects which shape our understanding of a psychological object but also construct “an array of subject positions” (Parker, 1994, p. 245). Willig (2013) further explained that a subject position is a position from which one can be in the world and a point of view from which to see it and be seen within it. A subject position enables and constrains the discourses and practices available to use. For example, people positioned as mobile phone dependent can be categorised by others and themselves into a hierarchy in which they are seen as psychologically abnormal and inferior relative to others who are considered to be normal. This hierarchy can lead to unequal power relations during social interactions in which one speaker has more influence than another and different social consequences such as exclusion and inclusion (see Foucault, 1977; 1978). While apparently unjust, the medical discourse was generated during a time when society seemed to demand the identification of an underlying problem which could be addressed,

and also within a political situation where government was responsible for promoting the health, wellbeing and productivity of the subject (see Foucault, 1978).

The discussion of the mobile phones within a medical discourse was challenged by the generation of a socialisation discourse by literature which constructed the mobile phone as an additional tool within a social toolbox which could be used to achieve social goals such as reinforce relationships (Balakrishnan & Raj, 2012; Geser, 2004; Parks, 2005), increase social inclusion within a group (Srivastava, 2005), strengthen interpersonal solidarity (Chung, 2011) and enhance sociability and social capital building (Bian & Leung, 2015). The socialisation discourse positioned mobile phone users as contextually selective through their personal choice within their unique social world rather than inferior or superior through practices categorisation. The socialisation discourse argued that spending time with friends face to face may be considered a normal step for social and identity development, and so even high levels of mobile phone use may also be considered as a natural developmental behaviour (Leung, 2008). Mobile phone users who subscribe to the socialisation discourses of the mobile phone may be encourage to use their mobile phone frequently in order to express their social self rather than moderate their practices in fear of displaying problematic behaviours.

Further to the development of discourses involving the mobile phone within psychological literature, the way in which the mobile phone has been represented within promotional media has also changed over the last 30 years. The original presentations of the portable cellular phone were generally limited to a practical business tool and status symbol for the successful professional 'man' (e.g. Mashable, 2014; Microsoft Devices Team, 2016). The current variety of promotional presentations of today's multipurpose devices accessible to everyone include discourses of an individualised tool which can be used to assist social peoples' business, recreation and social success (e.g. Motorola, 2016b; Microsoft, 2016).

The brief review of literature clearly shows that the meaning of the mobile phone as a psychological object is a socially constructed and dynamically fluid product within an evolving historical context. Bunn (2011) emphasised that a psychological object is a socially constructed consequence of historically situated powers which have shaped its discourse over time and so is best understood through a form of historical analysis. Foucault (1961) excavated radically different discursive constructions throughout the 17th to 19th centuries that regulated talk and thought about the psychological object of madness which changed over time. The changing discourses and knowledge about madness consequently governed changing practices of how people positioned as 'mad' were excluded and confined or eventually cared for. Foucault's (1977; 1978) genealogies highlighted that homosexuality constructed as a crime positioned a homosexual as a criminal who was confined and punished, whereas homosexuality constructed as an illness positioned a homosexual as a patient who was cared for. Foucault provided insights into the forces which shaped reason and power which enabled society to construct its experience of

madness and homosexuality through intellectual, economic and cultural structures. Foucault (1978) showed that the state can work through seemingly objective and benevolent institutions, such as psychiatry and law, in order to direct the population's self-regulation. Foucault explored the role psychiatry played in repressing sexuality during the mid-20th century by constructing homosexuality as a disease in need of cure through apparently scientific and objective knowledge. This apparently scientific fact and the institution which provided it were tools used to oppress a group and normalise society through governing subjects' self-regulation toward disapproval of homosexuality. Foucault indicated that power of control is not only exercised through knowledge of an individual by others (this individual is ill and must be removed from society) but also through an individual's knowledge of their self through self-scrutiny and comparison to internalised norms dictated by (for example) science and efforts to conform to them (I am not 'normal' and so I will regulate myself to return to normal). Foucault (1977) further proposed that self is constructed when subjected to the gaze of others within institutions. Foucault explored panoptic surveillance in prisons and reported that prisoners behaved in accordance with the prison rules when under the perpetual threat of observation by the guards. In such power relations the prisoners' self could be constructed which exemplified the power of the normalising gaze. Foucault asserted that the normalising gaze was prevalent throughout society in the form of being continuously evaluated and judged in relation to social norms. Consequently, self can be constructed through self-reflection in relation to others within their social institutions in order to meet their social norms.

Foucault's genealogical analyses framework can provide insights into an exploration of the historical evolution of the way the mobile phone has been spoken about and represented over the last 30 years. The historical emergence of discourses involving the mobile phone promoted through psychological literature, medicine, law, promotional media and social culture may have played a role in evolving the way in which society knew and subjectively experienced the increasingly personalisable mobile phone. These evolving discourses may have been shaped by the interests and powers of institutions and may have shaped mobile phone practices and constructions of the self through self-scrutiny and self-regulation.

The mobile phone has softly proliferated and quietly infected socialisers throughout the world over the last three decades in such a way that our current conceptual understanding of the mobile phone may be considered without history. There is evidence to show that the ways in which the mobile phone has been spoken about and represented in scientific literature and promotional media has changed over the last 30 years. Studies which explore mobile phone practices from a critical perspective are sparse and critical studies which explore the shaping of mobile phone users' understandings of mobile phones are unapparent. In an endeavour to provide a rationale for the rapid proliferation of mobile phones and current mobile phone practices the proposed study will analyse the historical circumstances, and their irregularities, in which our current understanding of the mobile phone has emerged and has been shaped.

3. Outline of study design and methods

The critical methodology will adopt a poststructuralist approach inspired by the Foucauldian concepts of genealogy and governmentality.

Foucault's genealogy is a method of historical analysis which aims to offer a critique of the present (O'Farrell, 2005). It is a questioning and analysis of current taken-for-granted ideas, an analysis of the circumstances in which ideas have emerged and have been shaped (Andersson & Fejes, 2005). A genealogical analysis will explore the ways in which power operated within different constructions of understanding an object. The proposed analysis will seek to expose the relationship between knowledge, power and the subject within their current social context through understanding the ways in which the subject's 'being' has been shaped by the historical powers and constraints which have acted on their knowledge about the mobile phone. Foucault's genealogy pursues to illuminate current taken for granted knowledge in order to deconstruct apparently absolute truths, destabilise discourses of current knowledge about psychological objects and the subjects they construct, and open new perspectives to assist our future practices.

A genealogy can be focused through the Foucauldian concept of governmentality which was conceptualised by Foucault (1991) as the mentalities of rule for governing mentalities. Governmentality highlights the ways in which individuals are regulated toward useful objectives of national prosperity such as social order, economy, productivity, self-realisation and harmony (Rose, 1998). Rose further expounded that striving for the construction of the self is a regime of subjectification, and so analysis of the relationship between the self and power is a matter of "Investigating the ways in which subjectivity has become an essential object, target, and resource for certain strategies, tactics and procedures of regulation" (p.152).

Foucault's (1980) conceptualised power as a social strategy generated by the dynamo of social interactions which circulated and thrived as a productive network between members of the social body. Foucault (1972) further emphasized the constructive role of language by suggesting that discourses are "practices that systematically form the objects of which they speak" (p49). That is to say discourses are a collection of statements which project an understanding of the phenomenon of which they speak. In this way discourses can be utilised to shape understanding and knowledge about a phenomenon such as the mobile phone. Parker (1994) further highlighted that discourses 'construct objects and an array of subject positions' (p.245). A subject position is a position from which one can be in the world and a point of view from which to see it which can influence subjectivity and self-formation (Willig, 2013). From a position of understanding, discursive practices constrain the statements and actions which can be made from this perspective (O'Farrell, 2005). Further to this, the knowledge which discourses shape can influence practices (Willig, 2013) which indicates that mechanisms of power can shape knowledge about the mobile phone and consequently influence people's mobile phone practices.

The proposed study will conduct a genealogical analysis of the discourses about the mobile phone over the last 30 years (since the first handheld portable cellular phone became commercially available in 1984) within the dominant knowledge sites. Foucault's (1977) extensive genealogy of discourses of discipline and punishment showed that the dominant knowledge sites were medicine, psychiatry and law whose knowledge was disseminated to the wider population through mass media of the time such as newspapers. Based on Foucault's dominant knowledge sites, the data set for analysis will be collected from psychological, medical and legal literature and accessible mass media sources accessible in the UK from the last 30 years which focused on mobile phones. In order to focus the data collection criteria to the specific aims and objectives of the study, articles and information not published or accessible to mobile phone users in the UK will be excluded from the data collection (e.g. foreign mobile phone laws, foreign media not accessible in the UK). Mass media sources will include service provider literature, advertisements and news articles published in the UK. Media information will be searched and accessed with the support of ProQuest databases which provide services that enable strategic acquisition, management and discovery of information collections.

Foucault never proposed a specific process for genealogical analysis, so the fundamental underpinnings of the analytic approach will be grounded on the established principals of historical and Foucauldian inspired discourse analysis approaches proposed by Arribas-Ayllon and Walkerdine (2008), Bunn (2011) and Hook (2001; 2005). For example, Arribas-Ayllon and Walkerdine (2008) proposed a guiding overview of Foucauldian inspired discourse analysis in the context of genealogy. Arribas-Ayllon and Walkerdine discuss the selection of suitable types of text for analysis and initiating the analysis through problematisation which positions taken for granted knowledge as a problem and challenges its viewpoint. For example, Arribas-Ayllon and Walkerdine view of problematisation suggests that part of a genealogy of the mobile phone may be initiating by problematizing the notion of mobile phone dependency by interrogating the historical conditions which gave rise to the motivation to pathologise enthusiastic mobile phone users in terms of mobile phone dependency and problematic conduct. Bunn (2011) further considered the analysis of power and the forms of power which may have shaped discourses such as powers which oppress (which may be relevant to discourse which pathologise mobile phone users and subjugate selected people to inferior abnormal groups), prohibit (which may be relevant to discourses apparent in mobile phone laws which restrict practices) and empower (which may be relevant to discourses apparent within promotional marketing texts). However, Arribas-Ayllon and Walkerdine (2008), Bunn (2011) and Hook (2001; 2005) do not provide suitably detailed procedure for a genealogical analysis of the mobile phone because each genealogy requires its unique process tailored to its specific aims.

The specific procedural steps for the detailed analytic process will be initiated by Parker's (1992) 20 step framework of Foucauldian inspired critical discourse analysis with consideration of Hook's (2001) comprehensive critique. Parker's framework will be used as an initiating inspirational guide

from which a final analysis will evolve. Parker's discourse analysis framework is a macro-discourse analysis informed by macro social constructionism which acknowledges the constructive power of language and recognises that the constructions are derived from culturally available discourses which are governed and constrained by the material reality of power in guises such as institutional practices and social structures (Burr, 2015). Parker's (1992) macro-discourse analysis framework will suit the specific aims of this genealogical analysis by exploring the discourses about mobile phones and the powers which shaped them. For example, Parker's analytic process considers the selection of suitable text for analysis which compliments Arribas-Ayllon and Walkerdine (2008) discussion. Parker's framework then considers systematically identifying and describing the discursive object (in the case of this genealogy will be the mobile phone) and subjects constructed within the discourses. Parker's process further considers the historical emergence of the discourses, the institutions which are reinforced or subverted by the use of the discourse, the groups of people who would gain or lose from the hierarchical positions (e.g. superior or inferior, normal or abnormal) to which the discourses subjugate people. Not all data will be text (or audio transcribed to text) some will be media images (e.g. advertisements). Parker (1992) highlighted that many symbolic systems of meaning such as images and advertising can be considered as text suitable for discourse analysis. Interpretation of images will be supported by procedures discussed by Reavey and Johnson (2008). Parker's discourse analysis process, together with Arribas-Ayllon and Walkerdine (2008) overview of genealogical analysis and Hook's (2001) critique of Parker's account of discourse analysis, clearly provides a suitable and practical framework to initially guide the demands of a genealogy of the mobile phone from which the final and complete analysis will emerge.

The general procedure of analytic process will be guided by Fejes (2006a) who proposed seven inter-related steps for conducting a genealogy for his published genealogy and governmentality analyses which represents a process of curiosity, interpretation and re-interpretation (see Andersson & Fejes, 2005; Fejes, 2005; 2006b; 2008). The analysis will commence by examining and re-examining data from the present time using Parker's (1992) framework for discourses about the mobile phone in relation to power relations and subjectivity or problems of governance. Areas of interest will be annotated with reflections and interpretations. Interpretations will be re-examined in order to construct a discursive formation from statements made in different texts. This will be guided by suitable questions from Parker's (1992) discourse analysis framework and questions such as; "How does the formation take shape?" and "how are the discourses constructed and what central figures of thought do they contain?" (Fejes, 2006a, p.34) Also consideration will be given to the forms of power which may have shaped the discourses (e.g. Bunn, 2011). Aspects relevant to governing mobile phone practices, the aim of the study, will be focused on as well as any interesting aspects which emerge from this inductive or data driven process. A coherent story will be commenced in order to begin to weave the interpretations from different documents.

Consistent with the genealogy, the analysis will turn to data produced earlier in history and continue in a similar way as before seeking discourses about the mobile phone and how are they constructed (Fejes, 2006a). Focus will be on discourses of interest found in the data of the present time and searching for their presence at an earlier time. If present, it will be considered with what other figures of thought were they combined and what role were they assigned in the understanding of the mobile phone. The analysis will search for the circumstances (such as conditions of interest and operations of power by institutions) in which these discourses emerged. The analysis will examine how mobile phones were constructed through different techniques of governing by asking of the text such questions as: What form of power may have shaped the discourse? How was the governing conducted? What problems will be solved? What subjectivities are brought to the fore? How do techniques of governing construct a specific mobile phone user? What is the subject to become? How are constructions of the mobile phone put to work as a governing technique? What beneficial objectives are achieved by the governing institutions? What future should be created? After further examination of the documents and interpretations, the analysis will be related to other research and a coherent narrative weaved.

The proposed study will focus analysis on the considerations of interest and operations of power which shaped current discourses and understandings of the mobile phone into being, show their plural and contradictory past and attempt to account for the scope of current beliefs. The study will further consider the ways in which these constructions may have been used to govern the mobile phone practices, subjectivities and self-formation of mobile phone users. The findings will be discussed in relation to contemporary theories of the self in order to inform current rationales of mobile phone practices and the curious rapid proliferation of mobile phones over a short time in the development of the global society. The study will further serve to generate greater awareness of possible covert infusion of the Foucauldian concept of governmentality into apparently innocuous practices of everyday life promoted through apparently transparent, benevolent and objective institutions in order to construct and regulate productive subjects and achieve institutional goals.

4. Sample: Please provide a detailed description of the study sample, covering selection, number, age, and if appropriate, inclusion and exclusion criteria.

There will be no human participants involved in the proposed study

5. Are payments or rewards/incentives going to be made to the participants? If so, please give details below.

Do you intend to give *Participation Points* for taking part in your study? **No** (Delete as appropriate)

6. What resources will you require? (e.g. questionnaires, equipment, for example video camera, specialised software; if questionnaires are to be used please give full details here including permissions).

Requested from University of Derby

Access to the ProQuest databases.

Provided by Researcher

Information and data processing will be accomplished on the researcher's personal laptop which has password protection, security with McAfee total protection 2016 which enables encrypted vault folders to store data, and Microsoft word 2016 which enables text documents to be password encrypted.

7. References Give the references for any sources cited in the sections on rationale, methods etc.

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8. Ethical Considerations Please indicate how you intend to address each of the following in your study. Points a-i relate particularly to projects involving human participants. Guidance to completing this section of the form is provided at the end of the document.

There will be no human participants involved in the proposed study

a. Consent

N/A

b. Deception

N/A

c. Debriefing

N/A

d. Withdrawal from the investigation

N/A

e. Confidentiality

N/A

f. Protection of participants

N/A

g. Observation research [complete if applicable]

N/A

h. Giving advice

N/A

i. Research undertaken in public places [complete if applicable]

N/A

j. Data protection

N/A

k. Animal Rights [complete if applicable]

N/A

l. Environmental protection [complete if applicable]

N/A

9. Have/do you intend to request clearance from any other body/organisation? No
If Yes – please give details below.
10. All projects have an element of risk which should be assessed before any project is undertaken.
Have the activities associated with this research project been risk assessed? Yes



11. Declaration: The information supplied is accurate to the best of my knowledge and belief. I understand my obligations and the rights of the participants. I agree to act at all times in accordance with University of Derby Ethical Policy for conducting research with human participants.

Place a ✓ in the box above to confirm your agreement with the declaration

Date of application: 01/08/2016

Study 3: Ethics Reference ETH1819-0060

Decision - Ethics ETH1819-0060: Mr Michael Smyth



University of Derby <pgrstudentoffice@derby.ac.uk>

Fri 05/04/2019 16:13

Michael Smyth ✉

University of Derby

Dear Michael

Thank you for submitting your application to the College of Life and Natural Sciences Research Ethics Committee, which has now been reviewed and considered.

The outcome of your application is:

approved.

If any changes to the study described in the application are necessary, you must notify the Committee and may be required to make a resubmission of the application.

Please note that ethical approval for this application is valid for five years (i.e. until 05/04/2024)

On behalf of the Committee, we wish you the best of luck with your study.

Yours sincerely

Stuart Wain

Ethics ETH1819-0060: Mr Michael Smyth

Research Student Office

The Registry

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Kedleston Road,

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Ethics ETH1819-0060: Mr Michael Smyth

Date 11 Feb 2019
Researcher Mr Michael Smyth
Student ID 100149148
Project Doctoral Research Project
College College of Life and Natural Sciences

Ethics application

Initial screening

Does the project involve collecting and/or analysing primary or unpublished data from, or about, living human beings?

Yes

Does it involve collecting or analysing primary or unpublished data about people who have recently died, other than data that is already in the public domain?

No

Does it involve collecting or analysing primary or unpublished data about or from organisations or agencies of any kind, other than data that are already in the public domain?

No

Does it involve research with non-human vertebrates in their natural settings or behavioural work involving invertebrate species not covered by the Animals Scientific Procedures Act (1993)?

No

Does this project involve human participants?

Yes

Background

Title of current research study

Exploring Conceptualisations of the Mobile Phone Presented by Mobile Phone Users' Online Mobile Phone Reviews

Has this research been funded by an external organisation (e.g. a research council or public sector body)?

No

If yes, please provide the name of funder:

Has this research been funded internally (such as the RLTF fund)?

No

Have you submitted previous requests for ethical approval to the Committee that relate to this research project?

Yes

Was the title of research study the same on previous applications for approval?

No

If no, title of previous application and Ethics Application ID if available:

Exploring Conceptualisations of the Smartphone Presented by Smartphone Users' Online Smartphone Product Reviews Ethics Ref No: 27-1819-MSp Reason: A contingency study in case Samsung decline or are unresponsive to the request for permission to reproduce copyright material suggested by the HSREC in the minor amendment comments about the above-mentioned study (letter of request sent 28 January 2019. No reply from Samsung UK as of 11/02/2019).

Date previous application for approval was submitted

14 Dec 2018

Was the previous application approved?

No

Are other research partners involved in the proposed research?

No

If yes, please provide details

Should your research adhere to the British Psychology Society (BPS) code of ethics and conduct?

Yes

Study

What is the aim of your study? What are the objectives for your study?

Aim

Explore the conceptual understandings and experiences of the mobile phone by mobile phone users and consider how these understandings may shape practices in the current digital age.

Objectives

Consider how mobile phone reviewers conceptually understand the mobile phone.

Consider how the mobile phone reviewers position their self within the digital age through their experience of the mobile phone.

Brief review of relevant literature and rationale for study

Please Note:

This literature review and rationale for this study is the same as the above-mentioned study Ethics Ref No: 27-1819-MSp, because this study is a contingency study which differs in the method of data collection.

The most ubiquitous digital communication technology involved in the consumable socio-digital revolution is the mobile phone which has rapidly become an integral part of contemporary socialising in the UK as well as globally (Groupe Speciale Mobile Association, GSMA, 2018; International Telecommunications Union, ITU, 2017; Office of Communications, Ofcom, 2018). The development of the smartphone, with its intuitive design, finger operated touchscreen, feature rich operating system and full access to websites, significantly contributed to mobile phone take-up (Linge & Sutton, 2015; Ofcom, 2018). The mobile phone has evolved from being an awkward luxury item, accessible by a wealthy few, to an affordable smart device and essential tool of contemporary living which has radically changed consumer behaviour and social culture (Linge & Sutton, 2015).

During 2017, the global penetration of unique mobile subscriptions stood at approximately 66% of the world population with over 5 billion individual mobile subscribers (GSMA, 2018) from a world population estimated to have been 7.5 billion (UN, 2017). In the UK an estimated 96% of UK adults supported 79.1 million mobile handset subscriptions (Ofcom, 2018) from a total UK population estimated to be 66.1 million (United Nations; UN, 2017). Ofcom (2018) estimated that 78% of UK adults were using compact and sophisticated smartphones (almost triple the percentage of 2011) which has become the preferred device for accessing the internet in the UK.

The revolution in mobile phone practices and resulting problematic practices (e.g. excessive use, repetitive use, risky behaviours, use when driving) provoked community concerns about the cause of problematic mobile phone practices (Bianchi & Phillips, 2005; Panova & Carbonell, 2018).

Psychological research linked problematic mobile phone practices with addictive behaviour, dependence and the problem mobile phone user (e.g. Bianchi & Phillips, 2005; Chóliz, 2012; Kwon et al., 2013). The studies developed the concept of mobile phone addiction, mobile phone dependence and the problem mobile phone user as a rationale to explain problematic mobile phone practices during a time when society seemed to demand the identification of an underlying problem which could be addressed. However, the studies do not reveal clear definitions of mobile phone addiction, dependence or the problem user, or a distinction between normal and problematic or healthy and unhealthy practices.

Further studies sought to identify risk factors of problematic mobile phone practices. For example age such that younger participants were more prone to high levels of use and mobile phone dependence

(e.g. Bianchi & Phillips, 2005; Mitchell & Hussain, 2018), gender such that females demonstrated higher levels of mobile phone dependence, frequency of use and problematic use compared to males (e.g. Chóliz, 2012; Sanchez-Martinez & Otero, 2009) and personality factors such as high scores of extroversion (e.g. Bianchi & Phillips, 2005; Lane & Manner, 2011), low self-esteem (e.g. Bianchi & Phillips, 2005; Pérez, Monje & De Leon, 2012) and higher narcissism scores and self-serving personalities (Hussain, Griffiths & Sheffield, 2017; Pearson & Hussain, 2015).

Interpretation of the findings from studies which focused on discovering risk factors for mobile phone addiction, mobile phone dependence and the problem mobile phone user should be conducted with caution. The scales developed to measure mobile phone addiction, mobile phone dependence or problematic mobile phone use (e.g. Bianchi & Phillips, 2005; Chóliz, 2012; Kwon et al., 2013) were founded on the generalisable framework of substance dependence and abuse diagnosis defined in the Diagnostic and Statistical Manual of Mental Disorders of the time (DSM-IV; see American Psychiatric Association; APA, 2000). Such diagnostic frameworks separated the individual from their social context (Hare-Mustin & Marecek, 2009). Consequently, the scales and predictors of mobile phone addiction, dependence and the problem user, may not adequately distinguish between normal and problematic practices of an individual user situated within their unique world. "On the whole, it is argued that the evidence supporting PMPU as an addictive behavior is scarce. In particular, it lacks studies that definitively show behavioral and neurobiological similarities between mobile phone addiction and other types of legitimate addictive behaviors." (Billieux et al., 2015, p. 156).

Further studies challenged the narrative which pathologised mobile phone practices by relating mobile phone practices to normal socialisation and identity development. For example, Leung (2008) highlighted that spending time with friends is normal practice for identity development and so utilising new socio-technologies to enhance wider social capital may also be considered a normal identity development practice. Balakrishnan and Raj (2012) used a mixed-mode approach which involved questionnaire surveys and diaries to reveal that socializing with families and friends was one of the most important reasons to use mobile phones. The smartphone was further shown to be a tool used for sociability and social capital building (Bian & Leung, 2014). However, these studies fail to explore how these situations came to be, the mechanism by which the relationship between influence and practice came about.

Focusing on identity, Walsh & White (2007) used focus groups and questionnaires to show that the self-expressive identity an individual's mobile phone offers within a social group may influence frequency of mobile phone use. Further to this, Walsh, White, Cox and Young's (2011) online survey study found that the self-identity of "Being a mobile phone user is an important part of who I am" (p. 336) was significantly associated with constant mobile phone awareness and frequency of use. Through a thematic analysis of focus group discussions, Walsh, White, and Young (2008) explored the role of mobile phone use and identify psychological benefits. Descriptions of their mobile phones revealed that some participants were extremely attached to their mobile phone which seemed to have an integral role in their lives. Self construction through mobile phone practices was argued by Campbell (2006) who compared the mobile phone experiences of teenage girls with the idealisations

presented in advertisements. Campbell argued that at the intersection of competing discourses of independence, safety and femininity, the mobile phone served as an element within the teenage girls' technologies of self, a tool within the practices through which the girls shaped their self and identity enactment (see Foucault, 1988). The findings of these studies clearly rationalised the mobile phone as an additional tool for normal social networking and identity formation which positioned the mobile phone as an integral part of contemporary socialisation and identity.

The proposed research is a response to the concepts of mobile phone addiction, dependence and the problem mobile phone user. The quantitative studies, such as cross-sectional correlations, attempt to predict, quantify and generalise these concepts and make statistical inferences about differences in mobile phone practices between groups. The problem lies with these generalisable notions which attempt to establish ill-informed social norms by distinguishing between undefined normal and problematic mobile phone practices for all individuals by detaching them from their unique social worlds. The concepts of mobile phone addiction and dependence may unjustly separate selected individuals from social norms and subjugate them to a simplistic binary grouping of socially normal or socially problematic and the social consequences which adhere to those positions.

Previous qualitative studies which generated data through interviews and focus groups analysed the generated data for emerging themes related to the influential factors which shaped participants' mobile phone practices. However, such studies did not use their methodological design to deeply explore the mechanisms by which the influential themes shaped current practices. The proposed study aims to explore mechanisms by which current mobile phone practices are shaped by building on studies which focused on the mobile phone as a tool in self-formation and identity enactment. The study will adopt the unrepresented critical perspective and consider mobile phone practices within the context of a unique individual immersed within their unique world trying to govern their self and their mobile phone practices through their current understanding of the mobile phone. The study intends to open new rationales from an underrepresented perspective for differences in mobile phone practices through contemporary theories of the self and inform a route for social change.

Outline of study design and methods

The explorative study will focus on the conceptualisations and experiences of the mobile phone by mobile phone users through their online mobile phone reviews. The study will adopt a critical perspective rooted in social constructionism (see Burr, 2015; Gergen, 2015) and thematic analysis (see Braun & Clarke, 2006).

Data Collection

The data of interest are mobile phone users' review of their mobile phone. The data will be collected via an online survey presented via 'Qualtrics'. The Qualtrics based mobile phone review survey was designed by the researcher based on the design and terminology presented by the online smartphone product review framework used by Samsung UK. The study will collect the reviews of consenting mobile phone users for thematic analysis.

Brief information about the survey and an invitation to take part (See Attachments: invitation to participants) will be sent via email to known associates, invitation announcements to students and staff at the University of Derby, and invitation announcements on social media (Facebook and Instagram). The Qualtrics mobile phone review survey will begin with further information about the nature of the study (see Attachments: Information sheet about your research study) followed by a 'Consent Page' (see Attachments: Informed consent forms for participants). Participants will be asked to read the statements on the consent screen and to agree to all of them if they wish to continue with the survey. Once they have signalled their consent, instructions on how to create their unique Individual Participant Code (IPC; used to ensure anonymity) will be presented. The IPC creation page will be followed by a request for brief demographic information and then the mobile phone review survey questions (see Attachments: Self-completion questionnaire). A status bar at the top of the screen will inform participants of how far they have progressed into the survey. At the end of the survey, debrief information (see Attachments: Debriefing material) will be presented on screen which will include their IPC (through the 'piped text' feature of Qualtrics) and a reminder to the debrief details.

Participant responses will be recorded and saved by the Qualtrics secure data base. The data will be downloaded by the researcher as a Microsoft Excel document which will be password protected. That data will be transferred to password protected Microsoft word documents for analysis. The data will be stored securely and processed on the researcher's personal laptop which is password protected with enhanced security through McAfee total protection 2019. All files pertaining to the study will be stored in a password protected and encrypted vault folder created through the McAfee security software. The files locked in this secure folder are hidden from the applications system and are NOT accessible through the application in which they were created (e.g. Microsoft word > Open > Recent > Documents, will result in the statement "the directory name isn't valid"). For further details on data protection measures for this study please see Ethical considerations: Data Protection; GDPR considerations. section of this document.

Analytic approach

The data were analysed using an inductive thematic analysis informed by social constructionism to work with latent themes. Through this approach the analysis aims to systematically identify and explore coherent patterns of meaning (themes) throughout the data, without preconceptions, which relate to conceptualisations and experiences of mobile phones (see Braun & Clarke, 2006).

Thematic analysis is a widely-used, structured and theoretically flexibly analytic method for identifying, analysing and reporting themes in wide range of qualitative data within psychology (Braun & Clarke, 2006). Social constructionist approaches to thematic analysis focus on the role of language (or any symbolic system of meaning) during the construction of human experience and considers how this experience is mediated by social and historical context (Burr, 2015; Gergen, 2015). Social constructionist approaches conceptualise language as an active tool for constructing and negotiating a shifting contextual reality and is the data of interest to be explored (Willig, 2013). A social

constructionist thematic analysis will suit the aim of this study which is to explore conceptual understandings and experiences of the mobile phone and how these understandings may shape practices.

An inductive logic of inquiry is suitable for the proposed study because an inductive approach seeks to discover new critical factors which are generated by the analysis of the data which provide a deeper understanding of conceptualisations and experiences of the smartphone rather than reaffirming previous evidence (see Braun & Clarke, 2006; Willig, 2013). An inductive thematic analysis can identify themes at latent level which are themes analysed beyond their surface description at an interpretive level. Working with latent themes were of interest to this study in order to explore the underlying conceptualisations and experiences of the mobile phone throughout the data.

Analytic Process

The thematic analysis process was guided by the six-phase approach to thematic analysis proposed by Braun and Clarke (2006) and shaped by social constructionist principles (see Burr, 2015) for deeper analysis of the underlying latent themes. The thematic analysis process involves a logical sequence of six reiterative phases: 1. familiarising yourself with the data, 2. generating initial codes, 3. searching for themes, 4. reviewing the themes, 5. defining and naming themes, 6. producing the report.

The findings will be discussed in relation to contemporary theories of the self in order to open new rationales for differences in mobile phone practices from a new perspective. The findings will further populate understanding of the landscape of the self from a critical perspective through the vehicle of experiences and conceptualisations of mobile phones. This new understanding will also assist future practices of evolving social technologies and inform social change.

Please provide a detailed description of the study sample, covering recruitment, selection, number, age and if appropriate, inclusion and exclusion criteria.

Participants must be adult (over 18 years of age) mobile phone users. Participants will not be selected based on other demographics such as gender, nationality, race or socio-economic status.

Participant recruitment will be initiated through opportunistically sending an invitation email to known associates, invitation announcements to students and staff at the University of Derby, and invitation announcements on social media (Facebook and Instagram). The email / announcement will include details of the study, inclusion criteria, that participation is voluntary, participants right to withdraw from the study, contacts for further information about the study, and a link to the Qualtrics mobile phone review survey (See Attachments: invitation to participants). The invitation will also include a polite request to forward the Invitation to Participate to other mobile phone users known to the invitee to initiate snowball sampling to increase the size and range of the sample through the increased reach of the survey.

Data collection will cease (the Qualtrics mobile phone review survey will be closed) when data saturation has been reached which will be known through simultaneous analysis as the data is gathered. Beitin . Beitin (2012) reported that data saturation was becoming the most common approach to sample size decisions for qualitative research. Saturation is the phase of qualitative data analysis in which analysis no longer reveals new information or themes and so is used as a criterion for ceasing new data collection (Guest, Bunce & Johnson, 2006).

Are payments or rewards/incentives going to be made to the participants?

No

If yes, please provide details

Do you intend to give participant points for taking part in your study?

No

What resources will you require?

Use of Qualtrics (The researcher has current access to an active Qualtrics account through the University of Derby)

References for any sources cited in the sections on rationale, methods etc.

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Ethical considerations

Consent

Informed voluntary consent will be obtained before the survey questions are presented to the participants. This will be achieved via an Invitation to Participate email/announcement which will be a short text to potential volunteers informing them of the nature of the study, inclusion criteria, that participation is voluntary, participants right to withdraw from the study, contacts for further information about the study, and a link to the Qualtrics survey (See Attachments: invitation to participants). The link provided will lead to the Information About the Study page which will provide more detailed information about the study, the survey procedure and participant's rights during and after the survey. The next page will present the participant with a list of statements regarding consent and will be asked to 'click' on all consent statement boxes individually to indicate their consent of each statement (see Attachments: Informed consent forms for participants). The consent statements are validated with a 'forced response' which means the survey will not continue to the review stages of the survey unless all informed statements are 'clicked'. Completing Informed Consent Statements page will lead to the survey so the consenting participant can continue with their participation.

Deception

No deception is involved in the study. Participants who volunteer to take part will be informed about the nature of the mobile phone review survey.

Debriefing

Participants will be presented with a Debrief Information page on screen and encouraged to make a note of the information provided. The debrief information gives details of the study as well as of organisations that they can contact should they have any concerns raised by taking part in this survey. The Debrief Information page will reiterate how participants' anonymity will be ensured and remind them about their right to withdraw and how to do so (see Attachments: Debriefing material).

Withdrawal from the investigation

Participants will be informed of their right to withdraw at the start and at the end of the study. They are informed how to withdraw their participation and data from the study either during the survey (by simply exiting the Qualtrics survey) or within two weeks of having completed the survey (by emailing the researcher at the email provided requesting to withdraw from the study and quoting their unique Individual Participant Code) without the need for explanation. Withdrawal information will be presented to participants in the Invitation to Participate email/announcement, Information about The Study page, an Informed Consent Statement section and Debrief Information page (See Attachments: invitation to participants, Information sheet about your research study, Informed consent forms for participants, Debriefing material). Withdrawn data will be permanently deleted through McAfee's secure digital shredding system. The participants digital data can be sent to them securely (e.g. email a password protected word document containing their raw data) if they request.

Confidentiality

Participants will be reassured that their responses will be anonymous. To ensure anonymity, they will be asked to create a unique study identification code so that the information they provide cannot be linked to their personal identity. The unique Individual Participant Code will be comprised of four characters: the last letter of their last name and the last three digits of their mobile phone number.

Protection of participants

Participation in this anonymous survey is not likely to cause any harm or adverse effects for the participants. Participants will not be at risk of physical, psychological or emotional harm greater than encountered in ordinary life.

To ensure the protection of participants and their informed choice to participate, participants will be made fully aware of all aspects of this study via Invitation to Participate email/announcement, Information about The Study page, an Informed Consent Statement section and Debrief Information page. Participants anonymity (and confidentiality of their personal identity details if they send the researcher an email with their unique Individual Participant Code) will be maintained. Participants will not be deceived at any stage of the study.

The participants will be informed that they may ask any questions or voice any concerns they may have regarding their participation in the study by contacting the researcher or the researcher's supervisors by using the contact details provided. Participants will be made aware of their right to withdraw their participation and data from the study without the need for explanation.

Observation research

The study uses an online survey and no observation is carried out.

Giving advice

In order to protect the best interests of each participant and ensure minimal researcher bias, the role of the researcher will be limited to the facilitator of the survey and research investigator and will not be available to offer advice outside of study's procedure and participation framework. At no time during the study will the researcher offer personal or mental health advice to any participant. Any participant who expresses concern for their mental, emotional or physical wellbeing will be referred to their Debrief Information page details and encouraged to contact their local wellbeing support services. The limited role of the researcher will be clearly explained to each participant and contained within in their Informed Consent Statement section and Debrief Information page. However, the participants can contact the researcher at any time to clarify any concerns they may have about the study and their participation.

Research undertaken in public places

NA

Data Protection (GDPR considerations)

The researcher will act in accordance with the data protection and GDPR guidelines set out by the University of Derby. This means that the researcher is responsible for looking after all information pertaining to the study and using it appropriately.

All data pertaining to the study will be stored and processed securely guided by the security standards recommended by the Information Commissioner's office (ICO, 2018a) which relates to the data protection act 2018 (ICO, 2018b) and the general data protection regulation (GDPR; ICO, 2018c). More specifically, data will be stored securely and processed on the researcher's personal laptop which is password protected with enhanced security through McAfee total protection 2019. All files pertaining to the study will be stored in a password protected and encrypted vault folder created through the McAfee security software. The files locked in this secure folder are hidden from the applications system and are NOT accessible through the application in which they were created (e.g. Microsoft word > Open > Recent > Documents, will result in the statement "the directory name isn't valid"). The data will only be shared with the doctoral supervision team, examiners and other authorised individuals within the University if necessary. When necessary, data contained within password protected files will be shared through the secure University of Derby email system or a password protected USB flash drive handed personally.

The data will be used only for the purposes of this study and for any relevant publications that arise from it. Participant raw data will be kept for 7 years after which all raw data will be destroyed/permanently deleted. The study will only proceed after its ethical standards have been approved by The University of Derby Human Sciences Research Ethics Committee.

GDPR Statement

The researcher will be collecting data from your participation in this study. The data will contribute to our understanding of mobile phone users' experiences and practices. This is the legal basis on which we are collecting your data. While this allows us to use your data it also means we have obligations towards you to:

- Not seek more information from you than is essential and necessary for the study.
- Make sure that you are not identified by the data by anonymizing the survey and using unique individual participant codes in case you chose to withdraw your data from the study.
- Store data safely in password-protected databases to which only the lead researcher and supervisors have access.
- Use your anonymised data only for the purposes of this study, teaching materials and for any relevant publications that arise from it.
- Not keep your information for longer than is necessary (up to seven years).
- Safely destroy your data when required by permanently deleting them.

The researcher will act in accordance with the data protection and GDPR guidelines set out by the University of Derby. This means that the researcher is responsible for looking after all information pertaining to the study and using it appropriately. The researcher and supervisors on the project with access to the data are highly qualified and experienced and are very careful to ensure the security of your data. The study was approved for its ethical standards by The University of Derby Human Sciences Research Ethics Committee. However, in the unlikely event that you feel you need to make a complaint regarding the use of your information, you can contact the Data Protection Officer at the University of Derby: James Eaglesfield (01332) 591762, or the Information Commissioners Office 0303 123 1113.

References

Information Commissioner's Office (ICO; 2018a). Security. Retrieved from <https://ico.org.uk/for-organisations/guide-to-the-general-data-protection-regulation-gdpr/security/>

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Animal Rights

NA

Environmental protection

NA

Are there other ethical implications that are additional to this list?

No

If yes, please provide details

Have/do you intend to request ethical approval from any other body/organisation?

No

If yes, please provide details

Do you intend to publish your research?

Yes

If yes, what are your publication plans?

The study is inductive. Until I know the dominant themes I do not know where the study will be relevant.

Have you secured access and permissions to use any resources that you may require?

Yes

If yes, please provide details

The researcher has current access to an active Qualtrics account through the University of Derby.

Have the activities associated with this research project been risk-assessed?

Yes

If yes, please provide details

The Qualtrics based mobile phone review activity is voluntary and is similar in design to the online smartphone product review process offered by Samsung UK. The online nature of the study enables all participants (and the researcher) to participate in the study within environments familiar to them. Consequently, the researcher considers that the activity presents no greater risk to consenting participants (and researcher) than every day optional activities mobile phone users will chose to encounter. However, the Debrief Information page will highlight appropriate support services.

Further to this, the researcher has experience with research based on more complex Qualtrics surveys. The researcher can draw on the support of the supervisory team and/or the student wellbeing centre, University of Derby if required.

Study 4: Ethics Reference 02-16/17-MSp

Approval Letter: Human Sciences Research Ethics Committee

University of Derby

Date: 18th October 2016

Dr Frances Maratos
Chair, Human Sciences Research Ethics Committee, University of Derby

Dear Michael,

Ethics Ref No: 02-16/17-MSp

Thank you for submitting this revised application to the Human Sciences Research Ethics Committee.

I have now reviewed the revised documents you sent following the feedback you received on your application, and I am satisfied that all of the issues raised have been dealt with. The application can now therefore be approved.

The following documents have now been re-reviewed:

1. Ethics application form
2. Supplementary Materials (Appendices A-M).

If any changes to the study described in the application or supporting documentation is necessary, you must notify the committee and may be required to make a resubmission of the application.

Please note ethical approval for application 02-16/17-MSp is valid for a period of 5 years i.e. 18th October 2021.

Good luck with the study.

Yours sincerely

Signature removed for
data protection

Amendment to ethics approval request for 02-1617-MSp.

🕒 Label: Staff 7 Years Delete (7 years) Expires on: Tue 05/05/2026 16:36



Edward Stupple

Tue 07/05/2019 16:36

Michael Smyth; Stuart Wain; Lee Rylands; Christopher Barnes; Chris Howard ✕

Dear Michael,

As your revised application does not alter the original ethical issues in any substantial way I am happy to approve the amendments via chair's action.

Stuart, please record this on the tracker.

Best wishes

Ed

...

Request For Ethical Approval For Individual Study / Programme Of Research

This form is for University members of staff and PhD students making applications to the Human Sciences Research Ethics Committee (HS REC). Complete this form and submit it by email to the Chair *and* Vice Chair of HS REC. Information about submission and approval processes, deadlines, and meeting dates is given at:

Once approval has been given, you will be eligible to commence data collection.

Your Name	Michael Smyth
Discipline	Psychology
Position	PhD Student
Staff ID	stf2260
Student ID	100149148
12Email Address	m.smyth@derby.ac.uk
Institute/Research centre (if internal applicant)	Life and Natural sciences / Psychology
Title or topic of proposed research study	
Exploring the Conceptualisations of the Mobile Phone Presented by Problem Mobile Phone Users.	
Background information	
Should your research adhere to the British Psychology Society (BPS) code of ethics and conduct?	Yes
Has this research been funded by an external organisation (e.g. a research council or public sector body) or internally (such as the RLTF fund)? If yes, please provide details.	No
Have you submitted previous requests for ethical approval to the Committee that relate to this research project? If yes please provide details.	No
Are other research partners involved in the proposed research? If yes please provide details.	No
Signatures	
The information supplied is, to the best of my knowledge and belief, accurate. I clearly understand my obligations and the rights of the participants. I agree to act at all times in accordance with University of Derby Policy and Code of Practice on Research Ethics: http://www.derby.ac.uk/research/uod/ethics/	
Signature of applicant:	[Signature removed for data protection]
Date of submission by applicant	01/08/2016
If applicable name of supervisor (Director of Studies) if you are PhD student:	Supervisor (Director of Studies) signature of consent: <i>I have reviewed this application and approve its submission:</i> [Signature removed for data protection] <i>(supervisor in lieu of DoS)</i> Date: 1/08/2016
<i>For Committee Use</i>	<i>Reference Number (Subject area initials/year/ID number)</i>

Date received	Date considered
.....	
Committee decision	Signed
.....	

1. What is the aim of your study? What are the objectives for your study?

Aim

Explore the conceptual understandings and experiences of the mobile phone by those positioned as problem mobile phone users and consider how these understandings may shape their practices in the current digital age.

Objectives

Consider how those positioned as problem mobile phone users conceptually understand and experience the mobile phone.

Consider how they position their self within the digital age through their mobile phone experiences.

2. Brief review of relevant literature and rationale for study

We are currently immersed within an evolving information and communication technologies (ICTs) saturated world according to international studies which measured the development, progress and consumption of ICTs around the world (e.g. International Telecommunications Union; ITU, 2015a; Office of Communications; Ofcom, 2015a). In particular, the rapid proliferation of mobile phones in recent years has resulted in the current global penetration of mobile phone subscriptions which stands at 96.8% of the world population (ITU, 2015a). Approximately 120% in developed countries and 95% in developing countries. Since the first handheld portable cellular phone became commercially available in 1984 for a minority (Motorola, 2016), the number of mobile phone subscriptions has increased steadily to the current level which almost equals the global population. During the early years of the 21st century subscriptions have risen from approximately 0.7 billion in 2000 to almost 7.1 billion in 2015 (ITU, 2015a; 2015b). The growth of mobile phone subscriptions (approximately 6.4 billion) during this period was significantly greater than the growth of the global population (approximately 1.2 billion) which brought the current world population to an estimated 7.3 billion (United Nations, 2015).

In the UK, the percentage of adults who currently use a mobile phone has risen to 93% (Ofcom, 2015b). Ofcom (2015b) further showed that mobile phone practices have developed similarly such that the volume of calls from mobile phones significantly exceeded the volume of fixed line phone calls and text messaging from a mobile phone was the most popular form of communication with friends and family on a daily basis more so than face to face. Over 70% of adult mobile phone users use a smartphone which is almost triple the percentage in 2011. Ofcom described a

smartphone as a feature rich and highly customisable mobile device capable of supporting a variety of applications (apps) and mobile connectivity to the internet which are sophisticated functions beyond that of a traditional talk and text tool. Most smartphone users downloaded around 17 apps to their smartphone creating a uniquely personalised device beyond brand, operating system and decor. More than 70% of adults' smartphone time is spent on communications activities and the most popular apps downloaded and used by adult smartphone users are social networking apps with 62% of adult smartphone users having a social networking app on their phone. Ofcom further revealed that smartphones have overtaken laptops as the most popular device for connecting to the internet and 81% of smartphone users send and receive some of their emails using their smartphone. The opportunity to personalise the sophisticated features of mobile phones to such a unique degree may link with the statistic that 32% of UK adults reported that they would miss their mobile phone more than any other media device and that 58% of smartphone users with 4th generation (4G) high speed internet connection report that they are hooked on their mobile phone. These statistics indicate that adult mobile phone users in the UK are seeking personalisable mobile devices which can be tailored to conveniently assist their management of their socialisation within their unique social world in the evolving digital age.

The revolution in mobile phone practices and resulting problematic practices prompted community concerns and stimulated psychological research which linked problematic mobile phone practices (e.g. excessive use, use when driving) with addictive behaviour (e.g. Bianchi & Phillips, 2005; Chóliz, 2012; Merlo, Stone & Bibbey, 2013). Bianchi and Phillips (2005) used quantitative methodology and questionnaires to link problematic mobile phone practices to addictive behaviour and developed the *Mobile Phone Problem Use Scale* (MPPUS) to measure problem mobile phone use. Notions of problem mobile phone use and mobile phone addiction imply that mobile phone practices are activities with limits to normal practices which were distinct from problematic practices which exceeded the limits of normal practices. However, reports of problem mobile phone use and mobile phone addiction are not universally understood, particularly the distinction between normal and problematic levels of use (Park, 2005).

Further studies sought to identify, quantify and generalise predictors of mobile phone practices in order to provide further rationales for changing and problematic mobile phone practices. Studies found that younger participants were more prone to high levels of use and mobile phone dependence (e.g. Bianchi & Phillips, 2005; Chóliz, 2012; Walsh, White, Cox & Young, 2011). However, Ofcom (2015b) reported that there was little difference in mobile phone uptake between age groups below 55 years and that mobile data consumption had increased within all age groups. Lu et al. (2011) further found that text messaging dependence was prevalent among adults and not limited to adolescents. Nevertheless, Ofcom (2015b) supported significant generational differences between the mobile phone practices of 16-24 year olds and the over-55s such that the younger generation showed greater use of communications services particularly instant messaging services. The previous collection of evidence clearly indicates that age or generation is

not a stable, definitive or generalisable factor to rationalise differences in mobile phone practices or problematic practices.

Personality factors were also proposed as predictors of problematic mobile phone practices such that high scores of extroversion and low self-esteem predicted problematic practices (e.g. Bianchi & Phillips, 2005; Pérez, Monje & De Leon, 2012). Also, higher narcissism scores, self-serving personalities, and neuroticism levels were linked to smartphone addiction such that smartphones encouraged narcissism, even in non-narcissistic users (Pearson & Hussain, 2015). Mobile phone addiction was also reported to be bidirectionally linked to depressive symptoms (e.g. Jun, 2016) and linked to shyness and loneliness such that higher scores of either were linked to a greater likelihood of smartphone addiction (e.g. Bian & Leung, 2015).

Interpretation of the findings from studies focused on mobile phone addiction and predictors of mobile phone practices should be conducted with caution because the scales developed to measure problematic phone use or mobile phone dependence (e.g. Bianchi & Phillips, 2005; Chóliz, 2012; Merlo, Stone & Bibbey, 2013) were founded on the generalisable framework of substance dependence diagnosis as defined in the Diagnostic and Statistical Manual of Mental Disorders of the time (see American Psychiatric Association; APA, 2000) or were validated using existing scales such as the Addiction Potential Scale (see Weed et al. 1992) which was a measure of the potential for substance abuse and alcoholism. Such diagnostic frameworks separated the individual from their social context (Hare-Mustin & Marecek, 2009), consequently the studies did not consider the mobile phone as an additional social tool within the mobile phone user's unique social world. Consequently, the measures and predictors of mobile phone addiction may not adequately distinguish between normal and problematic practices of an individual user situated within their unique world. The studies reflect an ill-informed understanding of current mobile phone practices.

Further studies challenged notions of mobile phone addiction by relating mobile phone practices to socialisation and Identity development. Leung (2008) highlighted that spending time with friends is normal practice for identity development and so utilising new socio-technologies to enhance wider social capital may also be considered a normal identity development practice. Focusing on relationships, Park (2005) found that stronger relationships resulted from ritualistic mobile phone use which was supported by Geser (2004) who found phone use reinforced relationships between close friends and families. Mobile phone use was also associated with increased social inclusion and connectedness between friends within a group (Srivastava, 2005). Balakrishnan and Raj (2012) used a mixed-mode approach which involved questionnaire surveys and diaries to reveal that socializing with families and friends was one of the most important reasons to use mobile phones. The smartphone was further shown to be a tool used for sociability and social capital building (Bian & Leung, 2015). These studies provide a supportive rationale for the popularity of social networking apps (see Ofcom, 2015b) however, these studies fail to explore how these

situations came to be, the mechanism by which the relationship between influence and practice came about.

Focusing on identity, Walsh and White (2007) used qualitative focus groups and quantitative questionnaires to show that an individual's frequency of mobile phone use increased when their phone offered greater self-expressive identity within a social group. Walsh, White, Cox & Young (2011) further found that the self-identity of being mobile phone user was associated with frequency of use and awareness of their device. Through a qualitative study Walsh et al. (2008) found that some respondents' descriptions of their mobile phone revealed extreme attachment to their phone which seemed to have an integral role in their lives. These studies rationalised the mobile phone as an integral part of socialisation and identity and may also serve a social function such as social inclusion through self-identity construction.

Self construction through mobile phone practices was argued by Campbell (2006) who compared the mobile phone experiences of teenage girls with the idealisations presented in advertisements. Campbell used discourse analysis of semi-structured interviews with the girls and semiotic analysis of advertising images which included representations of the mobile phone. The discourses of idealisation constructed within the advertising did not completely match the constructions generated by the girls mainly due to the freedom and safety limitations of their current social situation. Campbell argued that at the intersection of competing discourses of independence, safety and femininity, the mobile phone served as an element within their technologies of self, a tool within the practices through which the girls shaped their self and identity enactment (see Foucault, 1988).

The proposed research is a response to the proposed concepts of mobile phone addiction or dependence and studies which attempt to predict, quantify and generalise these concepts. The problem lies with these generalisable notions which attempt to establish ill-informed social norms by distinguishing between normal and problematic mobile phone practices for all individuals within their unique social worlds. Israel (2014) highlighted that the principle of justice in research is concerned with the even distribution of benefits and burdens of research findings across the demographics of community members. The concepts of mobile phone addiction and dependence may unjustly separate selected individuals from social norms which may discriminatorily exclude them from opportunities within the digital age and digital society. The studies around the concept of mobile phone addiction and dependence can be interpreted as evidence that the current understandings of mobile phone practices need to be refreshed from a new perspective.

Previous quantitative studies which collected data through questionnaires and surveys generated quantitative data in order to quantify mobile phone practices and make statistical inferences about differences in practices between groups. However, the findings of such methodologies did not reveal the influences which shaped these practices. Previous qualitative studies which generated data through interviews and focus groups analysed the generated data for emerging themes

related to the influential factors which shaped participants' mobile phone practices. However, such studies did not use their methodological design to explore the mechanisms by which the influential themes shaped current practices. The proposed study aims to explore mechanisms by which current mobile phone practices are shaped by building on studies which focused on the mobile phone as a tool in self-formation and identity enactment. The study will adopt the unrepresented critical perspective and consider mobile phone practices within the context of a unique individual immersed within their unique world trying to govern their self and their mobile phone practices through their current understanding of the mobile phone. The study will be an endeavour to destabilise ill-informed and unjust discourses about the problem mobile phone user which may subjugate people to a simplistic binary grouping of socially normal or socially problematic, and the social consequences which adhere to those positions. This passionate plea for social justice intends to open new rationales for differences in mobile phone practices through contemporary theories of the self and inform a route for social change.

3. Outline of study design and methods

The proposed study will adopt a critical perspective to reveal ways in which adult mobile phone users, who are rated as a problem mobile phone user by the MPPUS (see Appendix F), use their conceptual understanding of the mobile phone to regulate their mobile phone practices and self-formation. The rating of problem mobile phone user by the MPPUS is not a clinical diagnosis but compares more to the level of a personality trait on a psychometric scale. Use of the MPPUS is intended to justify that the participants of the study are frequent users and attenders of their mobile phone, which the literature positions as problematic, in order to critique the rationale of notions such as mobile phone addiction, mobile phone dependence and the problem mobile phone user.

The study will be designed as two phases commencing with the selection (questionnaire) phase which will lead to the interview phase. During the selection phase, consenting participants will complete the 27 item MPPUS questionnaire. All questions are on Likert-type scale ranging from 1 (not true at all) to 10 (extremely true). The researcher will introduce the participants to the questionnaire and instruct them on how to complete it. However, the title of the questionnaire will not be revealed to the participants until after completion during their debrief so that the title will not be an influencing factor in the participants' responses. During their debrief, the participants will also be informed that their individual score for the questionnaire will be calculated by the researcher and emailed to their preferred contact email address recorded on their *Informed Consent Statement* form (see *Appendix C*) within one week of their participation. The email will also contain either their invitation to participate in the interview phase of the study (highlighting that participation is voluntary and they are under no obligation to continue their participation into the interview phase) or conclusion to their valued participation with thanks as appropriate to their score.

During the interview phase, the data will be generated during dyadic semi-structured interviews with consenting participants who are adult mobile phone users indicated as problem mobile phone users by the MPPUS during the selection phase. The interviews will flexibly follow a pre-designed interview schedule. The interviews will be audio recorded (with the participants' prior consent) and transcribed verbatim.

Analytic approach

The data will be analysed using an inductive thematic analysis informed by social constructionism to work with latent themes. Through this approach the analysis aims to systematically identify and explore coherent patterns of meaning (themes) throughout the data, without preconceptions, which relate to conceptualisations and experiences of mobile phones (see Braun & Clarke, 2006).

Thematic analysis is a widely-used, structured and theoretically flexibly analytic method for identifying, analysing and reporting themes in wide range of qualitative data within psychology (Braun & Clarke, 2006). Social constructionist approaches to thematic analysis focus on the role of language during the construction of human experience and considers how this experience is mediated by social and historical context (Burr, 2015; Gergen, 2015). Social constructionist approaches conceptualise language as an active tool for constructing and negotiating a shifting contextual reality and is the data of interest to be explored (Willig, 2013). A social constructionist thematic analysis will suit the aim of this study which is to explore conceptual understandings and experiences of the mobile phone by those positioned as problem mobile phone users and consider how these understandings may shape their practices.

An inductive logic of inquiry is suitable for the proposed study because an inductive approach seeks to discover new critical factors which are generated by the analysis of the data which provide a deeper understanding of conceptualisations and experiences of the smartphone rather than reaffirming previous evidence (see Braun & Clarke, 2006; Willig, 2013). An inductive thematic analysis can identify themes at a latent level which are themes analysed beyond their surface description at an interpretive level. Working with latent themes were of interest to this study in order to explore the underlying conceptualisations and experiences of the mobile phone throughout the data.

Analytic Process

The thematic analysis process was guided by the six-phase approach to thematic analysis proposed by Braun and Clarke (2006) and shaped by social constructionist principles (see Burr, 2015) for deeper analysis of the underlying latent themes. The thematic analysis process involves a logical sequence of six reiterative phases: 1. familiarising yourself with the data, 2. generating initial codes, 3. searching for themes, 4. reviewing the themes, 5. defining and naming themes, 6. producing the report.

The findings will be discussed in relation to contemporary theories of the self in order to open new rationales for differences in mobile phone practices from a new perspective. The findings will further populate our understanding of the landscape of the self from a critical perspective through the vehicle of mobile phone practices. This new understanding will also assist future practices of evolving social technologies and inform social change.

4. Sample: Please provide a detailed description of the study sample, covering selection, number, age, and if appropriate, inclusion and exclusion criteria.

Inclusion criteria

Participants for the selection phase, the MPPUS questionnaire phase, must be adult (over 18 years of age) mobile phone users. Participants for the interview phase will be indicated as problem mobile phone users by the MPPUS through using a cut-off score of 180 out of a maximum score of 270 (see section below; *Rationale for the Cut-off Score of 180*). Participants who score 180 or higher will meet the criterion to be invited to participate in the Interview phase of the study.

Participants who score 180 or more on the MPPUS will be justified as problematic and frequent users and attenders of their mobile phone, in order for the study to critique the rationale of notions such as the problem mobile phone user, mobile phone addiction and mobile phone dependence. The rating of problem mobile phone user by the MPPUS remains open to debate by the literature and is not a clinical diagnosis. The rating compares more to the level of a personality trait on a psychometric scale, and so the participants will not be considered vulnerable or psychologically unstable. Participants will not be selected based on other demographics such as gender, nationality, race or socio-economic status.

Rationale for the Cut-off Score of 180

Most of the literature comment that a cut-off score to distinguish between problematic users from non-problematic users requires more research before proposing a scale for the purpose of detecting clinically significant symptoms (e.g. Bianchi & Phillips, 2005; Merlo, Stone, & Bibbey, 2013). However, two studies which have tentatively proposed similar cut-off scores (proportionally) for the adapted versions of the MPPUS which they used in their study. Lopez-Fernandez, Honrubia-Serrano, Freixa-Blanxart, and Gibson (2014) used an adapted version of the MPPUS for adolescents used with 1,024 British adolescents in and around London. The adapted scale used 26 of the 27 items. The authors proposed a tentative cut-off score (separating problematic users from non-problematic users) of 167 which proportionally equates to 173.42 ($270/260 \times 167 = 173.42$) of the complete 27 item MPPUS. Kalhori, et al (2015) used a version of the MPPUS adapted for Iranian students at Tehran universities by using 24 of the 27 items. The authors suggested that the best cut-off score for 24 item scale used was 160 which proportionally equates to 180 ($270/240 \times 160 = 180$) of the complete MPPUS.

Taking into consideration the excellent internal consistency of the original scale and the adapted scales (Cronbach's alpha greater than 0.90), the use of the higher proportionally adjusted cut-off score of an adapted MPPUS was considered adequate to justify that the sample of the interview study are included in the group of problem users to which the literature refers. The use of the full 27 item MPPUS scale will also allow the generation of a discussion comparing the results of the questionnaire phase of the study with the scores of the adapted scales by considering the scores of the relevant 26 or 24 items.

Sample size

In accordance with the small sample size required for qualitative research (Willig, 2013) and considering the recommendations of Braun and Clarke (2013) regarding sample sizes for thematic analysis projects for publication, twenty adult users who are rated as problem mobile phoned user by the MPPUS will be purposively sampled from the university population of mobile phone users, the researchers place of work and the wider UK public (see *Appendix A*). Beitin (2012) reported that data saturation was becoming the most common approach to sample size decisions for qualitative interview research. Saturation is the phase of qualitative data analysis in which analysis no longer reveals new information or themes and so is used as a criterion for ceasing new data collection (Guest, Bunce & Johnson, 2006). Guest and colleagues found that saturation occurred within the first twelve interviews while the foundation meta-themes were formed as early as six interviews.

Sampling and recruitment

Purposive sampling will be employed to find 'a more closely defined group for whom the research question will be significant' (Smith & Osborn, 2015, p28) because the idiographic nature of the inquiry seeks a detailed understanding of individual mobile phone users who were positioned as problematic users by the literature rather than a representative section of the population. Initially, consenting participants will be recruited to participate in the selection questionnaire phase of the study in which they will be invited to complete the MPPUS as a screening process to meet the inclusion criteria of the qualitative interview phase. Potential participants will be initially approached via a research recruitment poster/flyer/email attachment (see *Appendix A*). The poster will include details of the study, inclusion criteria and contact details for people who are interested in participating in the questionnaire phase of the study. Interested people will then be given a formal *Invitation to Participate* relevant to the questionnaire phase (see *Appendix B*) which will explain why they are being invited to take part in this study, why it is being conducted, that it is a selection process for suitably characterised mobile phone users to participate in a further interview study in which they are not obliged to participate, and what their participation will involve. They will also be provided with the questionnaire phase *Participant Information* sheet which will provide a more detailed procedure of the questionnaire completion activity (see *Appendix E*). The questionnaire will be offered in traditional paper-based format and online digital format through Qualtrics for the convenience of the participant and to optimise recruitment potential. A link to the

Qualtrics presentation of the questionnaire will be sent via email to people who are interested in participating through the Qualtrics format. All participant information relevant to the questionnaire selection phase (see *Appendices B-G*) will be presented to the participant in both formats.

Participants who score 180 or higher on the MPPUS will be invited to participate in the interview phase and it will be highlighted that participation is voluntary and they are under no obligation to continue their participation. Their invitation will include an Interview Study Information pack (*Invitation to Participate, Informed Consent Statement, Participant Information, Interview Schedule; see Appendices I, J, K, L*) to assist their informed choice. Participants who scores do not meet the criterion will be informed and thanked for their valued participation.

Pearson and Hussain (2015) found that 13.3% of their sample from a UK University population were classified as addicted to smartphones. Using this as a general guide, it is anticipated that up to 150 participants may be required to take part in the screening process. When twelve consenting participants have been successfully recruited through the screening process for the qualitative study, recruitment through screening will cease.

The Questionnaires and Interviews

The paper-based questionnaire completions and face-to-face interviews will be conducted in a safe, quiet and comfortable space convenient and satisfactory to participant and researcher. Paper-based questionnaire completions and Interviews with participants recruited from the University of Derby will be conducted in a suitable available room within the university which can provide a safe, quiet and comfortable space convenient and satisfactory to participant and researcher. The questionnaire will also be offered in an online digital format through Qualtrics for the participant to complete in a place of their choosing. The dyadic semi-structured interview will also be offered as a Skype interview (over social media) for the participant to participate in a place of their choosing.

See section 6: Permission granted by the copyright holder to use the Mobile Phone Problem Use Scale (MPPUS; Bianchi & Phillips, 2005)
See section 10. *Risk Assessment*, of this document.

5. Are payments or rewards/incentives going to be made to the participants? If so, please give details below.

Do you intend to give *Participation Points* for taking part in your study? **No** (Delete as appropriate)

Yes, a small token of recompense for their time and inconvenience will be offered to the participants of the interview phase of the study.

The participants of the interview phase of the study will be offered a £10 amazon voucher as an appreciation to compensate the participant for their time and effort involved in participating in the interview. The voucher will be sent to their preferred email address within 2 days of completing their interview. If a participant withdraws from the study (up to two weeks after their participation) they will be able to keep the £10 amazon voucher.

This is in line with BPS (2014) guidelines on reasonable recompense for the participant's time and inconvenience:

"However, it is acceptable, and in many cases proper, for reasonable recompense for attendance, travel, other incurred costs and the time and inconvenience of participation to be offered" (p.21)

6. What resources will you require? (e.g. questionnaires, equipment, for example video camera, specialised software; if questionnaires are to be used please give full details here including permissions).

Requested from University of Derby

Use of Qualtrics and SPSS

For conducting interviews with participants from within the university, a suitable available room which can provide a private, safe, quiet and comfortable space convenient and satisfactory to participant and researcher.

Provided by Researcher

The interviews will be recorded to an Olympus WS-6505 digital voice recorder and Philips 7655 digital voice recorder as backup.

Paper-based information and forms will be designed and printed by the researcher:

- Participant Recruitment Poster
- Printed copies of Mobile Phone Problem Use Scale (MPPUS; Bianchi & Phillips, 2005)
- Invitation to Participate
- Participant Information Sheet
- Informed Consent Statement
- Interview Schedule
- Debrief

(See *Appendices A-G*)

Information and data processing will be accomplished on the researcher's personal laptop which has password protection, security with McAfee total protection 2016 which enables encrypted vault folders to store recordings and transcripts of interviews, Microsoft word 2016 which enables text documents (such as transcribed recordings and scanned personal data) to be password encrypted.

The participant will bring their mobile phone (set to silent) to the interview in order to help stimulate the discussion.

Permission to Reproduce and Administer a Questionnaire

Permission has been granted by the copyright holder to use the Mobile Phone Problem Use Scale (MPPUS; Bianchi & Phillips, 2005; see *Appendix F*). The MPPUS will be used during the

participant screening process so the participants in the qualitative study are justified as frequent and problematic users of their mobile phone.

7. References Give the references for any sources cited in the sections on rationale, methods etc.

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8. Ethical Considerations Please indicate how you intend to address each of the following in your study. Points a-i relate particularly to projects involving human participants. Guidance to completing this section of the form is provided at the end of the document.

m. Consent

Potential participants will be initially approached via a research recruitment ~~poster or~~ flyer or the researcher's PhD research Facebook page dedicated the researcher's PhD research only with the same recruitment information and a link to the study which will open with information about the study (see *Appendices A and B*). The poster will include details of the study, inclusion criteria and contact details for people who are interested in participating in the selection questionnaire phase (see *Appendix A*). Interested parties will then be given a formal *Invitation to Participate* (see *Appendix C*) which will explain why they are being invited to take part in this study and why it is being conducted. The *Invitation to Participate* will detail:

- What the study is about
- Eligibility to participate
- A selection phase for an interview study
- Participation is voluntary
- Penalty free withdrawal from the study
- What participation will involve
- Approximate duration of the whole questionnaire activity
- The potential benefits to society of taking part
- Potential risks involved in participation
- Confidentiality

Participants who meet the criterion for the interview phase of the study will be given a formal *Invitation to Participate* (see *Appendix I*) which will explain why they are being invited to take part in this study and why it is being conducted. The *Invitation to Participate* will detail:

- What the study is about
- Participation is voluntary
- Penalty free withdrawal from the study
- What participation will involve
- Approximate duration of the whole interview activity
- The potential benefits to society of taking part
- Potential risks involved in participation
- Confidentiality

Both invitations will also provide contact information of the researcher and supervisor so that potential participants are able to how to request further information or ask questions so as to make an informed decision about participation in the study.

Potential participants will be also provided with an information sheet about the participation procedure relevant to the phase of participation (see *Appendices E an K*) and a sample of the questionnaire or interview schedule before phase participation (see *Appendices F and L*).

If the potential participant chooses to participate in the first of both phases of the study they will be guided through the phase relevant *Informed Consent Statement* form (see *Appendix C and J*) which will re-affirm the information of the *Invitation to Participate* to ensure participants are aware of all aspects of this study before they agree to participate.

Informed consent will be documented through a signed hard copy of the phase relevant *Informed Consent Statement* form (duplicated for participant and research team).

For the Qualtrics questionnaire, consent will be provided by forced responses to each consent statement before the participant can move to the demographic and questionnaire pages.

For interviews conducted over social media, consent will be provided by the participant audio recorded responses of agreement to the inform consent statements read out by the interviewer.

n. Deception

There is no deception in this study. Participants will be informed of what is being investigated with respect to their practices, views and experiences related to mobile phones. Participants will be informed of the purpose of the study and the procedure of their participation in the phase relevant *Invitation to Participate*, *Informed Consent Statement* and *Debrief* (see *Appendices B, C, G, I, J and M*).

o. Debriefing

After the phase of participation is complete, a brief summary will be orally presented by the researcher and questions invited in order to provide an appropriately comfortable ending for the participants.

Participants will also receive a written phase relevant *Debrief* (see *Appendix G and M*) at the conclusion of the participation phase which will provide:

- An explanation of the study to complete their understanding of the research.
- Reveal the full title of the MPPUS question title and its non-clinical nature (questionnaire phase only)
- A reminder of confidentiality and anonymity.
- A reminder of the participant's rights once the interview has been conducted.
- A reminder of the limitations of the role of the researcher.
- Details of services that can provide help and support for the protection of participants.

p. Withdrawal from the investigation

The participant can contact the researcher to withdraw their participation and data from the study at any time, before, during and up to two weeks after their questionnaire completion or interview without explanation or penalty which will be indicated to the participant in the phase relevant *Invitation to Participate, Informed Consent Statement and Debrief* (see *Appendices B, C, G, I, J and M*). In the event of participant withdrawal, all information and collected data related to the withdrawing participant will be destroyed or delivered to the participant as they prefer.

Each participant will have a unique *Individual Participant Code* which they will create before participating in the study and which will also be recorded on their phase relevant *Informed Consent Statement and Debrief* along with the researcher's email address (see *Appendices C, G, J and M*). The participant can email the researcher their statement to withdraw along with their unique *Individual Participant Code*, so the data and information can be identified and removed while maintaining confidentiality and anonymity.

q. Confidentiality

All participants' personal details will be kept confidential and their responses will be anonymised. Confidentiality and anonymity will be maintained by the generation of a unique *Individual Participant Code* which will be generated (the last letter of surname and last three digits of their mobile phone number) once they have agreed to participate. The *Individual Participant Code* will only be known by the researcher and supervisors with the participants' consent, and will be the only form of identification in the study (see *Appendices C, D, G, J and M*). Participants' questionnaire only data will be anonymised and only connected to demographic information while a participant's questionnaire data and interview responses will be anonymised through a pseudonym of the participant's choosing to represent any of their statements used within the disseminated research text.

Should a participant choose to withdraw from the study up to two weeks after their interview, their *Individual Participant Code* must be referenced by the participant to the researcher by the email address provided. The participant's data will be returned or destroyed as the participant requests (see *Appendix G and M*). Their questionnaire or interview data will not be analysed.

Participants' personal information will not be linked with the data, and not published in the final report. The analysis will be published in the final report but remain unidentifiable. A false name will be associated to participants' transcribed data for convenient reading of the transcript of the recorded interview.

All data pertaining to the study will be stored with the security standards recommended by the Information Commissioner's office for data protection (ICO, 2018) and will only be accessible by the researcher. Each participant's identifiable personal information (such as their *Informed Consent Statement* form) and data (paper-based and digital) will be stored separately and securely as recommended by Information Commissioner's Office (ICO, 2018)

Each participant's data will be kept for a minimum of six years. At the conclusion of the study all data will be destroyed.

Reference

Information Commissioner's Office (ICO; 2018). Security. Retrieved from <https://ico.org.uk/for-organisations/guideto-the-general-data-protection-regulation-gdpr/security/>

r. Protection of participants

To ensure the protection of participants and their informed choice to participate, all will be made fully aware of all aspects of this study via phase relevant *Invitation to Participate*, *Informed Consent Statement* form, *Participant Information* sheet, *Questionnaire* and *Interview Schedule*, before consenting to participate (see *Appendices B, C E, F, I, J, K, and L*). Protection of participants will be ensured by maintaining confidentiality of their personal identity details and anonymity of their responses via an 'individual participant code', a pseudonym name of their choosing in transcribed interviews and following data protection protocol. Participants will not be deceived at any stage of the investigation and contact details of the researcher and the researcher's supervisor will be given to allow participants to ask questions or to voice any concerns about the study. Participants will be made aware of their right to withdraw from the study without explanation or penalty.

There are no anticipated risks, which are greater than normal life encounters, for the participants during the proposed study. However, the researcher is mindful of the unpredictable nature of any social group interaction, and the deep exploration and expression of personal views and experiences which may evoke unhelpful or unpleasant emotions. This potential risk will be indicated to the participant within the phase relevant *Invitation to Participate* (see *Appendix B and I*). Contact information of services which could provide help and support to participants will be provided in the written phase relevant *Debrief* (see *Appendix G and M*).

The participant will be informed that they may ask any questions they may have regarding this study and may contact their researcher or the researcher's supervisors later using the contact details provided with any questions or concerns which may arise related to their participation in the study.

All participants will be non-vulnerable adults without impairments in understanding or communication and who are able to individually consent and do not require any special safeguarding procedures.

The rights and dignity of the participants will be respected at all times in accordance with guidelines proposed by the British Psychological Society (BPS; 2014; 2018). The researcher will be sensitive, respectful and responsible to the participants and their needs relating to their participation in the study. The researcher will act competently and with integrity in order to protect the participants and the reputation of the wider academic institution.

No participant will be pressurised to complete items of the questionnaire or speak during the interview

The risk mitigation actions developed during the risk assessment will be followed. If any of the conditions or procedures change, the researcher will notify his supervisors immediately. A new risk assessment will be made.

This study will be reviewed by the Human Sciences Research Ethics Committee (HS REC) of the University of Derby. The study will only commence when ethical approval is achieved.

References

British Psychological Society (BPS; 2014). *Code of human research ethics*. Retrieved from http://www.bps.org.uk/system/files/Public%20files/inf180_web.pdf

British Psychological Society (BPS; 2018). *Code of ethics and conduct*. Retrieved from [https://www.bps.org.uk/sites/bps.org.uk/files/Policy%20%20Files/Code%20of%20Ethics%20and%20Conduct%20\(2018\).pdf](https://www.bps.org.uk/sites/bps.org.uk/files/Policy%20%20Files/Code%20of%20Ethics%20and%20Conduct%20(2018).pdf)

s. Observation research [complete if applicable]

N/A

t. Giving advice

At no time during the study will the researcher offer advice to any participant. Any participant who expresses concern for their mental, emotional or physical wellbeing will be referred to their phase relevant *Debrief* sheet and encouraged to contact their local wellbeing support services.

In order to protect the best interests of each participant and ensure minimal researcher bias, the role of the researcher will be limited to the mediator/facilitator of the interview and research investigator. The limited role of the researcher will be clearly explained to each participant and contained within in their phase relevant *Informed Consent Statement* and

Debrief (see *Appendix C, G, J and M*). However, the participants can contact the researcher at any time to clarify any concerns they may have about the study or their participation.

u. Research undertaken in public places [complete if applicable]

N/A

v. Data protection

GDPR considerations

The University of Derby will act as the Data Controller for this study. This means that the University is responsible for looking after information and using it properly. Researchers on the project with access to the data are highly qualified and experienced and have been very careful to ensure the security of all data. The research team acknowledges their obligation to store data safely in password-protected databases to which only the named researchers have access. The data will be used only for the purposes of this study and for any relevant publications that arise from it. The study will only proceed after its ethical standards has been approved by The University of Derby Human Sciences Research Ethics Committee.

All data pertaining to the study will be stored and processed securely guided by the security standards recommended by the Information Commissioner's office (ICO, 2018a) which relates to the data protection act 2018 (ICO, 2018b) and the general data protection regulation (GDPR; ICO, 2018c). No data will be stored on cloud-based storage systems (e.g. OneDrive, iCloud). The raw data collected will only be shared with the doctoral supervision team, examiners and other authorised individuals within the University if necessary. Data will be shared through secure University of Derby email in password protected documents or password protected USB flash drives if necessary

Participant rights pertaining to the data protection act 2018 (ICO, 2018b), the general data protection regulation (ICO, 2018c) and data security (ICO, 2018a) will be observed at all times.

Participants will be informed of how their rights to anonymity and confidentiality will be guaranteed (see *Appendices B and I*)

Each participant will be informed of:

- What the research is about (Mobile phone practices and views about mobile phones)
- What their participation involves.
- The nature of the questionnaire completion and interview process as the participant requires.
- Their interview will be recorded and analysed

- Who will conduct the research and facilitate their questionnaire completion and interview.
- How their personal information and collected data will be used.
- Whom will have access to their information.
- How long their information will be kept.

Each participant's information and data will only be used for the purposes for which they consent.

Each participant's identifiable personal information will only be conveyed to the researcher and supervisor with the participant's consent (see *Appendix C and J*)

Each participant's anonymity of their interview responses will be protected through a pseudonym of their choosing.

Each participant's identifiable personal information (such as their *Informed Consent Statement* form) and data (paper-based and digital) will be stored separately and securely as recommended by Information Commissioner's Office (ICO; 2018a2015).

Only data relevant to the study to which the participant has consented will be collected.

Each participant's data will be kept for a minimum of 6 years. At the conclusion of the study all data will be destroyed.

No information or data will be used to take decisions in respect of any living individual.

No information or data will be used to cause damage and/or distress to any living individual.

In the event of participant or consent withdrawal, all information and collected data will be destroyed or delivered to the participant as they prefer.

References

Information Commissioner's Office (ICO; 2018a). Security. Retrieved from

<https://ico.org.uk/for-organisations/guideto-the-general-data-protection-regulation-gdpr/security/>

Information Commissioner's Office's (ICO; 2018b). *Data protection act 2018*. Retrieved from

http://www.legislation.gov.uk/ukpga/2018/12/pdfs/ukpga_20180012_en.pdf

Information Commissioner's Office's (ICO; 2018c). *Guide to the general data protection regulation (GDPR)*. Retrieved from <https://ico.org.uk/for-organisations/guide-to-the-general-data-protection-regulation-gdpr/>

w. Animal Rights [complete if applicable]

N/A

x. Environmental protection [complete if applicable]

N/A

9. Have/do you intend to request clearance from any other body/organisation? Yes

If Yes – please give details below.

Permission to use the Mobile Phone Problem Use Scale (MPPUS; Bianchi & Phillips, 2005). Please see section 6 for complete details.

10. All projects have an element of risk which should be assessed before any project is undertaken.

Have the activities associated with this research project been risk assessed? Yes

Lone working procedure

All participants and the researcher will participate in the study within environments familiar to them and which comply to workplace health and safety regulations and so there will be no more risk expected beyond everyday experiences. However, the participants will be encouraged to have their whereabouts known by at least one other (see *Appendix C and J*) and the researcher will inform the Director of Studies, Dr Chris Howard, of all questionnaire completion and interview appointment times, locations and durations and inform him on completion. The researcher will carry a charged mobile phone at all times during scheduled interview events.



11. Declaration: The information supplied is accurate to the best of my knowledge and belief. I understand my obligations and the rights of the participants. I agree to act at all times in accordance with University of Derby Ethical Policy for conducting research with human participants.

Place a √ in the box above to confirm your agreement with the declaration

Date of application: 01/08/2016

Appendix B

Study 1: The 17 UK National Newspapers Searched During Data Collection and the Years *Infotrac Newsstand* Database Provided Full-Text Coverage (Infotrac Newsstand, 2019)

Table B1

The Years Infotrac Newsstand Database Provided Full-Text Coverage of the 17 Relevant UK National Newspapers (Infotrac Newsstand, 2019)

Publications (17)	The years each publication was covered by the Infotrac Newsstand database																																						
	Early period 01/01/1985 to 31/12/1998 Introduction of the consumer mobile phone														Middle period 01/01/1999 to 08/11/2007 Massification of the mobile phone							Late Period 09/11/2007 to 15/03/2019 Popularisation of the smartphone																	
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019				
The Times																																							
Sunday Times																																							
The Guardian																																							
Daily Mail																																							
The Mirror																																							
The Independent																																							
Mail on Sunday																																							
The Observer																																							
Sunday Mirror																																							

Appendix C

Study 2: Mobile Phone Brands and Models Used by the Participants of Studies 3 and 4

Table C1

Mobile Phone Models Reported by The 164 Participants of Study 3 and the 20 Interview Participants of Study 4 Including Frequency and the URLs Of Websites Used for Data Collection.

The mobile phone models are listed in descending order of frequency.

Mobile phone brand and model reported by the participants of studies 3 and 4 (52 models reported excluding brand only)	Frequency			URLs of websites retrieved between 27 July and 1 December 2019 (110 URLs)
	Study 3 Reviews	Study 4 Interviews	Total	
Apple iPhone 7	22	4	26	27 July 2019 https://www.vodafone.co.uk/mobile/phones/pay-monthly-contracts/apple/iphone-7
Apple iPhone 8	15	3	18	27 July 2019 https://www.vodafone.co.uk/mobile/phones/pay-monthly-contracts/apple/iphone-8?cid=ppc-bing-non-298161148-prch-05-01-2019-&kpid=bi_cmp-298161148_adg-1285329150891095_ad-80333152479073_kwd-80333191201315:loc-188_dev-c_ext-_prd-&mclkid=d4dece2b6ce5178f666c93c484409be4
Apple iPhone (brand only reported)	10	1	11	Not Applicable
Apple iPhone X	9	1	10	27 July 2019 https://www.apple.com/uk/iphone/ https://www.apple.com/uk/ios/ios-12/ https://www.apple.com/uk/airpods/ https://www.apple.com/uk/shop/iphone/iphone-accessories https://www.apple.com/uk/iphone/compare/
Apple iPhone 6S	9	1	10	27 July 2019

				https://www.vodafone.co.uk/mobile/phones/pay-monthly-contracts/apple/iphone-6s#features
Samsung Galaxy S9	6	2	8	<p>1 December 2019</p> <p>https://www.samsung.com/uk/smartphones/galaxy-s9/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-s9/camera/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-s9/augmented-reality/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-s9/design/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-s9/performance/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-s9/accessories/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-s9/explore/</p>
Samsung Galaxy S8	7	1	8	<p>1 December 2019</p> <p>https://www.samsung.com/uk/smartphones/galaxy-s8/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-s8/design/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-s8/camera/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-s8/security/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-s8/performance/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-s8/intelligence/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-s8/phone-plus/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-s8/accessories/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-s8/gallery/</p>
Apple iPhone XR	5	2	7	<p>27 July 2019</p> <p>https://www.apple.com/uk/iphone-xr/</p> <p>https://www.apple.com/uk/iphone-xr/display/</p> <p>https://www.apple.com/uk/iphone-xr/face-id/</p> <p>https://www.apple.com/uk/iphone-xr/a12-bionic/</p>

				https://www.apple.com/uk/iphone-xr/cameras/ https://www.apple.com/uk/iphone-xr/only-iphone/ https://www.apple.com/uk/iphone-xr/specs/
Apple iPhone 6	6		6	Not accessible
Apple iPhone SE	5		5	Not accessible
Apple iPhone 8 Plus	4		4	See Apple iPhone 8
Samsung Galaxy S7	4		4	1 December 2019 https://www.samsung.com/uk/smartphones/galaxy-s7/overview/ https://www.samsung.com/uk/smartphones/galaxy-s7/design/ https://www.samsung.com/uk/smartphones/galaxy-s7/camera/ https://www.samsung.com/uk/smartphones/galaxy-s7/gaming/ https://www.samsung.com/uk/smartphones/galaxy-s7/hardware/ https://www.samsung.com/uk/smartphones/galaxy-s7/shortcut/ https://www.samsung.com/uk/smartphones/galaxy-s7/accessories/
Apple iPhone XS	3		3	27 July 2019 https://www.apple.com/uk/iphone-xs/
Apple iPhone 7 Plus	2	1	3	See Apple iPhone 7
Huawei P20 Pro	3		3	24 August 2019 https://consumer.huawei.com/en/phones/p20-pro/
Samsung Galaxy A3	3		3	1 December 2019 https://www.samsung.com/uk/smartphones/galaxy-a3/ https://www.samsung.com/uk/smartphones/galaxy-a-series-range/?s_tnt=216124%3A1%3A0&adobe_mc_sdid=SDID%3D0720A0B773F99747-0DC177A8C438ED66%7CMCORGID%3DEE3EFAFC56FA42B27F000101%40AdobeOrg%7CTS%3D1576431460&adobe_mc_ref=https%3A%2F%2Fwww.samsung.com%2Fuk%2Fsearch%2F%3Fsearchvalue%3Dgalaxy%2520a%2520series

Samsung (brand only reported)	3		3	Not Applicable
Apple iPhone XS Max	2		2	27 July 2019 https://www.vodafone.co.uk/mobile/phones/pay-monthly-contracts/apple/iphone-xs-max
Apple iPhone 5S	2		2	Not accessible
Apple iPhone 4	2		2	Not accessible
Huawei P30	2		2	24 August 2019 https://consumer.huawei.com/uk/phones/p30/
Huawei P20 Lite	1	1	2	24 August 2019 https://consumer.huawei.com/uk/phones/p20-lite/
Motorola Moto G6 Play	2		2	27 July 2019 https://www.motorola.com/us/products/moto-g-play-gen-6
Samsung Galaxy S10 Plus	2		2	See Samsung Galaxy S10
Samsung Galaxy Note 9	2		2	1 December 2019 https://www.samsung.com/uk/smartphones/galaxy-note9/ https://www.samsung.com/uk/smartphones/galaxy-note9/performance/ https://www.samsung.com/uk/smartphones/galaxy-note9/design/ https://www.samsung.com/uk/smartphones/galaxy-note9/s-pen/ https://www.samsung.com/uk/smartphones/galaxy-note9/camera/ https://www.samsung.com/uk/smartphones/galaxy-note9/accessories/ https://www.samsung.com/uk/smartphones/galaxy-note9/explore/ https://www.samsung.com/uk/smartphones/galaxy-note9/mobile-couture/
Samsung Galaxy A5	1	1	2	1 December 2019 https://www.samsung.com/uk/smartphones/galaxy-a5/ https://www.samsung.com/uk/smartphones/galaxy-a5-2016-a510f/SM-A510FZDABTU/
Sony Xperia (no model number reported)	2		2	Not Applicable
Alcatel	1		1	24 August 2019

(brand only reported)				Alcatel A1 (released 2018) https://eu.alcatelmobile.com/en/mobile/smartphones/alcatel-1/
Apple iPhone 8S	1		1	Not accessible
Apple iPhone 7S	1		1	Not accessible
Apple iPhone 6S Plus	1		1	See Apple iPhone 6S
Apple iPhone 5C	1		1	Not accessible
Google Pixel	0	1	1	Not Applicable
Google Pixel 1	1		1	Not Accessible
Google Pixel XL	1		1	27 July 2019 Google Pixel 3 and 3XL https://store.google.com/gb/product/pixel_3 https://store.google.com/gb/product/pixel_3#overview-unlimited-story https://store.google.com/gb/product/pixel_3#overview-digital-wellbeing-story https://store.google.com/gb/product/pixel_3#overview-ar-story
HTC 10	1		1	24 August 2019 https://www.htc.com/us/smartphones/htc-10/ https://www.htc.com/us/smartphones/htc-10-design/ https://www.htc.com/us/smartphones/htc-10-camera/ https://www.htc.com/us/smartphones/htc-10-audio/ https://www.htc.com/us/smartphones/htc-10-performance/ https://www.htc.com/us/smartphones/htc-10-control/ https://www.htc.com/us/smartphones/htc-10-battery/
HTC U12 Plus	1		1	24 August 2019 https://www.htc.com/us/smartphones/htc-u12-plus/
Honor 20	1		1	24 August 2019 https://www.hihonor.com/uk/product/honor-20
Huawei (brand only reported)	1		1	Not Applicable
Huawei P30 Lite	1		1	27 July 2019

				https://consumer.huawei.com/uk/phones/p30-lite/
Huawei P20	1		1	27 July 2019 https://consumer.huawei.com/uk/phones/p20/
Huawei P8 lite 2017	0	1	1	27 July 2019 https://Huawei P30 Proconsumer.huawei.com/uk/phones/p8-lite-2017/
LG (brand only reported)	1		1	Not Applicable
LG K4 (2017)	1		1	24 August 2019 https://www.lg.com/uk/mobile-phones/lg-M160E
LG G6	1		1	24 August 2019 https://www.lg.com/uk/mobile-phones/lg-H870-black
Motorola Moto G4	1		1	27 July 2019 https://www.lenovo.com/gb/en/smart-devices/smartphones-and-watches/moto/smartphones/Moto-G-4th-Gen-Smartphone/p/PMIPMIT11MF
Nokia TA1057	1		1	24 August 2019 https://www.nokia.com/phones/en_gb/nokia-3-2018
OnePlus 5T	1		1	24 August 2019 OnePlus 6T https://www.oneplus.com/uk/6t
Samsung Galaxy S10	1		1	1 December 2019 https://www.samsung.com/uk/smartphones/galaxy-s10/ https://www.samsung.com/uk/smartphones/galaxy-s10/design/ https://www.samsung.com/uk/smartphones/galaxy-s10/camera/ https://www.samsung.com/uk/smartphones/galaxy-s10/performance/ https://www.samsung.com/uk/smartphones/galaxy-s10/intelligence/ https://www.samsung.com/uk/smartphones/galaxy-s10/connected-plus/ https://www.samsung.com/uk/smartphones/galaxy-s10/accessories/

				https://www.samsung.com/uk/smartphones/galaxy-s10/explore/
Samsung Galaxy Note 8	1		1	<p>1 December 2019</p> <p>https://www.samsung.com/uk/smartphones/galaxy-note8/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-note8/s-pen/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-note8/camera/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-note8/performance/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-note8/design/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-note8/phone-plus/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-note8/accessories/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-note8/gallery/</p>
Samsung Galaxy Ace	1		1	Not accessible
Samsung Galaxy A6	1		1	<p>1 December 2019</p> <p>https://www.samsung.com/uk/smartphones/galaxy-a6-sm-a600/SM-A600FZKIBTU/</p>
Samsung Galaxy J3	1		1	<p>1 December 2019</p> <p>https://www.samsung.com/uk/smartphones/galaxy-j3-2016-j320f/SM-J320FZDNBTU/</p> <p>https://www.samsung.com/uk/smartphones/galaxy-j3-2017-j330fn/SM-J330FZKNBTU/</p>
Samsung Galaxy J9	1		1	Not accessible
Sony Xperia XZ	1		1	<p>27 July 2019</p> <p>https://www.sonymobile.com/gb/products/phones/xperia-xz-premium/</p> <p>https://www.sonymobile.com/gb/products/phones/xperia-xz-premium/camera/</p> <p>https://www.sonymobile.com/gb/products/phones/xperia-xz-premium/display/</p> <p>https://www.sonymobile.com/gb/products/phones/xperia-xz-premium/design/</p> <p>https://www.sonymobile.com/gb/products/phones/xperia-xz-premium/sound/</p>

				https://www.sonymobile.com/gb/products/phones/xperia-xz-premium/performance/ https://www.sonymobile.com/gb/products/phones/xperia-xz-premium/intelligence/ https://www.sonymobile.com/gb/products/phones/xperia-xz-premium/battery/ https://www.sonymobile.com/gb/products/phones/xperia-xz-premium/accessories/
Xiaomi Mi A1	1		1	24 August 2019 https://www.mi.com/global/mi-a1 https://www.mi.com/global/mi-a1/camera https://www.mi.com/global/mi-a1/design https://www.mi.com/global/mi-a1/android-one
Xiaomi Redmi 6A	1		1	24 August 2019 https://www.mi.com/uk/redmi-6a/
Do not wish to disclose	2		2	
Total	164	20	184	

Appendix D

Study 3: Examples of Participant Recruitment Announcements

Announcement Email

Subject: Seeking Research Participants - Mobile Phone Review Survey

You are invited to take part in an online survey which aims to explore mobile phone users' views and experiences of their mobile phone. You will be asked to rate and write a brief review about your mobile phone as if writing an online product review.

The research is being conducted by Michael Smyth (PhD research student) under the supervision of Dr Chris Howard, Dr Jenny Hallam and Dr Jane Montague at the University of Derby.

Your answers will be anonymous. The information you provide will be stored securely and held confidentially in accordance with the data protection and GDPR guidelines set out by the University of Derby.

Your participation is voluntary. You are free to withdraw from the study by exiting the survey at any point or withdraw your data from the study up to two weeks after your survey completion, without explanation.

If you'd like to take part, please click on the link below to Qualtrics, a secure online platform. Once you click on the link, you will be given further information about the survey, an informed consent page, a request for some demographic information, your mobile phone rating and review, and a final information page (a debrief information page) after which you can simply close your internet browser to exit.

If you would like further information about the study, please contact the researcher Michael Smyth at m.smyth@derby.ac.uk or Dr. Chris Howard (Director of Studies) email: c.howard1@derby.ac.uk, tel.: 01332 592037 at the College of Life and Natural Sciences, University of Derby, Kedleston Road, Derby DE22 1GB.

Link to the online Mobile Phone Review Survey:

https://derby.qualtrics.com/jfe/form/SV_6fXFSd9wFWmEyFL

Thank you
Michael (PhD research student)
E: m.smyth@derby.ac.uk

Dr. Chris Howard (Director of Studies)
E: c.howard1@derby.ac.uk
T: 01332 592037
College of Life and Natural Sciences
University of Derby
Kedleston Road
Derby
DE22 1GB



[« back to cover page](#)

What does your mobile phone mean to you?

Researchers at the University of Derby are looking at what role mobile phones play in our lives.

You are invited to complete a brief online questionnaire about what your phone means to you.

[Take the questionnaire now.](#)

The research is being conducted by Michael Smyth (PhD research student) under the supervision of Dr Chris Howard, Dr Jenny Hallam and Dr Jane Montague at the University of Derby.

Michael's research aims to challenge narratives of mobile phone addiction which often fail to account for the meaningful life enhancements that we experience through our mobile phone.

If you have any questions about the study, please post a comment or contact [Michael Smyth](#).

Announcement Posted on the Researcher's Professional Facebook Page




The image shows a screenshot of a Facebook page for a researcher named Michael Smyth. The page header includes navigation buttons for 'Like', 'Follow', 'Share', and a menu icon. Below the header, the profile picture of Michael Smyth is visible, along with his name and the page handle '@MichaelsPhDresearch'. A sidebar on the left lists navigation options: Home, Events, Reviews, About, Videos, Photos, Posts, Jobs, and Community. The main content area features a post titled 'Michael Smyth: My PhD Research' dated '15 April'. The post text asks for a review of mobile phone usage and provides a link to a survey form. The survey link is https://derby.qualtrics.com/jfe/form/SV_6fXFSd9wFWmEyFL. The post also mentions the research is supervised by Dr Chris Howard, Dr Jenny Hallam, and Dr Jane Montague at the University of Derby. At the bottom of the post, there is a link to 'DERBY.QUALTRICS.COM' and a call to action: 'Please Review Your Mobile Phone'.

Like Follow Share ...

See all

Posts

 **Michael Smyth: My PhD Research** 15 April · 

How does your mobile phone take part in your life?
Please write a brief review of your mobile phone. A simple sentence or a detailed paragraph about the value of your mobile phone in your day-to-day life. Your review will be anonymous.

The link which opens with information about the study
https://derby.qualtrics.com/jfe/form/SV_6fXFSd9wFWmEyFL

The research is being conducted by Michael Smyth (PhD research student) under the supervision of Dr Chris Howard, Dr Jenny Hallam and Dr Jane Montague at the University of Derby. My research aims to challenge narratives of mobile phone addiction which often fail to account for the meaningful life enhancements that we experience through our mobile phone.

Your participation is voluntary.

If you have any questions about the study, please post a comment or contact me at m.smyth@derby.ac.uk

DERBY.QUALTRICS.COM 

Please Review Your Mobile Phone

Appendix E

Study 3: Online Mobile Phone Review Process

Information About the Study

The study is exploring adult mobile phone users' views and experiences relating to their mobile phone and the role it plays in their meaningful life experiences.

Am I eligible to participate?

The study is interested in the views of adult mobile phone users (over 18 years of age) who are willing to complete this brief review about their mobile phone.

Do I have to participate?

No. It is your decision whether or not to participate in this study, your participation is voluntary.

If I participate, can I withdraw from the study?

Yes. If you decide to take part, you are free to withdraw from the study by exiting the survey at any point or withdraw your data from the study up to two weeks after your survey completion, without explanation.

Demographic information

In order to disclose the context of the study it is necessary to gather certain demographic information such as age, gender and mobile phone brand.

What will I be expected to do?

You will rate and write a brief review of your mobile phone as if you were completing an online product review.

How much time will it take?

Completing the survey is expected to take about 10 minutes which will include agreeing to the informed consent statements, completing demographic information (age, gender and mobile phone brand), writing your review and reading the debrief information.

What are the possible benefits of taking part?

You will experience ethical research practices in psychology and the findings of this study will inform psychology about the meaningful role the mobile phone plays in peoples life experiences.

Are there any risks to participating in the study?

It is not anticipated that there will be any risk greater than ordinary experiences in every life.

Will anyone know my responses to the survey?

Your answers will be anonymous. You will *NOT* be asked to provide your name any other information which could personally identify you. Anonymity will be achieved through the generation of an *Individual Participant Code* so your data can be identified if you chose to withdraw from the study up to two weeks after you have completed the survey.

What will happen with the results of the study?

Initially, the analysed data will be written up for the researcher's PhD Thesis. After this, the analysed data may also be presented within academic presentations and journal articles to a wider academic audience. The survey data may be used for teaching materials under the same conditions of anonymity and confidentiality described for this study.

Contacts and questions. Where do I get questions answered and concerns aired?

If you have any questions or concerns about any aspect of this study, now or retrospectively should you choose to participate, you should contact the researcher Michael Smyth at m.smyth@derby.ac.uk or Dr Chris Howard (Director of Studies) email: c.howard1@derby.ac.uk, phone: 01332 592037.

The role of the researcher

The role of the researcher will be limited to the facilitator of the survey and research investigator. The researcher is not available to offer advice outside of the study's procedure and participation framework. However, the participant can contact the researcher at any time to clarify any concerns they may have about the study or their participation.

Who has reviewed and approved the study proposal?

This study has been reviewed and approved by the Human Sciences Research Ethics Committee of the University of Derby, Kedleston Road, Derby, DE22 1GB.

Use of your data and your rights (GDPR)

The researcher will be collecting data from your participation in this study. The data will contribute to our understanding of mobile phone users' experiences and practices. This is the legal basis on which we are collecting your data. While this allows us to use your data it also means we have obligations towards you to:

- Not seek more information from you than is essential and necessary for the study.
- Make sure that you are not identified by the data by anonymizing the survey and using unique *individual participant codes* in case you chose to withdraw your data from the study.
- Store data safely in password-protected databases to which only the lead researcher and supervisors have access.

- Use your anonymised data only for the purposes of this study, teaching materials and for any relevant publications that arise from it.
- Not keep your information for longer than is necessary (up to seven years).
- Safely destroy your data when required by permanently deleting them.

The researcher will act in accordance with the data protection and GDPR guidelines set out by the University of Derby. This means that the researcher is responsible for looking after all information pertaining to the study and using it appropriately. The researcher and supervisors on the project with access to the data are highly qualified and experienced and are very careful to ensure the security of your data. The study was approved for its ethical standards by The University of Derby Human Sciences Research Ethics Committee. However, in the unlikely event that you feel you need to make a complaint regarding the use of your information, you can contact the Data Protection Officer at the University of Derby: James Eaglesfield (01332) 591762, or the Information Commissioners Office 0303 123 1113.

Further information about the study can be obtained from Michael Smyth (researcher) email: m.smyth@derby.ac.uk, or Dr Chris Howard (Director of Studies) email: c.howard1@derby.ac.uk, phone: 01332 592037.

Thank you

Michael (PhD research student)

E: m.smyth@derby.ac.uk

Dr Chris Howard (Director of Studies)

E: c.howard1@derby.ac.uk

T: 01332 592037

College of Life and Natural Sciences

University of Derby

Kedleston Road

Derby

DE22 1GB

[Please click on the arrow button at the bottom right of the screen to continue.](#)

0%  100%



Informed Consent Statement: Please click on the box to indicate your consent.

- I am aware of the nature of the research study and what my participation will involve. I have read and understand the information provided in the *Information About the Study* page about the study and have had a chance to ask any questions I have about the study.

Informed Consent Statement: Please click on the box to indicate your consent.

- I understand that participation in the study is voluntary. I am free to withdraw from the study by exiting the survey at any point or withdraw my data from the study up to two weeks after my questionnaire completion, without explanation.

Informed Consent Statement: Please click on the box to indicate your consent.

- I am aware that anonymised data from my survey responses may be published in reports about the study. The published data will be associated with my demographic information.

Informed Consent Statement: Please click on the box to indicate your consent.

- I consent to the use of my anonymised survey responses and demographic data for potential teaching materials under the same conditions of anonymity described for this study.

Informed Consent Statement: Please click on the box to indicate your consent.

- I am aware that my anonymised data from my survey responses are to be stored securely and held in accordance with the data protection and GDPR guidelines set out by the University of Derby. Only the researcher, authorised members of the academic community, publication repositories and students will have access to my anonymised data. My anonymised data may be shared with other competent researchers and be used in other related studies.

Informed Consent Statement: Please click on the box to indicate your consent.

- I am over 18 years of age.

Informed Consent Statement: Please click on the box to indicate your consent.

- I consent to take part in this mobile phone review survey and for my data to be used for the outlined purposes.



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How to Create Your Individual Participant Code

Please create your individual participant code so that the information you provide can be kept anonymous.

If you decide to withdraw your data from the study within two weeks from completing this survey, simply email Michael Smyth at m.smyth@derby.ac.uk quoting your *Individual Participant Code* (no need for explanation). Your data will be permanently deleted.

If you decide to withdraw before completing the questionnaire while in Qualtrics, simply exit the Qualtrics process.

Your unique code should comprise of 4 characters:

The last letter of your surname and last three digits of your mobile phone number.

E.g. Joe Bloggs, whose mobile number is 0123456789, will be S789.

Please type your *Individual Participant Code* into this text box (keep a record of your code):



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Mobile Phone Review

Please provide as much information as you feel comfortable providing.

Your gender

Female

Male

Non-binary

Gender non-conforming/other

Do not wish to disclose

Your age

Age

Do not wish to disclose

Which is the closest description of your mobile phone?

Smartphone (ability to access the internet and supports the use of apps)

Feature phone (ability to access the internet but lacks the advanced functionality of a smartphone)

Basic mobile phone (talk and text only)

Do not wish to disclose

The brand and model of your mobile phone

Brand and model

Do not wish to disclose

Rate your mobile phone

1 Star

2 Star

3 Star

4 Star

5 Star

Please write a brief review about your mobile phone as if you were writing an online product review and highlighting the role of your mobile phone in your life.

Please avoid terms which could identify you or other people.



0%  100%



Thank you for completing the survey. Your responses have been recorded.

Debrief Information

Please make a note of the information presented on this debriefing screen.

The survey was designed to explore mobile phone users' views and experiences of their mobile phone

Your answers are anonymous so they cannot be traced back to you. The anonymised data from the study will be analysed and anonymised extracts and the overall findings may be submitted for publication in a scientific journal or presented at scientific conferences.

If you decide to withdraw your data from the study, you can do so within a period of two weeks from completing the survey without the need to give any explanation. Simply email the researcher, Michael Smyth at m.smyth@derby.ac.uk and quote your Individual Participant Code (last letter of surname and last three digits of mobile number) which you find at the bottom of this page. Then your data will be permanently deleted.

If you would like further information about the study please contact Michael Smyth (researcher) email: m.smyth@derby.ac.uk, or Dr Chris Howard (Director of Studies) email: c.howard1@derby.ac.uk, phone: 01332 592037. The role of the researcher will be limited to the facilitator of the survey and research investigator and so is not available to offer advice outside of study's procedure and participation framework. However, the participant can contact the researcher at any time to clarify any concerns they may have about the study or their participation.

There are no anticipated risks, greater than ordinary experiences in every life, attached to participation in this survey. But if you feel that you have been affected in any way from your participation in this study and wish to seek help and support you can contact:

Students of the University of Derby

The Student Wellbeing Service, Ground Floor, T Block, University of Derby, Kedleston Road, Derby DE22 1GB

Telephone: 01332 593000 Email: studentwellbeing@derby.ac.uk or psychologicalwellbeing@derby.ac.uk

Staff of the University of Derby

The Health Assured employee care service provides access to counselling services for university employees.

Telephone: 0800 783 2808 (Freephone with mobile phone call back service).

Website: <https://staff.derby.ac.uk/sites/hr/Health-Safety/Organisational-Safety/Pages/EmployeeCare.aspx>

Participants outside of the University of Derby

NHS Choices: Find Psychological Therapy Services (NHS IAPT; Improving Access to Psychological Therapies) Services.

[http://www.nhs.uk/Service-Search/Counselling-NHS-\(IAPT\)-services/LocationSearch/396](http://www.nhs.uk/Service-Search/Counselling-NHS-(IAPT)-services/LocationSearch/396)

(Enter your local postcode to commence the search for suitable psychological therapy services)

Individual Participant Code (keep a record of your code):

(Last letter of your surname and last three digits of your mobile number).

Thank you

Michael (PhD research student)

E: m.smyth@derby.ac.uk

Dr Chris Howard (Director of Studies)

E: c.howard1@derby.ac.uk

T: 01332 592037

College of Life and Natural Sciences

University of Derby

Kedleston Road

Derby

DE22 1GB

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Appendix F

Study 4: Permission to use the Mobile Phone Problem Use Scale (MPPUS; Bianchi & Phillips, 2005)

Email of Permission from the Copyright Holder

Request for permission to reproduce and administer copyright material ⤴



Ballen, Karen <KBallen@liebertpub.com>

Today 15:19

Michael Smyth ✉



Reply all | ⌵

Inbox

Dear Michael:

Copyright permission is granted for use of this paper in your thesis, however, because Open Access was not ordered, there is a 12-month embargo period, from the date of publication in print, before it can be deposited into Univ. of Derby's web catalog.

Kind regards,

Karen Ballen
Manager

Email to Which the Copyright Holder Responded

Subject: Request for permission to reproduce and administer copyright material

Reprints & Permissions,
Mary Ann Liebert, Inc., publishers.

Cyberpsychology, Behavior, and Social Networking (previously Cyberpsychology and Behavior),

Volume: 8

Issue: 1

Issue date: February 2005

Authors: Bianchi, A., and Phillips, J.

Pages: 39-51

doi:10.1089/cpb.2005.8.39.

Request permission to reproduce and administer the *Mobile Phone Problem Use Scale* (MPPUS) on Page 43 of the article.

I am completing a doctoral dissertation at the University of Derby entitled *Constructing the Mobile Phone: A Technology of Governing the Self*. I am studying under the supervision of Dr Chris Howard

(Director of Studies), Dr Jenny Hallam and Dr Jane Montague (supervisors) from the psychology department at the University of Derby, England.

I would like your permission to reproduce and administer to consenting participants in my research study the MPPUS for which I believe you hold the copyright.

I would like to print, administer to consenting participants and reproduce your questionnaire (Please see attached document) in my thesis and derivative articles under the following conditions:

- I will use the questionnaire only for my non-commercial research study.
- I will not sell or use the questionnaire for commercial activities.
- I will acknowledge the source of the instrument within the final thesis.
- I will include the copyright statement on all copies of the instrument.

A printed version of this thesis will be deposited within the library holdings of the University of Derby and will also be available in full text on the internet via the University of Derby Open Access Repository (UDORA) for reference, study and / or copy. Except in situations where a thesis is under embargo or restriction, the electronic version will be accessible through the University of Derby Library web catalogue, and also through web search engines. The thesis will also be available by request through the British Library's EThOS service.

If you do not hold the rights in the material, I should be grateful if you could forward this request to the appropriate person, or return it to me with the contact details in order that I might approach the copyright holder directly.

Thank you for your consideration. Please address all correspondence to me at m.smyth@derby.ac.uk

Yours faithfully,
Michael Smyth, BSc (Hons), MRes
PhD Student, Department of psychology
University of Derby
m.smyth@derby.ac.uk

Appendix G

Study 4: Examples of Participant Recruitment Announcements

Example of an Announcement Email and Post on Three Research and Psychology Related Modules' Course Resources, College of Life and Natural Sciences, University of Derby.

Subject: Are you interested in your relationship with your mobile phone?

Are you interested in your relationship with your mobile phone?

Does your mobile phone feel overworked?

Does your mobile phone ever get a good night's sleep?

You are invited to take part in an online questionnaire which aims to explore adult mobile phone users' mobile phone practices. The questionnaire will ask you to rate how true 27 statements about your mobile phone practices are to you. The questionnaire process will take about 20 minutes to complete. Your scores can be emailed to you within 3 days if you complete the *Preferred Email Address* section.

Your answers and information you provide will be stored securely and held confidentially in accordance with the data protection and GDPR guidelines set out by the University of Derby.

Your participation is voluntary. You are free to withdraw from the study by exiting the questionnaire at any point or withdraw your data from the study up to two weeks after your questionnaire completion, without explanation.

The research is being conducted by Michael Smyth (PhD research student) under the supervision of Dr Chris Howard, Dr Jenny Hallam and Dr Jane Montague at the University of Derby. This questionnaire is a selection phase to select suitable mobile phone users to participate in an interview study about their views on mobile phones. Participation in the interview study is voluntary and you are not obliged to participate even if you chose to complete this questionnaire.

If you'd like to take part, please click on the link below to Qualtrics, a secure online platform. Once you click on the link, you will be given further information about the questionnaire, an informed consent page, a request for some demographic information, the 27 statements for you to rate, and a final information page (a debrief page).

If you would like further information about the study, please contact the researcher Michael Smyth at m.smyth@derby.ac.uk or Dr. Chris Howard (Director of Studies) email: c.howard1@derby.ac.uk, tel.: 01332 592037 at the University of Derby, Kedleston Road, Derby DE22 1GB.

Link to the online Mobile Phone Use Questionnaire:

https://derby.qualtrics.com/jfe/form/SV_9oDn9QQOmxM2TYh

Thank you

Michael Smyth (MRes)

PhD research student

Psychology/College of Life and Natural Sciences

E: m.smyth@derby.ac.uk

Dr. Chris Howard (Director of Studies)

Psychology/College of Life and Natural Sciences

E: c.howard1@derby.ac.uk

T: 01332 592037



[« back to cover page](#)

How's your relationship... with your mobile phone?

You are invited to take part in an [online questionnaire](#) which aims to explore adult phone users' mobile phone practices.

The questionnaire will take about 20 minutes to complete. Your scores can be emailed to you within three days if you complete the 'preferred email address' section.

The research is being conducted by Michael Smyth (PhD research student) under the supervision of Drs Chris Howard, Jenny Hallam and Jane Montague at the University of Derby. This questionnaire is a selection phase to select suitable mobile phone users to participate in an interview study about their views on mobile phones.

You are free to withdraw from the study by exiting the questionnaire at any point or withdraw your data from the study up to two weeks after your questionnaire completion, without explanation. You are also not obliged to participate in the interview study even if you chose to complete this questionnaire.

[Learn more here.](#)

Announcement Posted on the Researcher's Professional Facebook Page



Like Follow Share ...

Michael Smyth: My PhD Research 2 April · 🌐

Are you interested in your relationship with your mobile phone?
Does your mobile phone feel overworked?
Do either of you ever get a good night's sleep?

You are invited to take part in an online questionnaire about adult mobile phone users' mobile phone practices. The questionnaire will take about 20 minutes to complete. Your scores can be emailed to you within 3 days. Your participation is voluntary.

Link to the online Mobile Phone Use Questionnaire which opens with information about the study:
https://derby.qualtrics.com/jfe/form/SV_9oDn9QQOmxM2TYh

This questionnaire is a selection phase to invite suitable mobile phone users to take part in an interview, conducted over mobile phone, about their views and experience of mobile phones. My research aims to challenge narratives of mobile phone addiction which often fail to account for the meaningful life enhancements that we experience through our mobile phone.

Your participation is voluntary.

The research is being conducted by Michael Smyth (PhD research student) under the supervision of Dr Chris Howard, Dr Jenny Hallam and Dr Jane Montague at the University of Derby.

If you have any questions about the study, please post a comment or contact me at m.smyth@derby.ac.uk

DERBY.QUALTRICS.COM **Mobile Phone Use Questionnaire**

Home
Events
Reviews
About
Videos
Photos
Posts
Jobs
Community
Promote
Manage promotions

Appendix H

Study 4: Online Mobile Phone Use Questionnaire Process (MPPUS; Bianchi & Phillips, 2005)

Information About the Study

Mobile Phone Use Questionnaire

The study is exploring mobile phone users' mobile phone practices in order to select suitable mobile phone users to participate in a further interview study about their views on mobile phones.

Participation in this questionnaire and the interview study is voluntary and you are not obliged to participate in the interview even if you chose to complete this questionnaire. The research is being conducted by Michael Smyth (PhD research student) under the supervision of Dr Chris Howard, Dr Jenny Hallam and Dr Jane Montague at the University of Derby.

Am I eligible to participate?

The study is interested in adult mobile phone users (over 18 years of age) who are willing to complete a brief questionnaire about their mobile phone practices and their motivations to use their mobile phone.

Do I have to participate?

No. It is your decision whether or not to participate in this study, your participation is voluntary.

If I participate, can I withdraw from the study?

If you decide to take part, you will be asked to sign an informed consent form. This states that you are free to withdraw from the study by exiting the questionnaire at any point or withdraw your data from the study up to two weeks after your questionnaire completion, without explanation.

Demographic information

In order to disclose the context of the study it is necessary to gather certain demographic information such as age, gender, occupation and some information about your mobile phone, favourite features and service provider. This information will remain confidential and not associated with your personal identifying information.

What will I be expected to do?

You will complete a questionnaire about your mobile phone use and motivations to use your mobile phone. You will be asked to indicate how true 27 statements are to you by using the 1-10 scale where: 1 represents "not true at all" to 10 represents "extremely true". Guidance on completing the questionnaire will be provided at the start of the questionnaire process.

How much time will it take?

Completing the questionnaire is expected to take about 20 minutes which will include instructions, completing the informed consent form, completing brief demographic information (including age, gender, occupation, and mobile phone brand, mobile phone uses), completing the questionnaire, and reading the debrief information.

What will happen with the results of the study?

Your questionnaire score will be emailed to you at the email address you provide in the *Preferred Contact Email Address* section within 3 days after you have completed the questionnaire. The results of the study will be used to select suitable participants to participate in a further interview study about their views of their mobile phone. If your questionnaire score meets the criterion required for participation in the interview study, you will be invited by email which will include the interview study information pack necessary for you to consider your participation in this additional study. Participation is voluntary and you are not obliged to participate. If you do not wish to participate in the interview study or your questionnaire score does not meet the criterion required for participation in the interview study, I will email a brief thank you on behalf of myself, the researcher, and the supervisory team.

The analysed data will be written up for the researcher's PhD Thesis. After this, the analysed data may also be presented within academic presentations and journal articles to a wider academic audience. The questionnaire data may be used for teaching materials under the same conditions of confidentiality described for this study. Your demographic data and analysed data will remain unidentifiable from your personal information which will not be published.

What are the possible benefits of taking part?

You will gain insights into some characteristics of your mobile phone practices. Also, you will experience ethical research practices in psychology and the findings of this study will inform knowledge about mobile phone practices and the motivations behind them.

Are there any risks to participating in the study?

The questionnaire will explore your experiences of your everyday mobile phone practices. It is not anticipated that there will be any risk greater than within discussions you would have in every life.

Will anyone know my responses to the questionnaire?

Your consent to participate in this study means that your name and any other information which could personally identify you will remain confidential to the researcher and supervisory team. This will be achieved through the generation of an *Individual Participant Code*. Your data will only be viewed by the researcher and authorised individuals from the University. Your analysed data will remain unidentifiable within resulting publications and your personal information will not be published.

Contacts and questions. Where do I get questions answered and concerns aired?

If you have any questions or concerns about any aspect of this study, now or retrospectively should you choose to participate, you should contact the researcher Michael Smyth at m.smyth@derby.ac.uk

The role of the researcher

The role of the researcher will be limited to the facilitator of the questionnaire completion and research investigator. The researcher is not available to offer advice outside of the study's procedure and participation framework. However, the participant can contact the researcher at any time to clarify any concerns they may have about the study or their participation.

Who has reviewed and approved the study proposal?

This study has been reviewed and approved by the Human Sciences Research Ethics Committee of the University of Derby

Use of your data and your rights (GDPR)

The researcher will be collecting data from your participation in this study. The data will contribute to our understanding of mobile phone users' experiences and practices. This is the legal basis on which we are collecting your data. While this allows us to use your data it also means we have obligations towards you to:

- Not seek more information from you than is essential and necessary for the study.
- Make sure that you are not identified by the data by anonymising it using unique *individual participant codes*.
- Use your anonymised data only for the purposes of this study and for any relevant publications that arise from it.
- Store data safely in password-protected databases to which only the named researchers have access.
- Not keep your information for longer than is necessary (up to six years).
- Safely destroy your data by shredding or permanently deleting them.

The researcher will act in accordance with the data protection and GDPR guidelines set out by the University of Derby. This means that the researcher is responsible for looking after all information pertaining to the study and using it appropriately. The researcher and supervisors on the project with access to the data are highly qualified and experienced and are very careful to ensure the security of your data. The study was approved for its ethical standards by The University of Derby Human Sciences Research Ethics Committee. However, in the unlikely event that you feel you need to make a complaint regarding the use of your information, you can contact the Data Protection Officer at the University of Derby: James Eaglesfield (01332) 591762, or the Information Commissioners Office 0303 123 1113.

Further information about the study can be obtained from Michael Smyth (researcher) email: m.smyth@derby.ac.uk, or Dr Chris Howard (Director of Studies) email: c.howard1@derby.ac.uk, phone: 01332 592037.

Many thanks

Michael (PhD research student)

E: m.smyth@derby.ac.uk

Dr Chris Howard (Director of Studies)

E: c.howard1@derby.ac.uk

T: 01332 592037

College of Life and Natural Sciences

University of Derby

Kedleston Road

Derby

DE22 1GB

[Please click on the arrow button at the bottom right of the screen to continue.](#)



Informed Consent Statement: Please click on the box to indicate your consent.

I am aware of the nature of the research study and what my participation will involve. I have read and understand the information provided in the *Information About the Study* section about the study and have had a chance to ask any questions I have about the study.

Informed Consent Statement: Please click on the box to indicate your consent.

I understand that participation in the study is voluntary. I am free to withdraw from the study by exiting the questionnaire at any point or withdraw my data from the study up to two weeks after my questionnaire completion, without explanation.

Informed Consent Statement: Please click on the box to indicate your consent.

I am aware that my data are to be stored securely and held confidentially in accordance with the data protection and GDPR guidelines set out by the University of Derby. Only the researcher and authorised individuals from the University (such as the supervisory team and examination assessors) will have access to my data.

Informed Consent Statement: Please click on the box to indicate your consent.

I am aware that data from my questionnaire responses and score may be published in reports about the study. The published data will be associated with my demographic information but remain unidentifiable from my personal identifying information which will not be published.

Informed Consent Statement: Please click on the box to indicate your consent.

I understand that in accordance with some scientific journal and organisations my anonymised data may be shared with other competent researchers and be used in other related studies. My name and other identifying details will not be shared with anyone.

Informed Consent Statement: Please click on the box to indicate your consent.

I consent to the use of my questionnaire data and demographic data for potential teaching materials under the same conditions of confidentiality described for this study.

Informed Consent Statement: Please click on the box to indicate your consent.

I am over 18 years of age.

Informed Consent Statement: Please click on the box to indicate your consent.

I consent to take part in this questionnaire phase of the study and for my data to be used for the outlined purposes.



How to Create Your Individual Participant Code

Please create your **individual participant code** so that the information you provide can be kept confidential.

Your unique code should comprise of 4 characters:

[The last letter of your surname and last three digits of your mobile phone number.](#)

E.g. Joe Bloggs, whose mobile number is 0123456789, will be S789.

If you decide to withdraw before completing the questionnaire while in Qualtrics, simply exit the Qualtrics process

If you decide to withdraw your data from the study within two weeks from completing the questionnaire, simply email Michael Smyth at m.smyth@derby.ac.uk quoting your *Individual Participant Code* (no need for explanation). Your data will be returned to you or destroyed as you request.

Please type your individual participant code into this text box (keep a record of your code):



Preferred Contact Email Address

Your preferred contact email address will be used to inform you of your questionnaire score. Also, it will be used to invite you to participate in the interview phase of the study if your questionnaire score meets the criterion. Participation in the interview phase of the study is voluntary and you are not obliged to participate.

Please type your preferred email contact address into this text box:



Demographic Information

In order to disclose the context of the study it is necessary to gather certain demographic information. This information will remain confidential and not associated with your personal identifying information.

Please provide as much information as you feel comfortable providing:

Your gender:

<input type="checkbox"/> Female	<input type="checkbox"/> Male	<input type="checkbox"/> Non-binary	<input type="checkbox"/> Gender non-conforming/other	<input type="checkbox"/> Do not wish to disclose
---------------------------------	-------------------------------	-------------------------------------	--	--

Your age:

Your occupation:

Which is the closest description of your mobile phone:

Smartphone (ability to access the internet and supports the use of apps)

Feature phone (ability to access the Internet but lacks the advanced functionality of a smartphone)

Basic mobile phone (talk and text only)

Brand and model of your mobile phone:

Contract Type:

Monthly contract (includes mobile phone rental/lease)

SIM only contract

Pay as you go (PAYG)

Other (please describe briefly)

Favourite apps:

Uses of your mobile phone:



Questionnaire

There are 27 statements below.

Please indicate how true the statements below are to you by using the scale where:

"1" represents "Not true at all" "10" represents "Extremely true"

I can never spend enough time on my mobile phone.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

I have used my mobile phone to make myself feel better when I was feeling down.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

I find myself occupied on my mobile phone when I should be doing other things, and it causes problems.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

All my friends own a mobile phone.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

I have tried to hide from others how much time I spend on my mobile phone.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

I lose sleep due to the time I spend on my mobile phone.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

I have received mobile phone bills I could not afford to pay.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

When out of range for some time, I become preoccupied with the thought of missing a call.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

Sometimes, when I am on the mobile phone and I am doing other things, I get carried away with the conversation and I don't pay attention to what I am doing.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------



The time I spend on the mobile phone has increased over the last 12 months.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

I have used my mobile phone to talk to others when I was feeling isolated.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

I have attempted to spend less time on my mobile phone but am unable to.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

I find it difficult to switch off my mobile phone.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

I feel anxious if I have not checked for messages or switched on my mobile phone for some time.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

I have frequent dreams about the mobile phone.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

My friends and family complain about my use of the mobile phone.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

If I don't have a mobile phone, my friends would find it hard to get in touch with me.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

My productivity has decreased as a direct result of the time I spend on the mobile phone.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------



I have aches and pains that are associated with my mobile phone use.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

I find myself engaged on the mobile phone for longer periods of time than intended.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

There are times when I would rather use the mobile phone than deal with other more pressing issues.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

I am often late for appointments because I'm engaged on the mobile phone when I shouldn't be.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

I become irritable if I have to switch off my mobile phone for meetings, dinner engagements, or at the movies.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

I have been told that I spend too much time on my mobile phone.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

More than once I have been in trouble because my mobile phone has gone off during a meeting, lecture, or in a theatre.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

My friends don't like it when my mobile phone is switched off.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------

I feel lost without my mobile phone.

Not true at all 1	2	3	4	5	6	7	8	9	Extremely true 10
----------------------	---	---	---	---	---	---	---	---	----------------------



Thank you for completing the questionnaire. Your score will be emailed to your preferred email address: {preferred email address piped here}

Copyright Statement: This questionnaire is the property of Mary Ann Liebert, Inc. publishers.
The questionnaire may not be copied, distributed or displayed without permission.

Debrief Information

Please make a note of the information presented on this debriefing screen.

The aim of this study is to explore mobile phone users' mobile phone practices and their motivations behind their practices in order to select suitable mobile phone users to participate in a further interview study about their views of their mobile phone. Participation in the interview study is voluntary and you are not obliged to participate. The findings of this study will inform psychological knowledge about mobile phone practices.

The questionnaire used in the study was the Mobile Phone Problem Use Scale (MPPUS; Bianchi & Phillips, 2005). The full title was not revealed to you so the title would not influence your responses. The MPPUS questionnaire is not aligned with any clinical diagnosis but is rather similar to a personality questionnaire and was only used to characterise your mobile use along a scale of infrequent to very frequent user of mobile phones.

The data from your questionnaire responses will remain detached from your personal identity information. All your personal information will remain confidential and not linked to data in the final reports. The published data will be associated with your demographic information but remain unidentifiable from your personal identifying information which will not be published.

If you decide to withdraw your data from the study, you can do so within a period of two weeks from completing the questionnaire without the need to give any explanation. Simply email the researcher, Michael Smyth at m.smyth@derby.ac.uk and quote your *Individual Participant Code* (last letter of surname and last three digits of mobile number) which you generated in *How to Create Your Individual Participant Code* section at the beginning of this questionnaire process. Your data will be returned to you or destroyed as you request.

What happens next?

Your questionnaire score will be emailed to you at the email address that you provided in the Preferred Contact Email Address section within 3 days after you completed the questionnaire. If your questionnaire score meets the criterion required for participation in the interview study, you will be invited by email which will include the interview study information

pack necessary for you to consider your participation in this additional study. Participation in the interview phase of the study is voluntary and you are not obliged to participate. If you do not wish to participate in the interview study or your questionnaire score does not meet the criterion required for participation in the interview study, I will email a brief thank you on behalf of myself, the researcher, and the supervisory team.

Further information

If you would like further information about the study or would like to receive a summary of the results from this study after its completion, please contact Michael Smyth (researcher) email: m.smyth@derby.ac.uk, or Dr Chris Howard (Director of Studies) email: c.howard1@derby.ac.uk, phone: 01332 592037.

The role of the researcher will be limited to the facilitator of the questionnaire completion and research investigator and so is not available to offer advice outside of study's procedure and participation framework. However, the participant can contact the researcher at any time to clarify any concerns they may have about the study or their participation.

There are no anticipated risks, which are greater than normal life encounters, attached to participation in the completion of the questionnaire. But if you have been affected in any way from your participation in this study and wish to seek help and support you can contact:

Students of the University of Derby

The Student Wellbeing Service, Ground Floor, T Block, University of Derby, Kedleston Road, Derby DE22 1GB

Telephone: 01332 593000 Email: studentwellbeing@derby.ac.uk or psychologicalwellbeing@derby.ac.uk

Staff of the University of Derby

The Health Assured employee care service provides access to counselling services for university employees.

Telephone: 0800 783 2808 (Freephone with mobile phone call back service).

Website: <https://staff.derby.ac.uk/sites/hr/Health-Safety/Organisational-Safety/Pages/EmployeeCare.aspx>

Participants who wish to consider support outside of the University of Derby

NHS Choices: Find Psychological Therapy Services (NHS IAPT; Improving Access to Psychological Therapies) Services.

[http://www.nhs.uk/Service-Search/Counselling-NHS-\(IAPT\)-services/LocationSearch/396](http://www.nhs.uk/Service-Search/Counselling-NHS-(IAPT)-services/LocationSearch/396)

(Enter your local postcode to commence the search for suitable psychological therapy services)

Individual Participant Code: {IPC piped here}

(Last letter of your surname and last three digits of your mobile number.

Best wishes

Michael (PhD research student)

E: m.smyth@derby.ac.uk

Dr Chris Howard (Director of Studies)

E: c.howard1@derby.ac.uk

T: 01332 592037

Appendix I

Study 4: Example Emails Informing Participant of Their MPPUS Score

Email Informing the Participant of Their MPPUS Score Which Met the Criteria for the Interview Phase of the Study

Subject: Mobile Phone Use Score and invitation to take part in an Interview about your Mobile Phone.

Thank you for taking part in the mobile phone use questionnaire recently.

Your mobile phone use questionnaire score was xxx on a scale of 27 – 270. Your score characterises you as a frequent mobile phone user whose views and experiences are of great interest to my study.

You are invited to take part in a short interview about the role of mobile phones in your life. The interview can be conducted over mobile phone, social media such as Skype, or face-to-face. For taking part you will receive a £10 Amazon voucher. Also, your participation will really help the voice of mobile phone users and my PhD research.

If you are interested in taking part in the short phone interview, please reply to this email, or text or call me on 07450368850 with your interest so we can arrange a convenient time. Weekends, evenings or daytime. The interview usually takes about 30 minutes but allow 45 minutes. Your participation is voluntary and you are under no obligation to continue to the interview phase of the study. I have attached an Participant Information Pack to inform your consideration.

My study aims to explore the role of mobile phones in the lives of contemporary mobile phone users and the extent to which mobile phones have become part of ever evolving social norms. My research aims to challenge narratives of mobile phone addiction which often fail to account for the meaningful life enhancements that we experience through our mobile phone. To achieve this, I need the help of your views and experiences that you are willing to share anonymously.

If you require any further information about the study, please contact me by replying to this email: m.smyth@derby.ac.uk or Dr. Chris Howard (Director of Studies) email: c.howard1@derby.ac.uk, tel.: 01332 592037 at the University of Derby, Kedleston Road, Derby DE22 1GB.

Thank you

Michael Smyth (MRes)

PhD research student

Psychology/College of Life and Natural Sciences

University of Derby

E: m.smyth@derby.ac.uk

M: 07450368850

Skype: m.smyth_8

Facebook page: Michael Smyth: My PhD Research

Email Informing the Participant of Their MPPUS Score Which Did Not Meet the Criteria for the Interview Phase and Conclusion of Participation

Subject: Mobile Phone Use Questionnaire Score

Thank you for taking part in the mobile phone use questionnaire recently.

Your mobile phone use questionnaire score was xxx on a scale of 27 – 270.

Your score did not characterise you as a very frequent user of the mobile phone and so did not meet the criterion required to participate in the interview phase of the study. The interview study is interested in the accounts of adults who frequently use, attend to and rely on their mobile phone.

The researcher and supervision team thank you for your enthusiastic participation which is a valuable contribution to our study and psychological knowledge.

Thank you

Michael Smyth (MRes)

PhD research student

Psychology/College of Life and Natural Sciences

University of Derby

E: m.smyth@derby.ac.uk

Appendix J

Study 4: Interview Phase Information About the Study

Information About the Study

Study Title: Exploring the Experiences of the Mobile Phone Presented by Frequent Users of their Mobile Phone
Researcher: Michael Smyth. Email: m.smyth@derby.ac.uk **Course:** PhD
Dir. of Studies: Dr. Chris Howard Email: c.howard1@derby.ac.uk **University:** University of Derby.
Supervisors: Dr. Jenny Hallam Email: j.hallam@derby.ac.uk; Dr. Jane Montague Email: j.montague@derby.ac.uk

You are invited to take part in a research study which is exploring mobile phone users' view of mobile phones and the role of mobile phones in their life. Analysis of this study will inform knowledge about current mobile phone practices and the extent to which mobile phones have become part of ever evolving social norms.

The research is being conducted by Michael Smyth under the supervision of Dr Chris Howard, Dr Jenny Hallam and Dr Jane Montague of the Psychology Department at the University of Derby. If there is anything which is not clear, or you would like further information about the study please contact the researcher, Michael Smyth, or a member of the supervision team on the information provided above.

What is the study about?

The study will look at the role of mobile phones in people's lives and the extent to which mobile phones have become part of ever evolving social norms. My research aims to challenge narratives relating to mobile phone addiction which often fail to account for the meaningful life enhancements that we experience through our mobile phone.

Am I eligible to participate?

The study is interested in the accounts of adults who frequently use and rely on their mobile phone, who are willing to participate in an interview style discussion about mobile phones and the role of mobile phones in their life

Do I have to participate?

No. It is your decision whether or not to participate in this study, your participation is voluntary.

If I participate, can I withdraw from the study?

If you decide to take part, you will be asked to sign an informed consent form. This states that you are free to withdraw from the study, along with your data, before, during and up to two weeks after your interview has been conducted, without explanation or penalty.

What will I be expected to do?

You will take part in an interview style discussion with the researcher which will be audio recorded. The discussion will be about mobile phones and the role of mobile phones in your life. The recorded interview will remain confidential and be transcribed and analysed by the researcher. Selected extracts from your interview will be quoted in published reports about the study. The published quotes will be anonymised and remain unidentifiable from your personal information which will not be published.

How much time will it take?

The interview is expected to last approximately 30 minutes, but this depends on how much you want to discuss. Please allow up to 50 minutes for the whole activity which will include an introduction and a debriefing at the end of the interview with an opportunity to ask questions about the study.

Where will the interview take place?

The interview can be conducted over mobile phone or social media (Skype/messenger voice call) on a weekend or weekday. If you prefer, the interview can be conducted face-to-face at the University of Derby or a convenient location near you (within 30 miles of Derby).

What are the possible benefits of taking part?

The study will provide a voice for frequent mobile phone users, to hear their side of their motivations, which is under-represented in psychological research that explores mobile phone practices. Analysis of this study will inform knowledge about current mobile phone practices and the extent to which mobile phones have become part of ever evolving social norms. This new knowledge may influence future research into understanding mobile communication technology practices and their development.

Are there any risks to participating in the study?

The interview will explore your experiences of your everyday mobile phone practices. It is not anticipated that there will be any risk greater than within discussions you would have in every life.

Will anyone know what I said or did?

Your consent to participate in this study means that your name and any other information which could personally identify you, will remain confidential to the researcher and supervisory team (see above). This will be achieved through the generation of an individual participant code. Your data will only be viewed by the researcher and authorised individuals from the University. Your analysed data will remain unidentifiable within resulting publications and your personal information will not be published. You will also choose a pseudonym that you feel will comfortably maintain your desired level of confidentiality and can be associated with quotes from your interview within academic publications.

What will happen with the results of the study?

Initially, the analysed data will be written up for the researcher's PhD Thesis. After this, the analysed data may also be presented within academic presentations and journal articles to a wider academic audience. The interview data may be used for teaching materials under the same conditions of confidentiality described for this study. Your data and analysed data will remain unidentifiable and your personal information will not be published.

Where do I get questions answered and concerns aired?

If you have any questions or concerns about any aspect of this study, now or retrospectively should you choose to participate, you should contact the researcher, Michael Smyth, or a member of the supervision team, Dr Chris Howard, Dr Jenny Hallam and Dr Jane Montague on the information provided above.

Who has reviewed and approved the study proposal?

This study has been reviewed and approved by the Human Sciences Research Ethics Committee of the University of Derby (Ethics Reference Number: 02-1617-MSp).

If I want to participate in this study who do I contact?

If you wish to participate please contact the researcher, Michael Smyth, Email: m.smyth@derby.ac.uk

Use of your data and your rights (GDPR)

Researchers will be collecting data from your participation in this study. We need these data to contribute to our understanding of mobile phone users' experiences and practices. This is the legal basis on which we are collecting your data. While this allows us to use your data it also means we have obligations towards you to:

- not seek more information from you than what is essential and necessary for the study
- make sure that you are not identified by the data by anonymising it using ID codes
- use your anonymised data only for the purposes of this study and for any relevant publications that arise from it
- store data safely in password-protected databases to which only the named researchers have access
- not keep your information for longer than is necessary (up to six years)
- safely destroy your data by shredding or permanently deleting them.

The researcher will act in accordance with the data protection and GDPR guidelines set out by the University of Derby. This means that the researcher is responsible for looking after all information

pertaining to the study and using it appropriately. The researcher and supervisors on the project with access to the data are highly qualified and experienced and are very careful to ensure the security of your data. The study was approved for its ethical standards by The University of Derby Human Sciences Research Ethics Committee (Ethics reference number: 02-1617-MSp). However, in the unlikely event that you feel you need to make a complaint regarding the use of your information, you can contact the Data Protection Officer at the University of Derby: James Eaglesfield (01332) 591762 or the Information Commissioners Office 0303 123 1113. Further information about the project can be obtained from Michael Smyth, m.smyth@derby.ac.uk, or Dr. Chris Howard, c.howard1@derby.ac.uk (Director of Studies) at the University of Derby, Kedleston Road, Derby DE22 1GB.

Thank you for taking the time to consider your participation in this study!

Appendix K

Study 4: Interview Schedule

Focusing task

- What springs to mind when you think about mobile phones.
 - Which idea stands out to you the most?
 - Are there any other thoughts about the mobile phone you may have had during this process that you would like to share?

Further discussion about your view of mobile phones and your experiences

- What are your thoughts on how the mobile phone is portrayed in their marketing, marketing about mobile phones?
 - What are your thoughts on how the mobile phone user is portrayed?
 - Do these representations relate to real life or your life in anyway?
- What are your thoughts on how the mobile phone is portrayed in the news?
 - What about the portrayal of the mobile phone user?
 - Do these representations relate to real life or your life in anyway?
- Tell me about your service provider
 - How does your service provider and tariff suit your use?
- Can you discuss some of your apps you have on your phone that you are willing to discuss?
 - Which apps do you use the most?
 - What do you use them for?
 - Can you describe to me how they enhance your life?
 - Do they hinder your life in anyway? If so, how?
 - Which app would you miss the most?
 - What additional app would you like, or invent, and how would you use it?
- Can you discuss the features on your phone?
 - Which features do you use the most?
 - What do you use them for?
 - Can you describe to me how they enhance your life?
 - Do they hinder your like in any way? If so, how?
 - Which feature would you miss the most?

- What additional feature would you like, or invent, and how would you use it?
- Can you describe your most recent experience with your mobile phone that you are willing to share with me?
- How has your mobile phone use changed since your first mobile phone?
- How would you describe your current mobile phone use?
- How does your mobile phone use compare to other people you know?
- Are there times when you would like to use your mobile phone but can't?
 - How does this make you feel?
- Can you discuss any photos that you have taken with this mobile phone that you are willing to discuss?
 - What is meaningful to you about this photo?
 - Please can you describe the occasion
 - What does this / these photo(s) bring to your life?

Final personal enquiries

- How does your mobile phone enhance your life?
- How does your mobile phone hinder your life?
- What role does your mobile phone play in your life?
- Can you describe your relationship with your mobile phone?
- If your mobile phone had an identity or was as a person how would you describe them?
- Do you think your mobile phone has changed the way you see yourself, if so, how?
- How do you think your experiences with your mobile phone compare other people's?

Additional comments

- Is there anything else that you feel I should have asked, or that you would like to add?

Appendix L

Study 4: Interview Phase Informed Consent Statement

Interview Study - Informed Consent Statement

Study Title: Exploring the Experiences of the Mobile Phone Presented by Frequent Users of their Mobile Phone
Researcher: Michael Smyth. Email: m.smyth@derby.ac.uk **Course:** PhD
Dir. of Studies: Dr. Chris Howard Email: c.howard1@derby.ac.uk **University:** University of Derby.
Supervisors: Dr. Jenny Hallam Email: j.hallam@derby.ac.uk; Dr. Jane Montague Email: j.montague@derby.ac.uk

Purpose of study

The aim of this study is to explore mobile phone users' view of mobile phones and the role of mobile phones in their life. Analysis of this study will inform knowledge about current mobile phone practices and the extent to which mobile phones have become part of ever evolving social norms.

Procedure

You will take part in a semi-structured interview with the researcher which will last approximately 30 minutes (but this depends on how much you want to discuss) so please allow 40 minutes in total. The discussion will focus on the topic of mobile phones and the role of mobile phones in your life. The audio recorded interview will remain confidential and be transcribed and analysed by the researcher.

The role of the researcher

The role of the researcher will be limited to the facilitator of the interview and research investigator and so is not available to offer advice outside of the study's procedure and participation framework. However, the participant can contact the researcher at any time to clarify any concerns they may have about the study or their participation.

Contacts and Questions

At this time, you may ask any questions you may have regarding this study. If you have questions later, you may contact the researcher, Michael Smyth, or a member of the supervision team, Dr Chris Howard, Dr Jenny Hallam and Dr Jane Montague, on the information provided above.

Consent

In order to participate in this research study, it is necessary that you give your informed consent. By signing this informed consent statement, you are indicating that you understand the nature of the research study and your role in the study, and that you agree to participate in the research. Please consider the following points:

- I have read the information in the *Invitation to Participate* sheet and *Participant Information* sheet about the study and have had a chance to ask any question I have about the study.
- I am aware of what my participation involves and that my interview will be audio recorded.
- I am aware that selected extracts from my interview will be quoted in published reports about the study. The published quotes will be associated with my pseudonym (see below) and demographic information but remain unidentifiable from my personal identifying information which will not be published.
- I consent to the use of my interview data and demographic data (completed during the questionnaire study) for potential teaching materials under the same conditions of confidentiality described for this study.
- I understand that participation in the study is voluntary and that if I wish to withdraw my data from the study I can do so before, during and up to two weeks after my interview.
- I am over 18 years of age.

Pseudonym:

(Chose a pseudonym that you feel will comfortable maintain your desired level of confidentiality and can be associated with your data)

Thank you for your participation!

Appendix M

Study 4: Interview Phase Debrief Information for Participants

Interview Study - Debrief

Study Title: Exploring the Experiences of the Mobile Phone Presented by Frequent Users of their Mobile Phone
Researcher: Michael Smyth. Email: m.smyth@derby.ac.uk **Course:** PhD
Dir. of Studies: Dr. Chris Howard Email: c.howard1@derby.ac.uk **University:** University of Derby.
Supervisors: Dr. Jenny Hallam Email: j.hallam@derby.ac.uk; Dr. Jane Montague Email: j.montague@derby.ac.uk

Thank you for your participation in this study.

The aim of this study is to explore how mobile phone users' view of mobile phones may influence the role of their mobile phone in their life. Analysis of this study will inform knowledge about mobile phone practices and the extent to which mobile phone use is part of ever evolving social norms. My research aims to challenge narratives of mobile phone addiction which often fail to account for the meaningful life enhancements that we experience through our mobile phone.

A reminder that your interview was audio recorded and will be transcribed, but the data will remain detached from your personal identity information. Your personal information will remain confidential and not linked to data in the final reports. Any statements from your interview published in the final report will be linked to your demographic information and pseudonym but remain unidentifiable from your personal identifying information which will not be published.

If you wish to withdraw your data from the study, you must contact the researcher on the above email address and reference your *Individual Participant Code* which was generated before the interview was conducted and recorded on this *Debrief* sheet below. Your data can be withdrawn before, during and up to two weeks after the interview in which case your data will be returned to you or destroyed as you request.

Further information

If you would like further information about the study or would like to receive a summary of the results from this study after its completion, please contact the researcher, Michael Smyth, or a member of the supervision team, Dr Chris Howard, Dr Jenny Hallam and Dr Jane Montague on the information provided above

The role of the researcher will be limited to the facilitator of the interview and research investigator and so is not available to offer advice outside of study's procedure and participation framework. However,

the participant can contact the researcher at any time to clarify any concerns they may have about the study or their participation.

There are no anticipated risks, which are greater than normal life encounters, attached to participation in the interview discussion on your mobile phone and practices. But if you have been affected in any way from your participation in this study and wish to seek help and support you can contact:

Students of the University of Derby

The Student Wellbeing Service, Ground Floor, T Block, University of Derby, Kedleston Road, Derby DE22 1GB

Telephone: 01332 593000

Email: studentwellbeing@derby.ac.uk or psychologicalwellbeing@derby.ac.uk

Staff of the University of Derby

The Health Assured employee care service provides access to counselling services for university employees.

Telephone: 0800 783 2808 (Freephone with mobile phone call back service).

Website: <https://staff.derby.ac.uk/sites/hr/Health-Safety/Organisational-Safety/Pages/EmployeeCare.aspx>

Participants who wish to consider support outside of the University of Derby

NHS Choices: Find Psychological Therapy Services (NHS IAPT; Improving Access to Psychological Therapies) Services.

[http://www.nhs.uk/Service-Search/Counselling-NHS-\(IAPT\)-services/LocationSearch/396](http://www.nhs.uk/Service-Search/Counselling-NHS-(IAPT)-services/LocationSearch/396)

(Enter your local postcode to commence the search for suitable psychological therapy services)

Individual Participant Code: _____

(Last letter of surname and last three digits of mobile number. E.g. Joe Bloggs, whose mobile number is 0123456789, will be S789)

The researcher and supervision team thank you for your enthusiastic participation which is a valuable contribution to psychological knowledge. Director of Studies, Dr Chris Howard; Supervisors, Dr Jenny Hallam and Dr Jane Montague; and researcher; Michael Smyth.

Appendix N

Study 4: Transcription notation system

Table N1

Transcription Notation System Used For the Transcription of the 20 Interviews of Study 4 (adapted from Braun & Clarke, 2013).

Notation feature example	Explanation of use
Interviewer:	The speaker's pseudonym or identity followed by a colon precedes the speaker's dialogue.
((laughs))	A description of a non-verbal behaviour enclosed within double parenthesis indicates a non-verbal behaviour by a speaker such as laughing ((laughs)), coughing ((coughs)) or sighing ((sighs)).
Mm-hm ((affirmative))	A non-verbal utterance followed by ((affirmative)) indicates agreement.
(.)	Indicates a short pause of one second or less.
((pause))	Indicates a significant pause of 1-4 seconds.
((long pause))	Indicates a pause greater than four seconds.
((in overlap))	Indicates overlapping speech between the speakers and is presented before the start of the overlapping speech.
((inaudible))	Indicates completely inaudible speech or sounds
(best guess)	Text within single parenthesis represents a best guess at interpreting an audible sound than was unclear.
cut-off spee-	A hyphen at the end of an incomplete word followed by a space indicates cut-off speech or sound, or a false start.
<u>emphasis</u>	A word or phrase underlined indicates that they were particularly emphasised or stressed by the speaker.
'reported speech'	A word or phrase within inverted commas indicates that the speaker was reporting an apparent verbatim account of speech or thoughts of their own or another person in the past.

Appendix O

Study 1: Search Strategy Development Process

Table O1

Details of the Four Steps Used to Develop the Final Search Strategy and the Results Yielded by each Step

The search syntax used the Boolean operator ‘or’ between the search terms (and their plural) to search for articles published between 01/01/1985 and 15/03/2019 (the date of the search strategy development commencement) in the 17 UK national newspapers accessible through the *Infotrac Newsstand* database.

Search strategy step	Search terms (and their plural)	Type of search	Number of results reported by Infotrac Newsstand			Comments about the search results
			Total	By 17 publications	By document type	
Step 1 The initial search terms derived from the psychology literature were used to search the entire document of articles in the 17 UK national newspapers accessible through the Infotrac	“Mobile phone”(s) “Cell phone”(s) “Cellular phone”(s) “Smartphone”(s) “Smart phone”(s)	In ‘Entire Document’	261,598	The Times (London, England)(42,685) Daily Mail (London, England)(37,636) The Guardian (London, England)(29,568) The Sun (London, England)(26,269) Daily Telegraph (London, England)(24,090) Sunday Times (London, England)(22,913) The Mirror (London, England)(21,687) The Independent (London, England)(19,427) Mail on Sunday (London, England)(9,670) The Observer (London, England)(7,097) Daily Mirror (London, England)(4,824) Sunday Telegraph (London, England)(4,772) Sunday Mirror (London, England)(4,252)	Article(155,471) Brief article(100,128) Editorial(2,262) Letter to the editor(2,184) Interview(1,499) Column(1,172) Company overview(351) Financial report(327) Book review(226) Obituary(190) Television program review(159) Calendar(135)	The high number of results would lead to an unmanageable data corpus. Also, reading a sample of the resulting articles revealed that many of the articles mentioned the mobile phone in passing but did not focus on the mobile

Newsstand database.				<p>The Independent on Sunday (London, England)(4,208)</p> <p>The Express (London, England)(1,522)</p> <p>Daily Star (London, England)(706)</p> <p>The Express on Sunday (London, England)(272)</p>	<p>Correction notice(133)</p> <p>Movie review(97)</p> <p>Theater review(83)</p> <p>Travel narrative(83)</p> <p>Conference news(65)</p> <p>Recipe(40)</p> <p>Discussion(37)</p> <p>Report(34)</p> <p>Chronology(33)</p> <p>Website overview(28)</p> <p>Industry overview(26)</p> <p>Buyers guide(24)</p> <p>Radio program review(23)</p> <p>Sound recording review(23)</p> <p>Survey(23)</p> <p>Product/service evaluation(20)</p> <p>Comedy review(17)</p> <p>Opera review(15)</p> <p>Medical condition overview(12)</p> <p>Reprint(12)</p> <p>Restaurant review(12)</p> <p>Case study(10)</p> <p>Conference notes(8)</p> <p>City overview(7)</p>	phone in a meaningful way.
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					<p>Concert review(7) Directory(7) Quotation(7) Clinical report(6) Dance review(6) Video recording review(6) Excerpt(5) Company rankings(4) Disease/Disorder overview(4) Bibliography(3) Glossary(3) Statistical data(3) Audiobook review(2) Awards list(2)</p>	
<p>Step 2 To reduce the number of results and find a meaning sample of data, the search focused on the document title of the articles.</p>	<p>“Mobile phone”(s) “Cell phone”(s) “Cellular phone”(s) “Smartphone”(s) “Smart phone”(s)</p>	<p>In ‘Document Title’</p>	<p>9392</p>	<p>The Guardian (London, England)(1,598) The Times (London, England)(1,524) Daily Mail (London, England)(1,125) Daily Telegraph (London, England)(1,055) Sunday Times (London, England)(699) Daily Mirror (London, England)(692) The Independent (London, England)(615) The Mirror (London, England)(592) The Sun (London, England)(463) The Observer (London, England)(286) Mail on Sunday (London, England)(277)</p>	<p>Article(4,734) Brief article(4,524) Letter to the editor(132) Editorial(56) Interview(20) Financial report(19) Company overview(15) Column(10) Obituary(6) Buyers guide(5) Report(5)</p>	<p>The number of results could lead to a manageable data corpus. However, the focus on meaningful representations of the mobile phone reported by the news institution was most consistent in the</p>

				<p>Sunday Telegraph (London, England)(162)</p> <p>Sunday Mirror (London, England)(123)</p> <p>The Independent on Sunday (London, England)(110)</p> <p>The Express (London, England)(50)</p> <p>Daily Star (London, England)(13)</p> <p>The Express on Sunday (London, England)(8)</p>	<p>Conference news(4)</p> <p>Correction notice(3)</p> <p>Disease/Disorder overview(3)</p> <p>Industry overview(3)</p> <p>Movie review(3)</p> <p>Book review(2)</p> <p>Calendar(2)</p> <p>Discussion(2)</p> <p>Television program review(2)</p> <p>Theater review(2)</p> <p>Clinical report(1)</p> <p>Medical condition overview(1)</p> <p>Product/service evaluation(1)</p> <p>Statistical data(1)</p> <p>Survey(1)</p>	document types of 'article' and 'brief article'.
<p>Step 3.</p> <p>To direct the search toward data which was consistently focused on mobile phone representations in</p>	<p>"Mobile phone"(s)</p> <p>"Cell phone"(s)</p> <p>"Cellular phone"(s)</p> <p>"Smartphone"(s)</p> <p>"Smart phone"(s)</p>	In 'Document Title'	9258	<p>The Guardian (London, England)(1,570)</p> <p>The Times (London, England)(1,501)</p> <p>Daily Mail (London, England)(1,111)</p> <p>Daily Telegraph (London, England)(1,041)</p> <p>Daily Mirror (London, England)(690)</p> <p>Sunday Times (London, England)(676)</p> <p>The Independent (London, England)(614)</p> <p>The Mirror (London, England)(589)</p>	<p>Article (4,734)</p> <p>Brief article (4,524)</p>	<p>The results provided news articles which were consistent in their focus on the mobile phone. However, the results for the early years of</p>

<p>the news, the search was limited to include only the 'article' and 'brief article' document types.</p>				<p>The Sun (London, England)(457) The Observer (London, England)(279) Mail on Sunday (London, England)(269) Sunday Telegraph (London, England)(157) Sunday Mirror (London, England)(123) The Independent on Sunday (London, England)(110) The Express (London, England)(50) Daily Star (London, England)(13) The Express on Sunday (London, England)(8)</p>		<p>the search period (1985 to 1995) were much lower than the later years. Five new search terms meaningful to the period were derived from the news articles sampled during the search strategy development process.</p>
<p>Step 4 To help populate the early years of the search period with data, five new search terms were added to the search syntax. These were derived from the news articles read while developing the search strategy.</p>	<p>"Mobile phone"(s) "Cell phone"(s) "Cellular phone"(s) "Smartphone"(s) "Smart phone"(s) "Mobile communication"(s) "Mobile telephone"(s) "Cellular phone"(s) "Mobile telecom"(s) "Cellular telephone"(s)</p>	<p>In 'Document Title'</p>	<p>9510</p>	<p>The Times (London, England) 1617 The Guardian (London, England) 1604 Daily Mail (London, England) 1120 Daily Telegraph (London, England) 1058 Daily Mirror (London, England) 713 Sunday Times (London, England) 690 The Independent (London, England) 633 The Mirror (London, England) 594 The Sun (London, England) 457 The Observer (London, England) 285 Mail on Sunday (London, England) 271 Sunday Telegraph (London, England) 161</p>	<p>Article 4913 Brief Article 4597</p>	<p>The results provided the foundation of a mangable data corpus which was relevant to representations of the mobile phone in the news from 01/01/1985 to 15/03/2019.</p>

	“Mobile telecommunication”(s)			<p>Sunday Mirror (London, England) 124</p> <p>The Independent on Sunday (London, England) 111</p> <p>The Express (London, England) 51</p> <p>Daily Star (London, England) 13</p> <p>The Express on Sunday (London, England) 8</p>		
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Appendix P

Study 1: Final Search Results for Newspaper Articles About the Mobile Phone in the 17 UK National Newspapers Accessible Through the Infotrac Newsstand Database

Table P1

Final Search Results for Newspaper Articles About the Mobile Phone in the 17 UK National Newspapers Accessible Through the Infotrac Newsstand database and Their Spread Across Publications, Document Type and Publications' Sections.

The final search syntax used the Boolean operator 'or' between the 10 search terms (and their plural) to search the 'document title' of 'article' and 'brief article' document types published in the 17 UK national newspapers between 1 January 1985 and 15 March 2019.

Total number of relevant articles	Number of results reported by <i>Infotrac Newsstand</i>				
	Total	By 10 search terms (and their plural) in 'document title'	By 17 publications	By 2 document types	By 7 publication sections
9399 (Of the 9510 articles identified by the search through Infotrac Newsstand, 111 articles were	9510	"Mobile phone"(s) 6119 "Smartphone"(s) 2850 "Cell phone"(s) 158 "Smart phone"(s) 157 "Mobile communication"(s) 95 (41 were not relevant to mobile Phones) "Mobile telephone"(s) 61 "Cellular phone"(s) 23	The Times (London, England) 1617 The Guardian (London, England) 1604 Daily Mail (London, England) 1120 Daily Telegraph (London, England) 1058 Daily Mirror (London, England) 713 Sunday Times (London, England) 690 The Independent (London, England) 633 The Mirror (London, England) 594 The Sun (London, England) 457	Article 4913 Brief Article 4597	News 6129 Business News 1881 Regional News 538 Lifestyle 484 Sports 181 Opinion and Editorial 145 Arts and Entertainment 125

<p>excluded because 47 were not relevant to mobile phones and 64 were duplicates by title)</p>		<p>“Mobile telecom”(s) 14 (5 were not relevant to mobile Phones) “Cellular telephone”(s) 11 “Mobile telecommunication”(s) 8 (1 was not relevant to mobile Phones)</p>	<p>The Observer (London, England) 285 Mail on Sunday (London, England) 271 Sunday Telegraph (London, England) 161 Sunday Mirror (London, England) 124 The Independent on Sunday (London, England) 111 The Express (London, England) 51 Daily Star (London, England) 13 The Express on Sunday (London, England) 8</p>		
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Appendix Q

Study 1: Distribution of Newspaper Articles About the Mobile Phone in 17 UK National Newspapers Across Three Distinct Time Periods

Table Q1

Distribution of Newspaper Articles About the Mobile Phone in the 17 UK National Newspapers Across Three Distinct Time Periods; Early period (01/01/1985 – 31/12/1998), Middle Period (01/01/1999 – 08/11/2007) and Late Period (09/11/2007- 15/03/2029).

Period	Total number of relevant articles	Number of results reported by <i>Infotrac Newsstand</i>			
		Total	By publication	By document type	By publication sections
Early period (Introduction of the consumer handheld mobile phones) 01/01/1985 to 31/12/1998 13-year period	713 (Exclusions from the 762 total: 47 articles were not relevant to mobile phones 2 Articles were duplicates)	762	The Times (London, England) 232 The Guardian (London, England) 131 The Independent (London, England) 109 Sunday Times (London, England) 87 The Mirror (London, England) 57 Daily Mail (London, England) 54 The Observer (London, England) 32 The Independent on Sunday (London, England) 23 The Sun (London, England) 20 Sunday Mirror (London, England) 12 Mail on Sunday (London, England) 5	Article 422 Brief article 340	News 472 Business News 142 Regional News 77 Arts and Entertainment 37 Lifestyle 26 Opinion and Editorial 5 Sports 3
Middle Period	2862	2,885	The Guardian (London, England) 624	Brief article 1,456	News 1,486

<p>(Massification of the mobile phone) 01/01/1999 to 08/11/2007</p> <p>Approximately 7 years and 10 months</p>	<p>(Exclusions from the 2,885 total: 23 Articles were duplicates)</p>		<p>The Times (London, England) 450 The Independent (London, England) 335 The Mirror (London, England) 262 Daily Mail (London, England) 257 Daily Telegraph (London, England) 219 Sunday Times (London, England) 159 The Sun (London, England) 131 The Observer (London, England) 108 Sunday Mirror (London, England) 80 Mail on Sunday (London, England) 65 The Independent on Sunday (London, England) 66 Sunday Telegraph (London, England) 57 The Express (London, England) 51 Daily Star (London, England) 13 The Express on Sunday (London, England) 8</p>	<p>Article 1,429</p>	<p>Business News 602 Regional News 361 Lifestyle 267 Opinion and Editorial 59 Sports 42 Arts and Entertainment 41</p>
<p>Late Period (Popularisation of smartphones) 09/11/2007 to 15/03/2019</p> <p>Approximately 11 years and 4 months</p>	<p>5824 (Exclusions from the 762 total: 39 Articles were duplicates)</p>	<p>5,863</p>	<p>The Times (London, England) 935 The Guardian (London, England) 849 Daily Telegraph (London, England) 839 Daily Mail (London, England) 809 Daily Mirror (London, England) 713 Sunday Times (London, England) 444 The Sun (London, England) 306 The Mirror (London, England) 275 Mail on Sunday (London, England) 201 The Independent (London, England) 125</p>	<p>Article 3067 Brief article 2796</p>	<p>News 4171 Business News 1137 Lifestyle 191 Sports 136 Regional News 100 Opinion and Editorial 81 Arts and Entertainment 47</p>

			The Observer (London, England) 145 Sunday Telegraph (London, England) 104 Sunday Mirror (London, England) 32 The Independent on Sunday (London, England) 22		
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Appendix R

Study 3: Participant Demographic Information

Table R1

Demographic information reported by the 164 participants who completed the mobile phone review survey between 08 April and 20 August 2019.

The participants are listed in chronological order of their participation starting with the earliest review survey completion. This is because there was no order in relation to their demographic information that was meaningful to the study.

Participant	Gender	Age	Mobile phone description selected (Smartphone, feature phone or basic mobile phone)	Mobile phone brand and model reported	Mobile phone rating selected (1-5 Star)
1	Female	34	Smartphone (ability to access the internet and supports the use of apps)	iphone 6	3 Star
2	Male	19	Smartphone	Apple iPhone 8	5 Star
3	Female	27	Smartphone	iPhone 8 plus	4 Star
4	Female	21	Smartphone	iphone 6SE	3 Star
5	Male	19	Smartphone	IPhone 7 Plus	5 Star
6	Male	35	Smartphone	Samsung S8	4 Star
7	Female	19	Smartphone	Apple iPhone 8 Plus	4 Star
8	Female	25	Smartphone	Google pixel 1	5 Star
9	Female	21	Smartphone	Xaomi redmi 6a	4 Star
10	Female	22	Smartphone	Samsung galaxy s10+	5 Star
11	Female	22	Smartphone	iPhone 8	5 Star
12	Female	63	Smartphone	I-phone 5s	4 Star
13	Female	35	Smartphone	iPhone 8plus	5 Star
14	Female	39	Smartphone	Huawei P20 Pro	4 Star
15	Female	39	Smartphone	Apple iPhone 7	5 Star
16	Female	61	Smartphone	LG	3 Star
17	Female	40	Smartphone	I phone 8	5 Star
18	Female	54	Smartphone	Samsung galaxy s8	4 Star
19	Female	38	Smartphone	iPhone 7	4 Star
20	Female	51	Smartphone	Iphone 7s	5 Star
21	Female	24	Smartphone	iPhone 7 plus	4 Star
22	Female	24	Smartphone	Samsung Galaxy S8	4 Star
23	Female	19	Smartphone	iPhone 7	4 Star
24	Female	38	Smartphone	Apple I phone 8	4 Star
25	Female	19	Smartphone	iPhone 7	4 Star
26	Male	33	Smartphone	Samsung S10	5 Star

27	Female	50	Smartphone	LG K4(2017)	4 Star
28	Female	18	Smartphone	Oneplus 5t	5 Star
29	Female	27	Smartphone	iPhone 6s	4 Star
30	Female	53	Smartphone	Samsung S9	5 Star
31	Female	50	Smartphone	Samsung galaxy j9	3 Star
32	Female	38	Smartphone	Apple iPhone 6s	3 Star
33	Male	27	Smartphone	Samsung A3	4 Star
34	Female	50	Smartphone	IPhone 7	5 Star
35	Female	42	Smartphone	I phone	5 Star
36	Female	37	Smartphone	Samsung S7	4 Star
37	Female	53	Smartphone	Iphone 8S	5 Star
38	Female	27	Smartphone	Samsung s9	5 Star
39	Female	55	Smartphone	iPhone SE	3 Star
40	Female	34	Smartphone	I phone	5 Star
41	Female	21	Smartphone	Samsung	4 Star
42	Female	42	Smartphone	apple iphone 5s	3 Star
43	Female	59	Smartphone	samsung	3 Star
44	Female	39	Smartphone	Apple iphone 6	2 Star
45	Male	38	Smartphone	IPhone 6S	4 Star
46	Male	37	Smartphone	HTC 10	5 Star
47	Female	23	Smartphone	Apple iPhone 7	4 Star
48	Female	18	Smartphone	Apple	4 Star
49	Female	18	Smartphone	Iphone	4 Star
50	Female	21	Smartphone	iPhone XR	5 Star
51	Female	28	Smartphone	iPhone 7	5 Star
52	Female	21	Smartphone	iPhone 8	4 Star
53	Female	84	Smartphone	Apple Iphone 4	5 Star
54	Male	34	Smartphone	Samsung note 9	5 Star
55	Female	33	Smartphone	SAMSUNG S9	4 Star
56	Female	19	Smartphone	iPhone X	5 Star
57	Male	63	Smartphone	sony	5 Star
58	Female	42	Smartphone	iphone 6s	3 Star
59	Male	18	Smartphone	Apple iPhone 8 Plus	4 Star
60	Female	22	Smartphone	Apple IPhone	4 Star
61	Female	22	Smartphone	iPhone x	4 Star
62	Female	19	Smartphone	Motorolla G4	3 Star
63	Female	32	Smartphone	iPhone X	5 Star
64	Male	32	Smartphone	Samsung galaxy s9	5 Star
65	Male	45	Smartphone	samsung s8	4 Star
66	Male	29	Smartphone	Huawei p30	5 Star
67	Female	22	Smartphone	iphone x	5 Star
68	Female	19	Smartphone	iPhone 6s	4 Star
69	Female	56	Smartphone	iPhone XR	5 Star
70	Female	18	Smartphone	iPhone 7	4 Star

71	Female	19	Smartphone	iPhone 7	4 Star
72	Male	40	Smartphone	HTC U12+	5 Star
73	Female	58	Smartphone	Iphone 5SE	4 Star
74	Female	21	Smartphone	iPhone 7	4 Star
75	Female	26	Smartphone	Iphone SE	3 Star
76	Male	39	Smartphone	iPhone 8	4 Star
77	Female	19	Smartphone	Moto G6 Play	5 Star
78	Female	18	Smartphone	Apple, iPhone X	5 Star
79	Female	21	Smartphone	iPhone 6S	4 Star
80	Non-binary	18	Smartphone	IPhone 6	4 Star
81	Female	19	Smartphone	Huawei P20 Lite	4 Star
82	Female	22	Smartphone	iPhone XR	5 Star
83	Female	24	Smartphone	Samsung galaxy s7	5 Star
84	Female	21	Smartphone	iPhone 8	4 Star
85	Female	18	Smartphone	Samsung S8	5 Star
86	Male	60	Smartphone	Apple iPhone 4	4 Star
87	Male	20	Smartphone	Apple iPhone XS Max	5 Star
88	Female	44	Smartphone	Samsung a5	5 Star
89	Female	28	Smartphone	Samsung Galaxy s9	5 Star
90	Female	18	Smartphone	iPhone 7	4 Star
91	Female	19	Smartphone	I phone x	4 Star
92	Male	26	Smartphone	Apple iPhone X	5 Star
93	Male	19	Smartphone	iPhone 8	4 Star
94	Female	18	Smartphone	Apple	5 Star
95	Non-binary	39	Smartphone	Sony Xperia	5 Star
96	Male	31	Smartphone	iPhone 8	4 Star
97	Male	18	Smartphone	Samsung galaxy J3	4 Star
98	Female	27	Smartphone	Huwaei p20 pro	4 Star
99	Male	18	Smartphone	Apple iPhone 8	4 Star
100	Female	18	Smartphone	iPhone 7	4 Star
101	Female	31	Smartphone	Google Pixel XL	4 Star
102	Male	44	Smartphone	Iphone	5 Star
103	Female	35	Smartphone	iPhone 6S Plus	5 Star
104	Female	26	Smartphone	iPhone x	4 Star
105	Female	40	Smartphone	Sony Xperia xz	5 Star
106	Female	33	Smartphone	S7	5 Star
107	Female	36	Smartphone	Samsung	3 Star
108	Non-binary	21	Smartphone	Samsung galaxy S7	5 Star
109	Male	42	Smartphone	iPhone not sure	3 Star
110	Female	19	Smartphone	Xiaomi mi a1	5 Star
111	Female	46	Smartphone	Alcatel	3 Star
112	Female	25	Smartphone	Apple iPhone 7	4 Star
113	Female	19	Smartphone	Samsung Galaxy s9	4 Star
114	Non-binary	45	Feature phone (ability to access the Internet but lacks the	samsung galaxy ace	5 Star

			advanced functionality of a smartphone)		
115	Male	29	Smartphone	Samsung note 9	4 Star
116	Male	19	Smartphone	Samsung Galaxy Note 8 64GB Black - EE UK	5 Star
117	Female	32	Smartphone	iPhone 6s	5 Star
118	Female	21	Smartphone	Samsung a6	4 Star
119	Male	41	Smartphone	Huawei P20	5 Star
120	Female	35	Smartphone	iPhone 6	5 Star
121	Female	47	Smartphone	Lgg6	5 Star
122	Female	51	Smartphone	iPhone 6	4 Star
123	Female	18	Smartphone	Iphone 7	4 Star
124	Male	18	Smartphone	Motorola G6 Play	5 Star
125	Gender non-conforming/other	23	Smartphone	Huawei P20 Pro	5 Star
126	Female	42	Smartphone	iPhone 8	5 Star
127	Female	21	Smartphone	iPhone 6S	4 Star
128	Female	40	Smartphone	iPhone Xr	5 Star
129	Female	27	Smartphone	Samsung Galaxy S10+	5 Star
130	Non-binary	18	Smartphone	Huawei p30 lite	4 Star
131	Female	24	Smartphone	Samsung s8	4 Star
132	Female	21	Smartphone	Iphone XR	5 Star
133	Female	50	Smartphone	Samsung S8	5 Star
134	Female	45	Smartphone	Apple iPhone 8	4 Star
135	Female	19	Smartphone	Iphone 5c	4 Star
136	Male	Do not wish to disclose	Smartphone	Honor 20	5 Star
137	Male	18	Smartphone	Samsung galaxy A3 2017	3 Star
138	Male	34	Smartphone	Apple iPhone 7	4 Star
139	Female	47	Smartphone	iPhone 7	4 Star
140	Female	51	Smartphone	iPhone 7	4 Star
141	Male	23	Smartphone	Apple iPhone 6	5 Star
142	Female	46	Smartphone	Do not wish to disclose	4 Star
143	Male	21	Smartphone	iPhone XS	5 Star
144	Male	37	Smartphone	iPhone	3 Star
145	Male	50	Smartphone	iPhone XS	4 Star
146	Female	46	Smartphone	Nokia TA1057	4 Star
147	Female	27	Smartphone	iPhone 8	5 Star
148	Female	48	Smartphone	Apple iPhone 8	4 Star
149	Male	18	Smartphone	Apple iPhone XS	4 Star
150	Female	41	Smartphone	iPhone 7	5 Star
151	Female	36	Smartphone	Samsung Galaxy A3 (2016)	4 Star
152	Male	18	Smartphone	Do not wish to disclose	3 Star
153	Male	24	Smartphone	Huawei P30	4 Star
154	Female	23	Smartphone	iPhone X	4 Star

155	Female	24	Smartphone	Iphone	4 Star
156	Female	21	Smartphone	Apple iPhone 7	3 Star
157	Female	21	Smartphone	Apple iPhone S6	4 Star
158	Female	20	Smartphone	Iphone 7 (Apple)	4 Star
159	Female	25	Smartphone	iPhone 7	5 Star
160	Male	22	Smartphone	iPhone 7	5 Star
161	Female	19	Smartphone	iPhone XS Max	5 Star
162	Female	23	Smartphone	iPhone 8	4 Star
163	Female	20	Smartphone	iPhone SE	4 Star
164	Female	23	Smartphone	Huawei	4 Star

Table R2

Summary of the demographic information reported by the 164 participants who completed the mobile phone review survey between 08 April and 20 August 2019.

Gender (Number of participants)	Age range (Number of participants)	Mobile phone description selected (Number of participants)	Mobile phone brand reported (Number of participants)	Mobile phone rating selected (Number of participants)
Female (119) Male (39) Non-binary (5) Gender non-conforming /other (1)	18 – 84 years Mean 31.23 SD 13.00 Median 27 IQR 19 18-25 (77) 26-35 (30) 36-45 (30) 46-55 (18) 56 - 84 (8) Do not wish to disclose (1)	Smartphone (163) (A mobile phone with the ability to access the Internet and support the use of apps; Linge & Sutton, 2015; Ofcom, 2016). Feature phone (1) (ability to access the Internet but lacks the advanced functionality of a smartphone; Ofcom, 2016) Note: The participant (participant 114) that reported they used a feature phone also reported a mobile phone brand and model (Samsung Galaxy Ace) that met the criteria of a smartphone.	Apple (100) Samsung (34) Huawei (9) LG (3) Motorola (3) Sony (3) Google (2) HTC (2) Xiaomi (2) Alcatel (1) Honor (1) Nokia (1) OnePlus (1) Do not wish to disclose (2)	5 star (68) 4 star (77) 3 star (18) 2 star (1)

Appendix S

Study 4: Questionnaire Phase Participant Demographic Information

Table S1

Demographic Information Reported by the 424 Participants Who Completed the MPPUS Questionnaire Between 07 February and 19 August 2019

The participants are listed in ascending MPPUS score order. This is because the MPPUS scores, particularly high MPPUS scores, are meaningful to the study. The 20 participants who participated in the interview phase of the study are highlighted in yellow so their details can be seen in the context of all participants involved in the selection phase of the study.

MPPUS score (/270)	Gender	Age	Occupation	Mobile phone description selected (Smartphone, feature phone or basic mobile phone)	Mobile phone brand and model reported	Service contract type	Favourite apps reported	Mobile phone uses reported
261	Female	19	Unemployed	Smartphone (ability to access the internet and supports the use of apps)	Apple iPhone 6a	Monthly contract (includes mobile phone rental/lease)	Instagram	Social media and messages
247	Male	25	Unemployed	Smartphone	Wileyfox swift	Monthly contract (includes mobile phone rental/lease)	Facebook, Snapchat, what's app, hay day, 94%	Texting, social media, calls, videos, music, pictures, internet
244	Female	21	student	Smartphone	Iphone 7	SIM only contract	Instagram	Emailing, Texting, Calling, Video Calls, Social Media
234	Female	21	Student	Smartphone	Apple iPhone 8	Monthly contract (includes mobile phone rental/lease)	Twitter	Everything
231	Female	40	Stay at home mum	Smartphone	Huawei p20pro	Monthly contract (includes mobile phone rental/lease)	Instagram and facebook	??
224	Female	22	Support Worker	Smartphone	iPhone 7	Monthly contract (includes mobile phone rental/lease)	All social media	Social media mainly and to stay in contact with family and friends
223	Male	35	H&S manager	Smartphone	Mate 20 pro	Monthly contract (includes mobile phone rental/lease)	Facebook BBC News Youtube	Web, email, games, video, social media
223	Gender non-conforming/other	20	Student	Smartphone	Apple iPhone SE	Pay as you go (PAYG)	Messenger YouTube snapchat Facebook	Talking to people and watching videos
223	Female	21	Student (undergraduate)	Smartphone	Apple iPhone XR	SIM only contract	Social media (Facebook/	Communication, entertainment,

							Messenger, Instagram, Snapchat, WhatsApp), Music, camera etc	
215	Female	18	In Education	Smartphone	iPhone 6S	Monthly contract (includes mobile phone rental/lease)	Instagram, Facebook, News, Camera	Text, Call, News, Social Media
215	Male	22	Derby County Ticket Office Assistant	Smartphone	iPhone	Monthly contract (includes mobile phone rental/lease)	Sky Sports	internet browsing
212	Male	24	Gymnastics Coach	Smartphone	Samsung S8	Monthly contract (includes mobile phone rental/lease)	Instagram, facebook, Gmail	Social media, work, gaming
211	Female	20	Student	Smartphone	Samsung galaxy s8	Pay as you go (PAYG)	Facebook, idle miner, youtube	Play games, network, watch movies
210	Female	18	Student/ Waitress	Smartphone	iPhone 8	Monthly contract (includes mobile phone rental/lease)	Facebook, Snapchat & Instagram	Social media
209	Male	20	bartender	Smartphone	Huawei mate 20 pro lite	Monthly contract (includes mobile phone rental/lease)	reddit, tinder	news, social media, google, music
209	Female	22	Health care assistant	Smartphone	Apple iPhone6s	SIM only contract	Instagram, Facebook, design home and email	I use the camera a lot to capture memories I also use it for quick banking to pay my shopping and look at my statements. I use it a lot for my apps.
208	Female	22	Care coordinator	Smartphone	Iphone 8	Monthly contract (includes mobile phone rental/lease)	Snapchat Instagram depop facebook	Work and personal
208	Female	27	Cleaner	Smartphone	Samsung galaxy s10	Pay as you go (PAYG)	Facebook Instagram snapchat	Message and games
207	Female	47	Manager	Smartphone	Apple iPhone 7	Monthly contract (includes mobile phone rental/lease)	Facebook google. eBay.	Social work pleasure
204	Female	26	Unemployed	Smartphone	Samsung Galaxy s10	Pay as you go (PAYG)	Snapchat Facebook Instagram	Everything
203	Non-binary	31	PhD researcher	Smartphone	iPhone 8	Monthly contract (includes mobile phone rental/lease)	Twitter, Facebook, gmail, outlook, Instagram	Personal
202	Female	24	Student	Smartphone	iPhone X	Monthly contract (includes mobile phone rental/lease)	Facebook, Twitter, Instagram	Personal
200	Female	18	Student	Smartphone	Samsung galaxy J3	Monthly contract (includes mobile phone rental/lease)	Instagram, Snapchat, Love Live	Ganes, Social Media
200	Female	24	Developer	Smartphone	iPhone 6s	SIM only contract	Animal Crossing Pocket Camp; Facebook; Messenger;	Social Media, Banking, Research, Gaming, Photo/Video editing, Calling

							Safari; Twitter; Instagram; Youtube; Signal; Pokemon Go; Ingress	
199	Female	39	Teacher	Smartphone	iPhone X	Monthly contract (includes mobile phone rental/lease)	Safari, Facebook, reminders, audible, calendar, messages	Communication, listening to audio books/reading, tv on occasion, social networking
198	Female	18	Student	Smartphone	Apple iPhone 6Plus	Monthly contract (includes mobile phone rental/lease)	Imessage, Facebook, snapchat, Instagram, Twitter	Message, social media, photos
198	Female	20	Student	Smartphone	iPhone XR	Monthly contract (includes mobile phone rental/lease)	Instagram, Twitter	Social media, keeping contact with friends and family, university work
198	Female	19	Door to door fundraiser	Smartphone	Honor view 20	SIM only contract	Snapchat Spotify Instagram	Every day and during work
197	Female	20	Student	Basic mobile phone (talk and text only)	I phone 7	SIM only contract	Facebook, bbc weather, Instagram, snapchat, Twitter, messenger, mail,	Phone, text, social media, communication, camera
196	Female	21	Unemployed	Smartphone	Huawei P20 Lite	Monthly contract (includes mobile phone rental/lease)	Facebook, Messenger, YouTube, Reddit, some games	Mostly messaging, also watching YouTube videos or Netflix and regular unproductive scrolls through Facebook and Reddit
196	Female	23	Physiotherap ist	Smartphone	iPhone 7	Monthly contract (includes mobile phone rental/lease)	Instagram	Entertainment social media contact
196	Female	26	Support Worker	Smartphone	Huawei p20 lite	Monthly contract (includes mobile phone rental/lease)	Facebook, Instagram, Twitter, WhatsApp, Outlook	Personal. For watching Netflix, streaming Netflix, watching YouTube videos and social media.
195	Female	21	Physiotherap ist	Smartphone	iPhone 6S	Monthly contract (includes mobile phone rental/lease)	Instagram, Facebook and snapchat	Everything
194	Female	18	None- Sixth Form	Smartphone	iPhone 7	Monthly contract (includes mobile phone rental/lease)	Insta, snapchat, FB	Social media
192	Female	18	Unemployed	Smartphone	Apple iPhone 8	Monthly contract (includes mobile phone rental/lease)	Snapchat, Facebook, Instagram	Social media, text, facetime
191	Female	18	Student	Smartphone	Huawei P8 lite 2017	Monthly contract (includes mobile phone rental/lease)	Snapchat, Instagram, Tumblr	Call, text, message, email, social media
191	Female	24	Student	Smartphone	Samsung s8	Monthly contract (includes mobile phone rental/lease)	WhatsApp.. Facebook.. games	Messaging

191	Female	20	Full time student	Smartphone	Apple iPhone 6S	SIM only contract	Snapchat, Instagram, Facebook, Twitter, Apple Music	Keep in contact with friends and family (both texting/calling and on social media), listen to music, occasionally play games, take photos, browse the internet, online shopping
191	Female	27	analyst	Smartphone	samsung galaxy s9	Monthly contract (includes mobile phone rental/lease)	FB, WhatsApp, snapchat, YouTube, Netflix	any and all
191	Female	25	Healthcare Assistant	Smartphone	Samsung S9	Monthly contract (includes mobile phone rental/lease)	Facebook, Instagram, Coin Master	Messaging, social media, games, Google, maps, basically everything
190	Female	25	Manager	Smartphone	iPhone XS Max	Monthly contract (includes mobile phone rental/lease)	Facebook, instagram, Snapchat, games and TV	TV, social media, texting, calling, pictures
190	Female	21	Student	Smartphone	iPhone 7 plus	Monthly contract (includes mobile phone rental/lease)	Facebook, FB messenger, Tumblr, Instagram,	For university (to access and edit docs for assignments). For social media. For communicating with people both in the same country and abroad. As a GPS beacon for my family to know I am safe. For emails to be up to date. For music and films.
188	Female	19	Student	Smartphone	iPhone XR	Monthly contract (includes mobile phone rental/lease)	Spotify, instagram, snapchat	Calls, texts, engaging with friends and family
188	Female	19	student/sales assistant	Smartphone	iPhone 7	Monthly contract (includes mobile phone rental/lease)	spotify and iMessage	music, entertainment, social, studies
188	Female	21	Student	Smartphone	iPhone 7	SIM only contract	Social media (Facebook, messenger, Instagram, snapchat, YouTube etc), music, photos, safari, Waze, Shazam, Amazon, eBay, Netflix	For social media/internet/taking photos and videos/streaming videos, contact with friends and family, etc.
187	Female	21	student	Smartphone	iphone XR	Monthly contract (includes mobile phone rental/lease)	twitter, instagram	social media and contacting people
187	Female	22	Student	Smartphone	Samsung Galaxy S10	Pay as you go (PAYG)	Facebook, Twitter, facebook messenger, YouTube	Mainly messaging people via facebook/text. I also frequently browse the internet, and use

								various social media apps a lot of the time e.g. Facebook/Twitter. Finally, my phone is used for music almost daily.
187	Female	21	student	Smartphone	Iphone XR	Monthly contract (includes mobile phone rental/lease)	facebook, twitter, instagram, stardew valley, twitch, youtube	social media, gaming and entertainment
186	Female	21	Student	Smartphone	Samsung s8	Monthly contract (includes mobile phone rental/lease)	Facebook, Instagram, snapchat	Calls, texts, Internet and social media
186	Female	26	Mental Health Act Administrator	Smartphone	OnePlus 5T	Monthly contract (includes mobile phone rental/lease)	What's app & Facebook	Text, calls, social media, photos etc
185	Female	19	Student	Smartphone	iPhone 8 Plus	Monthly contract (includes mobile phone rental/lease)	Twitter, instagram, snapchat	Socialise
185	Female	33	Full time postgraduate student	Smartphone	Samsung S9	Monthly contract (includes mobile phone rental/lease)	Pinterest, Instagram, focus, online banking, youtube	Phone calls, messaging, browsing internet, camera
185	Female	37	Administrati on	Smartphone	iPhone	Monthly contract (includes mobile phone rental/lease)	Facebook Instagram WhatsApp	Messaging calls apps
185	Female	32	Teacher	Smartphone	iPhone 8	Monthly contract (includes mobile phone rental/lease)	Whatâ€™s app. Snapchat. PokÃ©mon go. YouTube	Phoning. Text. FaceTime. Apps.
185	Female	41	Technical author	Smartphone	Iphone5s	Monthly contract (includes mobile phone rental/lease)	Outlook kindle	Calls texts internet searches photos email
185	Female	24	Exercise referral	Smartphone	iPhone 8	Monthly contract (includes mobile phone rental/lease)	Hearthstone , Netflix, bbc news, WhatsApp, safari, spotify	Check time, message fiends and family, organise socks activities, look up information, read news, listen to music, play games,
185	Female	28	Unemployed	Smartphone	Samsung Galaxy A50	Pay as you go (PAYG)	Facebook and Scrabble Go	Daily
184	Male	27	Civil servant	Smartphone	iPhone	Monthly contract (includes mobile phone rental/lease)	Telegram, Instagram, Facebook	Trading, social, communication
183	Female	35	Dental ceramist	Smartphone	Samsung s9	Monthly contract (includes mobile phone rental/lease)	Facebook, Instagram, WhatsApp, candycrush	Keeping in touch with family and friends, satnav, shopping
183	Female	38	Executive assistant	Smartphone	iPhone 7	SIM only contract	Whatsapp, Facebook	Personal & business
182	Female	26	Student	Smartphone	Samsung 10	Monthly contract (includes mobile phone rental/lease)	Facebook WhatsApp	Everything from alarms to listening

							internet explorer	to music and using apps
181	Male	19	student	Smartphone	Apple iPhone 8 plus	Monthly contract (includes mobile phone rental/lease)	messages, music, spotify, instagram, whatsapp, twitter, snapchat, netflix	everything
181	Female	18	Waitress	Smartphone	iphone 6s	Monthly contract (includes mobile phone rental/lease)	instagram, twitter, facebook	social media, phoning, texting, entertainment, education
181	Female	22	Researcher	Smartphone	iPhone 6	Monthly contract (includes mobile phone rental/lease)	Social media, news, Netflix	Social networking, keeping up with news, games, dating apps, weather, music, entertainment
181	Female	22	Student	Smartphone	iphone 8	Monthly contract (includes mobile phone rental/lease)	snapchat, facebook, photo editing apps	pictures, contacting others, games
180	Female	24	Dental Technician	Smartphone	Google pixel	Monthly contract (includes mobile phone rental/lease)	Instagram, Facebook, Snapchat, Pinterest	Social, music, photos
179	Female	19	Student	Smartphone	iPhone 8	Monthly contract (includes mobile phone rental/lease)	Snapchat, instagram, Netflix, Apple music	Talk to friends and family, social media, taking photos, listening to music, Callander app, alarm clock, timer, FaceTime and calls
179	Female	32	Care assistant	Smartphone	Samsung s9	Monthly contract (includes mobile phone rental/lease)	Facebook.	Social media mainly.
178	Female	19	Homemaker	Smartphone	iPhone 6s	Monthly contract (includes mobile phone rental/lease)	Facebook, messenger, snapchat, texts, FaceTime, instagram	To contact people and sometimes play games
177	Female	26	Student mental health nurse	Smartphone	Apple iPhone 8	Monthly contract (includes mobile phone rental/lease)	WhatsApp, Spotify, instagram, Facebook	Text, call, social media
177	Male	24	Accountant	Smartphone	Samsung Galaxy S8	Monthly contract (includes mobile phone rental/lease)	Social Media	Calls, Texts, Music and Video Streaming and General Internet use
177	Female	22	Bartender	Smartphone	iPhone X	Monthly contract (includes mobile phone rental/lease)	Facebook, Twitter, Instagram, WhatsApp and BitLife	Calling, messaging, video calling, social media, playing games
177	Female	20	Student	Smartphone	Samsung A5	Pay as you go (PAYG)	Games and Facebook	Social media, Games, Contacting people
176	Female	21	Student	Smartphone	iPhone 7	Monthly contract (includes mobile phone rental/lease)	Messenger, Instagram, Whatsapp	Social media, Emailing, Text and Calls

176	Female	20	Student	Smartphone	iphone 8	Monthly contract (includes mobile phone rental/lease)	Apple Books, Snapchat, Text, Instagram	to research uni things
176	Female	23	Teaching assistant	Smartphone	iPhone 7	SIM only contract	Spotify, Netflix, Facebook, Watsapp, messenger, snapchat, duolingo, Waze, GinRummy Plus, clue, hyperlapse	Social media, contact family, photo and video editing, emails
175	Female	30	Full time student	Smartphone	iPhone 7	Monthly contract (includes mobile phone rental/lease)	WhatsApp™s app, Facebook, Instagram	Calls, entail, file sharing, shopping, organising
174	Female	18	Student	Smartphone	iPhone 8 Plus	Pay as you go (PAYG)	Instagram and Snapchat	Social media, text, calling
174	Female	24	Postgraduate student	Smartphone	Apple iPhone 7	Monthly contract (includes mobile phone rental/lease)	Chrome, prime video, NatWest, Snapchat, Instagram, tinder	Entertaining, bus pass, camera, communication with others
172	Female	35	Psychiatric nurse	Smartphone	iPhone xr	Monthly contract (includes mobile phone rental/lease)	Instagram Facebook	Music social media texting
172	Female	22	Unemployed	Smartphone	iPhone 5	Monthly contract (includes mobile phone rental/lease)	Messenger, Facebook, tumblr	Contact with others
172	Female	22	Student	Smartphone	Zte axon elite	SIM only contract	Snapchat instagram messenger WhatsApp twitter facebook	Camera calculator social media calls
171	Female	19	student	Smartphone	i phone 7 +	Monthly contract (includes mobile phone rental/lease)	Instagram, Twitter, Snapchat	Social media, Emails, Texts, Calls, Internet, Online Banking
171	Female	18	Student	Smartphone	Apple - iPhone 6s	SIM only contract	Instagram, Twitter, Snapchat, YouTube, Netflix	Text, call, social media, watch videos, listen to music
171	Female	18	Mother	Smartphone	iPhone 8	Monthly contract (includes mobile phone rental/lease)	Facebook Snapchat	Social media, Internet, texting & games
171	Female	22	Personal banking manager	Smartphone	Samsung galaxy s9	Monthly contract (includes mobile phone rental/lease)	Whatsapp, Snapchat, Banking App, Facebook,	Communication mainly, Netflix also. Generally everything
170	Male	20	Student	Smartphone	Apple iPhone 6s	Monthly contract (includes mobile phone rental/lease)	Facebook, Snapchat, Instagram, YouTube, Netflix, pixelmator	Calls, texts, social media, watching films/videos

170	Female	23	Student	Smartphone	Google Pixel 2	Monthly contract (includes mobile phone rental/lease)	Facebook, Snapchat, Barclays, Netflix	Emailing, calling, texting, access to social media, calendar, news, weather
170	Female	18	Student	Smartphone	iPhone 6	Monthly contract (includes mobile phone rental/lease)	Snapchat	Leisure
170	Female	18	Administrative assistant	Smartphone	iPhone 8	Monthly contract (includes mobile phone rental/lease)	Snapchat, Instagram, Twitter and Facebook	Calling, Texting, social media and games
170	Male	26	Unemployed	Smartphone	Samsung Galaxy A8	Monthly contract (includes mobile phone rental/lease)	Facebook, Instagram, Twitter	Leisure and work
169	Male	18	Student	Smartphone	iPhone X	Monthly contract (includes mobile phone rental/lease)	Facebook, YouTube, Spotify, Instagram, Snapchat	Music, Information Gathering, Social Media
169	Female	21	Post Office assistant	Smartphone	iPhone Xs	Monthly contract (includes mobile phone rental/lease)	Twitter, Facebook, TikTok, Netflix, YouTube	Calling, texting, calendar, timer + clock, social media, gaming,
169	Female	27	Full time insurance claims handler	Smartphone	Samsung galaxy s8	Monthly contract (includes mobile phone rental/lease)	Facebook, fanfiction.net and various games	Social media and calls
167	Female	20	Checkout Assistant	Smartphone	iPhone 6	Monthly contract (includes mobile phone rental/lease)	Facebook, Snapchat, instagram, flow, iMessage	Social media, gaming, communicating, college work
167	Female	18	student	Smartphone	iPhone 8	Monthly contract (includes mobile phone rental/lease)	Snapchat, Twitter, Instagram, Facebook	The above and contacting
166	Female	19	Shop Assistant	Smartphone	iPhone XR	Monthly contract (includes mobile phone rental/lease)	Snapchat, Facebook, Instagram, Twitter	Phone, Text, use social media, banking, photos
166	Female	18	Student	Smartphone	Apple iPhone X	Monthly contract (includes mobile phone rental/lease)	Instagram, twitter, snap chat	Mostly social media and talking to friends
165	Female	19	Chef	Smartphone	iPhone Xs max	Monthly contract (includes mobile phone rental/lease)	Snapchat YouTube facebook Spotify apple music	Social media music text call facetime
165	Female	19	McDonalds Crew Trainer and student	Smartphone	iPhone X	Monthly contract (includes mobile phone rental/lease)	Instagram and Snapchat	social media
164	Female	27	Student	Smartphone	iPhone x	Monthly contract (includes mobile phone rental/lease)	Facebook, snapchat, Instagram	Social and leisure
164	Female	19	Street Rat	Smartphone	Samsung Galaxy S10+	Monthly contract (includes mobile phone rental/lease)	Facebook, Instagram, and Twitter	social media and texting/calls
164	Female	23	Clinical Immunologist/ Research Scientist	Smartphone	iPhone SE	Monthly contract (includes mobile phone rental/lease)	Instagram, Spotify, Uber	Using internet, checking emails, social media, Booking taxis,

								online banking, checking daily step count, streaming music and videos, online shopping
163	Female	20	Royal Air Force	Smartphone	iPhone 7	SIM only contract	WhatsApp, Facebook, Instagram	
163	Female	23	Registered veterinary nurse	Smartphone	Samsung s8	Monthly contract (includes mobile phone rental/lease)	Animal crossing pocket camp	Games socials email
163	Female	18	Waitress	Smartphone	Samsung s8	Pay as you go (PAYG)	Instagram snapchat YouTube	Messaging social media videos games
162	Female	36	Student	Smartphone	Samsung galaxy s9	Monthly contract (includes mobile phone rental/lease)	Facebook, instagram, online banking, whatsapp, internet	Access internet, calls, texts, whatsapp
162	Female	18	Student/catering and hospitality	Smartphone	Apple iPhone SE	Monthly contract (includes mobile phone rental/lease)	Instagram, YouTube, Snapchat	Social media, research, work
162	Female	18	health care support worker	Smartphone	apple	Monthly contract (includes mobile phone rental/lease)	instagram, pinterest, procreate	contacting people/being contacted, internet browsing
161	Female	25	Teaching assistant	Smartphone	iPhone 6S	Monthly contract (includes mobile phone rental/lease)	Instagram, Facebook	Texting face time social media emails
161	Female	22	Student	Smartphone	iPhone 7 plus	SIM only contract	Spotify, words with friends, Facebook, Netflix	Communication, fun, watch videos
161	Male	30	Student	Smartphone	iPhone x	SIM only contract	Facebook, dominations, spectator, galaxy attack, kindle	Games, news, calls, texts, social media, reading
160	Female	19	University Student	Smartphone	Iphone	Monthly contract (includes mobile phone rental/lease)	Snapchat	Keep in contact with friends and family
160	Male	18	Student	Smartphone	Samsung Galaxy A7 (2017)	Monthly contract (includes mobile phone rental/lease)	Spotify, Instagram, LINE	Calls, Messages, Browsing Internet, Social Media, Research, Data-keeping
160	Female	19	Health care support worker	Smartphone	iPhone 8	Monthly contract (includes mobile phone rental/lease)	Spotify, Instagram, messages, YouTube, Twitter, Facebook, WhatsApp	Social media, games, texting, FaceTime, phone call, internet, email, maps, music, watching videos
160	Female	20	Pharmacy Technician	Smartphone	Apple iPhone X	Monthly contract (includes mobile phone rental/lease)	Facebook, Snapchat, Instagram	Personal Use
160	Female	20	student	Smartphone	iphone 7 plus	Monthly contract (includes mobile phone rental/lease)	facebook, instagram, snapchat, twitter	texting, calling, social media

160	Female	30	Social Worker	Smartphone	Samsung s9	Monthly contract (includes mobile phone rental/lease)	PokemonGo, Facebook, WhatsApp	Personal
160	Female	41	Unemployed	Smartphone	iPhone 8 plus	Monthly contract (includes mobile phone rental/lease)	Coin master, Facebook, Timehop, bank, messenger	Everything
159	Female	22	polish	Smartphone	Sony L1	SIM only contract	instagram, messenger	talking
159	Female	18	Bartender	Smartphone	I phone 6s	Monthly contract (includes mobile phone rental/lease)	Instagram, Facebook	
159	Female	21	Unemployed	Smartphone	Samsung Galaxy S7edge	SIM only contract	Snapchat, Facebook, YouTube, Netflix	
158	Female	23	IT	Smartphone	Apple iPhone 6S+	SIM only contract	Facebook WhatsApp Spotify	Social
158	Female	25	Teacher	Smartphone	Apple iPhone 6s	Monthly contract (includes mobile phone rental/lease)	Facebook, Instagram, news, weather, online banking, WhatsApp, Spotify, messenger, 1se	Social media, music, camera, organisation, communication
158	Female	18		Smartphone	iphone xr	Monthly contract (includes mobile phone rental/lease)	snapchat, instagram, facebook	
157	Female	24	Psychological therapist	Smartphone	iPhone 7	Pay as you go (PAYG)	Instagram, Facebook, Twitter, YouTube, internet banking	entertainment, communication, information searching
156	Female	20	Student	Smartphone	iPhone 6S	SIM only contract	Twitter, Messenger, Netflix	Social media, watching tv, playing games
156	Female	18	Student	Smartphone	iPhone X	Monthly contract (includes mobile phone rental/lease)	Snapchat, instagram, YouTube, Twitter	To study, to talk to friends, to watch tv, to play games, to take pictures
155	Female	20	Student	Smartphone	Huawei p10 lite	Pay as you go (PAYG)	Facebook messenger, Snapchat, games, whatsapp	Internet use, calls, text
155	Female	19	Student	Smartphone	Huawei Honor 8	SIM only contract	Instagram, Quota, Messenger, Discord	Internet, Social Media, limited Texting
154	Male	23	reatil	Smartphone	apple iphone 8	Monthly contract (includes mobile phone rental/lease)	youtube, instagram, twitter, whatsapp and football manager	text, watch videos, play games, talk to friends

154	Female	27	Registered vet nurse	Smartphone	Samsung galaxy s8	SIM only contract	Instagram, Facebook, Spotify, YouTube	Internet browser, social media, sat nav, music player, calculator, diary
154	Female	19	Student	Smartphone	iPhone 7+	Monthly contract (includes mobile phone rental/lease)	Snapchat, instagram, Twitter, pinterest	Social media, emails, games, music, texting
153	Male	22	University Student	Smartphone	I phone 5s	Monthly contract (includes mobile phone rental/lease)	Instagram , snapchat , Uni app, Facebook	Entertainment
153	Male	28	Support worker	Smartphone	Huawei mate	Monthly contract (includes mobile phone rental/lease)	Reddit, whatsapp	Browsing articles and messaging friends
153	Female	21	Youth development worker	Smartphone	iPhone 7 Plus	Monthly contract (includes mobile phone rental/lease)	Instagram, Facebook, BBC news, ASOS	Social and work
153	Female	21	student	Smartphone	iphone 7	SIM only contract	snapchat, instagram	social media, shopping, browsing, games
152	Female	19	Student	Smartphone	iPhone 8	Monthly contract (includes mobile phone rental/lease)	Facebook and Instagram	Mostly for social media and messaging friends and family but I am also using an app to learn another language.
152	Female	21	Student	Smartphone	iPhone X	Pay as you go (PAYG)	Facebook, Instagram, Snapchat	Call, message, internet & social media
152	Female	19	Early Years Educator	Smartphone	iphone 8	Monthly contract (includes mobile phone rental/lease)	twitter, facebook, snapchat, instagram and gmail	internet, social media, staying in contact with friends and family, work emails, taking pictures and videos
152	Female	19	Student	Smartphone	Huawei P20 lite	Monthly contract (includes mobile phone rental/lease)	Facebook, Instagram, myfitnessapp	Texting, tracking diet & exercise
152	Male	22	Student	Smartphone	Apple - iPhone XR	Monthly contract (includes mobile phone rental/lease)	Facebook, Twitter and Instagram	more than 10 times per hour
151	Male	37	Functional Analyst	Smartphone	Samsung Galaxy S6 Edge	SIM only contract	Whatsapp, Spotify, BBC News, Scruff, Instagram	Pretty much everything from music and arts, to finance and science
151	Female	23	Sales Operations Administrator	Smartphone	Iphone 8	Monthly contract (includes mobile phone rental/lease)	Reddit, WhatsApp, Instagram, Spotify	Personal
151	Female	23	Student Nurse	Smartphone	iPhone 8	SIM only contract	Facebook Instagram snapchat Twitter messages	Social media texting iMessage calls
151	Female	18	Full time student	Smartphone	Iphone 7	Monthly contract (includes mobile phone rental/lease)	Instagram Facebook and Youtube	Social Media and Contact

150	Female	29	Project Officer	Smartphone	Huawei P20	Monthly contract (includes mobile phone rental/lease)	Candy Crush, Whats App, Instagram, Step tracker, Facebook, various games	Camera (it has a really good one), messaging, social media, games
150	Female	20	Student (Undegraduate, Final Year)	Smartphone	iPhone 6	SIM only contract	Social Media (in particular Instagram and Messenger), Spotify and Bumble	Keeping in touch with friends and family, taking and storing photos, entertainment, internet access, accessing University info on the go through iExeter app (information such as timetable, emails, course info etc), use it as an alarm clock and a timer, a calculator and torch
150	Female	38	Tutor	Smartphone	Apple	Monthly contract (includes mobile phone rental/lease)	YouTube, Facebook, messenger	Watch content, read, phone calls, texts, instant messages, banking, photos
150	Female	23	Mental health nurse	Smartphone	iPhone XR	Monthly contract (includes mobile phone rental/lease)	Instagram, Facebook, snapchat, Twitter, cut the rope, subway surfers, Netflix, prime video, Pinterest	Social, work, personal ,fun, business
150	Male	23	PC Compliance analyst	Smartphone	Moto G5	SIM only contract	Facebook, outlook and youtube	Phoning, texting, games, social media, writing
150	Do not wish to disclose	20	student	Smartphone	iphone xr	Monthly contract (includes mobile phone rental/lease)	facebook, twitter, reddit	internet, texting
149	Female	18	Student	Smartphone	iPhone 6S	Monthly contract (includes mobile phone rental/lease)	Instagram/Facebook/YouTube/spotify/whatsapp	Social media and video/music playing and messaging
148	Female	18	Full time student	Smartphone	Iphone	Monthly contract (includes mobile phone rental/lease)	Snapchat, Instagram, Apple Music	Camera, Social Media, Communication
148	Female	19	student	Smartphone	Iphone 6	SIM only contract	instagram	social media
148	Female	24	Student	Smartphone	Samsung s8	Monthly contract (includes mobile phone rental/lease)	Instagram, my fitness pal	Calls, texts and internet use
148	Female	18	Student nurse	Smartphone	Apple iPhone 6s	Monthly contract (includes mobile phone rental/lease)	Snapchat, instagram, Microsoft solitaire, candy crush, Spotify,	Social media, entertainment, contacting friends family and university purposes

							Netflix, YouTube, Twitter	
148	Male	19	Medical Student	Smartphone	Huawei Honor 9	SIM only contract	Snapchat, Reddit, Instagram, Wikipedia, BBC News	Primarily social media, browsing the Internet and gaming
148	Female	19	Student	Smartphone	Apple iPhone7 plus	Monthly contract (includes mobile phone rental/lease)	Instagram, Twitter, Headspace, Camera	Calendar, social media, contact, photography, email, music, FaceTime, meditation, YouTube video
148	Male	24	Food & Beverage Assistant	Smartphone	Apple iPhone 7 Plus	SIM only contract	Instagram	Text, Call, Social Medias, Take Photos
147	Female	20	Student	Smartphone	iPhone 8	Monthly contract (includes mobile phone rental/lease)	Social media ones e.g snapchat, Instagram and facebook messenger	Keep in contact with friends and family
147	Female	21	Student	Smartphone	Samsung A3	SIM only contract	Facebook, Instagram, Snapchat, LinkedIn	Calls, text, social media, camera, internet access
146	Male	23	Student	Smartphone	Iphone SE	Pay as you go (PAYG)	Twitter, netflix, investing, mail	Daily usage, communication, following news, games
146	Male	31	Assistant Director of Music	Smartphone	iPhone 7	SIM only contract	Outlook, Facebook, Messages, Mail	Work and personal
146	Female	18	student	Smartphone	Sony xperia xz premium	Monthly contract (includes mobile phone rental/lease)	twitter, YouTube, Instagram, clue	talk, text, research, procrastination
146	Female	18	Student	Smartphone	iPhone 7	SIM only contract	Fitbit instagram twitter	Social media and health tracking
146	Male	37	Social Worker	Smartphone	iPhone X	Monthly contract (includes mobile phone rental/lease)	Facebook, Instagram, News apps	Mainly social media, text, WhatsApp, calls, research.
145	Female	37	Student	Smartphone	Iphone 6s	Pay as you go (PAYG)	WhatsApp, facebook, ebay, amazon,groupon, quidco,	talking, messages, shopping, few distraction games
145	Female	19	student	Smartphone	iphone 6	SIM only contract	facebook, instagram, twitter, snapchat	using apps and contacting people
145	Male	20	Product manager	Smartphone	iPhone SE	SIM only contract	Instagram and Facebook	Social media, games, texting, video calling
144	Female	19	Student	Smartphone	6s plus	Monthly contract (includes mobile phone rental/lease)	Snapchat, Instagram, facebook	Social Media

143	Female	29	Healthcare Assistant (Mental Health)	Smartphone	iPhone 6	SIM only contract	TED Talks, BBC, Youtube, Amazon Prime, Derby Uni.	Personal, Educational, Communication (work and private)
143	Male	20	Student	Smartphone	Samsung Galaxy S9	Monthly contract (includes mobile phone rental/lease)	Instagram, Snapchat, Spotify	Music, Social media
143	Female	21	University of Derby student	Smartphone	iPhone XR	Monthly contract (includes mobile phone rental/lease)	Twitter, Facebook, Instagram, Snapchat, WhatsApp, text/call, email	Contact, games, social media, shopping, internet searches
143	Female	27	Manager	Basic mobile phone	Samsung s6	Monthly contract (includes mobile phone rental/lease)	Whatsapp facebook chrome	Talk to family and friends, look up things on Internet, listen to music, watch films, listen to meditation videos
142	Female	20	Student	Smartphone	iPhone 7	SIM only contract	Social media	Social media, texting, games
141	Female	19	Student	Smartphone	iPhone 6	SIM only contract	Facebook merge dragons snap chat Instagram my fitness pal etc	Connecting, games, social media
141	Female	37	Student	Smartphone	Samsung Galaxy S9	Monthly contract (includes mobile phone rental/lease)	Facebook, Audible, What's App	Internet, social media, music, camera, messaging, calling
141	Female	21	Student	Smartphone	OnePlus 6	SIM only contract	Snapchat, Pinterest, Facebook, Netflix, YouTube	Taking pictures, social media, films, calls and texts
141	Do not wish to disclose	20	Student	Smartphone	iPhone	SIM only contract	Instagram, messenger, Facebook, YouTube	Social media, contact with friends, sharing pictures on Instagram, music, alarm clock, looking up information, emails
140	Female	22	Student	Smartphone	iPhone 7	SIM only contract	Facebook, Instagram, reddit	Social media, games, pictures
140	Female	22	Unemployed	Smartphone	iPhone 7 Plus	SIM only contract	Instagram, YouTube, Podcasts, Spotify	iMessage, FaceTime, apps, listening to music
140	Female	38	TA	Smartphone	iPhone 7	Monthly contract (includes mobile phone rental/lease)	Facebook	Personal
140	Female	18	Cyber Security Apprentice	Smartphone	iPhone 7	Monthly contract (includes mobile phone rental/lease)	facebook + messenger, snapchat, Reddit	Used often
140	Female	46	Management consulting	Smartphone	Nokia TA1057	SIM only contract	Nuband, easyJet,	Browsing, uploading to Facebook, texting, calling,

							Meerkat Movies	taking pictures, calculator, stopwatch, fitness app
139	Female	21	Student	Smartphone	Apple iPhone XS Max	SIM only contract	Instagram, Snapchat, etc.	Messaging, calling, social media
139	Female	22	Student	Smartphone	Samsung S8	Pay as you go (PAYG)	Facebook, Facebook Messenger, Snapchat and Instagram	Communication and social media
139	Female	18	Student	Smartphone	Samsung Galaxy J3 (2017)	SIM only contract	Love Live School Idol Festival	Games and Contacting Friends
139	Female	22	Psychology PhD researcher	Smartphone	Google pixel	SIM only contract	Pinterest, duolingo, spotify	Calls, texts, emails, social media, photos, music , internet
138	Female	20	Full time student	Smartphone	iPhone 7	SIM only contract	snapchat, instagram, candy crush	social media, games, contacting family
138	Female	21	Student	Smartphone	Iphone 6S	Other (please describe briefly) Rolling monthly pay as you go with data/mins etc included	WhatsApp	Social media Web browsing Health tracking
138	Female	35	Lecturer	Smartphone	iPhone 8plus	Monthly contract (includes mobile phone rental/lease)	Facebook, Instagram, bbc news	News, social media, call, instant message, email, work
138	Female	26	Care home management	Smartphone	Huawei p30 lite	Pay as you go (PAYG)	Calendar, social media including Facebook Instagram Pinterest twitter	Personal (keep in touch with friends and family, leisure for example watching videos and reading e books) ; work especially when "on call" - answering colleagues texts and calls in a crisis
138	Female	28	Student	Smartphone	Samsung Galaxy A3 2017	Monthly contract (includes mobile phone rental/lease)	Spotify, Ecosia, Whatsapp	Calling, messaging, internet use
137	Female	19	Student	Smartphone	Samsung A3 2017	Monthly contract (includes mobile phone rental/lease)	Wattpad, Instagram, Snapchat, Facebook, YouTube	Talk to people, Reading, shopping
137	Female	20	Student	Smartphone	Apple iPhone 8	Monthly contract (includes mobile phone rental/lease)	Facebook Instagram YouTube	Social media, emails, maps, taking photos, listening to music
137	Female	23	Customer service agent	Smartphone	Samsung S9 plus	Monthly contract (includes mobile phone rental/lease)	Facebook, Instagram and snapchat	Socialising, emails and camera
137	Female	24	Family support keyworker	Smartphone	Honor a1	Monthly contract (includes mobile phone rental/lease)	Facebook, instagram	Social

137	Female	45	Mental health advocate	Smartphone	Apple iPhone 6	SIM only contract	Pokemon go, facebook	Internet access, reading emails, sms, playing games, taking photos
136	Female	18	Student	Smartphone	Samsung	Monthly contract (includes mobile phone rental/lease)	Youtube, Discord, Reddit	
136	Male	20	Student	Smartphone	iPhone 8	Monthly contract (includes mobile phone rental/lease)	Snapchat, Twitter, Instagram	Phone Calls, Texting
136	Female	34	Behaviour Consultant	Smartphone	IPhone 8 Plus Apple	SIM only contract	Monzo, Waze, Instagram, alarm clock	Calls, texts, web, alarm, games, photos
136	Male	21	Pension administrator	Smartphone	iphone 8	Monthly contract (includes mobile phone rental/lease)	whatsapp facebook youtube	texting using the internet playing games
136	Female	18	Teaching Assistant	Smartphone	iPhone 6	Pay as you go (PAYG)	Clue - Instagram - Whatsapp	Internet - Social Media - Health Tracking - Emails - general Internet Browsing - Communication - Video Calls
135	Male	25	Data Analyst	Smartphone	Samsung	Monthly contract (includes mobile phone rental/lease)	Twitter, email, Facebook, roller coaster tycoon mobile	Play games, contact people, keep informed
135	Female	27	Full Time Postgraduate Student	Smartphone	Iphone 7	SIM only contract	Twitter, mail, Whatsapp, Coin Master, Clue	Study, communication, social, business
135	Female	27	Full-time student	Smartphone	Apple iPhone 8	SIM only contract	Instagram, Facebook, YouTube, Spotify	Communication, news, music, photography
134	Female	48	Teacher	Smartphone	i phone 7	Monthly contract (includes mobile phone rental/lease)	Facebook, Strava	E mail. Messages. Internet browsing. Apps such as Strava and Facebook. Games.
134	Female	20	Student	Smartphone	Moto G6	SIM only contract	Facebook, YouTube, Instagram, Spotify	Emailing, Social Media, Watching YouTube videos, keeping in contact with friends and family, taking photos
133	Female	22	student	Smartphone	Iphone Xs	Monthly contract (includes mobile phone rental/lease)	Whatsapp, snapchat and instagram	communicating
133	Female	19	student?	Smartphone	SAMSUNG GALAXY S7 EDGE	Monthly contract (includes mobile phone rental/lease)	INSTAGRAM / FACEBOOK / SNAPCHAT	MANY
133	Female	21	Student	Smartphone	Iphone	Monthly contract (includes mobile phone rental/lease)	Facebook	Social networking, browsing

133	Female	47	Learning support assistant	Smartphone	Huawei pro mate 20	Monthly contract (includes mobile phone rental/lease)	Facebook Twitter Instagram Strava	Apps calls messaging
133	Female	27	Nurse	Smartphone	iPhone	Monthly contract (includes mobile phone rental/lease)	Instagram, email, medic bleep, Facebook, Nike run, fit bit	Social media, camera, banking, calling, work
132	Female	30	Marketing Officer	Smartphone	Sony Xperia	SIM only contract	Instagram, Spotify, BBC News	Personal
132	Female	28	Student	Smartphone	Apple iPhone 6	Monthly contract (includes mobile phone rental/lease)	WhatsApp, Facebook	Social media, emails & messages via text, whatsapp
132	Female	19	Student - Full Time	Smartphone	iPhone XR	Monthly contract (includes mobile phone rental/lease)	Social Media I.e Snapchat Instagram Facebook, games such as candy crush	To contact people via social media or text or calls, to browse the web for latest news and funny content and to play games
131	Female	26	Speech and language therapist	Smartphone	Huawei p20 lite	Monthly contract (includes mobile phone rental/lease)	Facebook, messenger, plant nanny, my fitness pal	Texting, calling, social media, torch, tracking my water and calorie intake, playing games
131	Male	22	Student	Smartphone	iPhone 7	SIM only contract	Facebook, Instagram, snapchat, bbc sort, various games	Several times a day
130	Female	22	Student	Smartphone	iPhone 6s	SIM only contract	Safari, whatsapp	Texting/whatsapping/Googling/photography
130	Female	27	Copywriter	Smartphone	iPhone 8	SIM only contract	Facebook, Twitter	Everything
129	Female	27	Student/ Cabin Crew	Smartphone	Apple Iphone X	Monthly contract (includes mobile phone rental/lease)	Instagram/ Spotify/ Youtube/ Facebook/ WhatsApp	Calls, messaging and video messaging, social media
129	Female	21	Student	Smartphone	iPhone	Monthly contract (includes mobile phone rental/lease)	YouTube , Facebook (social media)	Message , updates on social media
129	Female	18	student	Smartphone	Apple iPhone 8	Monthly contract (includes mobile phone rental/lease)	snapchat, instagram, facebook, youtube	social media, text and calls, and pictures
129	Female	33	Recruitment account manager	Smartphone	Apple iPhone 7	SIM only contract	Facebook. Instagram. Met office.	Talk. Text. Social media. Streaming. Internet
128	Female	19	sales assistant in child's toy store	Smartphone	apple iphone 7	Monthly contract (includes mobile phone rental/lease)	instagram and kindle app	to contact friends and family as well as listening to music and watching media
128	Female	21	Student	Smartphone	iPhone X	SIM only contract	Instagram, YouTube,	Traditional phone use, mobile games, social media

							Words with friends	
128	Male	29	Researcher	Smartphone	iPhone SE	SIM only contract	Instagram, WhatsApp, Chrome	
127	Female	20	Student m	Smartphone	iPhone 8	SIM only contract	Snapchat instagram	Social
126	Male	20	Student at Derby University	Smartphone	Iphone 6S	SIM only contract	Facebook, Twitter, Instagram, Snapchat	Messaging, Social Media, Sport
126	Female	19	Student teacher	Smartphone	iPhone 6S	SIM only contract	Snapchat, instagram	Text, phone, social media, games
126	Female	18	Student	Smartphone	Apple	SIM only contract	Social media	Social media
126	Female	32	Customer representative	Smartphone	Samsung s9	Monthly contract (includes mobile phone rental/lease)	Facebook, candy crush	Playing games, social media, taking photos, speaking to family and friends.
126	Female	21	Student	Smartphone	iPhone 7	Monthly contract (includes mobile phone rental/lease)	Twitter, instagram	Social media, looking things up, emailing, contacting family and friends, maps
126	Female	24	Horse handler	Smartphone	IPhone 8+	Monthly contract (includes mobile phone rental/lease)	Whatsapp and Instagram	I mainly use WhatsApp, Instagram and safari
125	Female	19	Student at a college in Liverpool and Bar Staff	Smartphone	Samsung J3 2017 model	Monthly contract (includes mobile phone rental/lease)	Facebook YouTube Outlook and Arriva Bus	To track buses (Arriva), inform parents i am safe, socialise on facebook, text and email
125	Female	24	student/carer	Smartphone	iphone 7	Monthly contract (includes mobile phone rental/lease)	instagram facebook snapchat safari whatsapp	talking to significant other, friends family. keeping in touch with relatives
125	Female	29	Teacher	Smartphone	Honor 9 lite	SIM only contract	Instagram	WhatsApp family and take photos
125	Female	35	Manager	Smartphone	Samsung s9	Monthly contract (includes mobile phone rental/lease)	WhatsApp facebook games	Calls and text internet browsing, social media, games
125	Female	22	Research assistant	Smartphone	Iphone 6s	Monthly contract (includes mobile phone rental/lease)	Fire emblem heroes	Talk to people, use internet, play games
125	Male	18	Receptionist	Smartphone	iPhone XS	Monthly contract (includes mobile phone rental/lease)	Reddit	Browsing, social networks and messaging
125	Female	33	Teacher	Smartphone	Samsung	Monthly contract (includes mobile phone rental/lease)	Amazon kindle unlimited, baby led weaning, peanut, audible	Reading, listening to audio books, Facebook, games, internet
125	Female	26	Bar tender	Smartphone	iPhone 8 Plus	Monthly contract (includes mobile phone rental/lease)	Instagram, Facebook, iMessage, Facebook messenger	Social media, text, call, internet
125	Female	39	Nurse	Smartphone	iPhone 8	Monthly contract (includes mobile phone rental/lease)	Face book	Social media, whatâ€™s app

124	Female	18	None/sick	Smartphone	iPhone 6s	SIM only contract	Facebook, snapchat, YouTube, Clue period	Play on, text, Universal Credit account
124	Female	22	Physiotherapist	Smartphone	Huawei mate 20 lite	Monthly contract (includes mobile phone rental/lease)	Twitter, Instagram, BBC sport, Iplayer, fitness apps	
124	Female	19	Full time student	Smartphone	iPhone 7	Monthly contract (includes mobile phone rental/lease)	Facebook, YouTube, Spotify	Communication, music, entertainment, note keeping
124	Female	22	Civil Servant	Smartphone	iPhone 7	Monthly contract (includes mobile phone rental/lease)	Facebook Messenger, Twitter, Instagram, Reddit, Spotify	Social media, texting, calls, internet browsing, music
124	Female	22	Print production operative	Smartphone	LG G6	Monthly contract (includes mobile phone rental/lease)	Social media (Facebook, Twitter, Snapchat)	Social media, texting, calling, gaming, watching tv shows/films
124	Female	42	Teacher	Smartphone	iPhone se	Monthly contract (includes mobile phone rental/lease)	WhatsApp™s app, Facebook, Instagram, bbc sport, sims free	Communication, Social media, games, internet
123	Female	24	Communications	Smartphone	Samsung S8	Monthly contract (includes mobile phone rental/lease)	Twitter, Instagram, Banking apps	Calling, texting, using the internet, social media, banking
123	Female	18	Student	Smartphone	iPhone 6s	Monthly contract (includes mobile phone rental/lease)	Snapchat, Twitter, Instagram, Facebook	Calling, texting, apps
123	Female	29	Teacher	Smartphone	iPhone 8	Monthly contract (includes mobile phone rental/lease)	Facebook, Twitter, Instagram, Whats App	Accessing social media, messaging and phone calls
123	Female	20	Student	Smartphone	iPhone 8	Monthly contract (includes mobile phone rental/lease)	Facebook, Twitter, WhatsApp, Pinterest, pregnancy apps	Keep in contact with friends and family, explore the outside world, organise myself and my thoughts, privacy
122	Female	20	Student	Smartphone	iPhone 8 Plus	Monthly contract (includes mobile phone rental/lease)	Instagram, Camera, Facebook, Twitter, VSCO	Social media, taking photos, phone calls and texts/messages
122	Female	18	Student	Smartphone	Apple iPhone 5s	Monthly contract (includes mobile phone rental/lease)	Instagram, Twitter, Facebook, Messenger	Email, social media, phone
122	Female	25	Teacher	Smartphone	iPhone 7	SIM only contract	Facebook, Instagram, snapchat, daily mail	Social media, banking and work
122	Female	19	Bartender	Smartphone	Sony Xperia Xa2	Monthly contract (includes mobile phone rental/lease)	Spotify, Netflix	Internet access, texting, making calls

122	Female	27	Unemployed	Smartphone	Redmi note 4	SIM only contract	Pintrest, instagram, Spotify, Facebook	Apps above for sharing my artwork, finding artists, inspiration, local events, friends, global issues
121	Female	19	Student	Smartphone	Apple - Iphone 6	SIM only contract	Snapchat, Instagram, Twitter, Facetime	To contact people, play games, get news
121	Female	23	Student	Smartphone	iPhone 7plus	Monthly contract (includes mobile phone rental/lease)	Facebook twitter Instagram snapchat coinmaster	Call text social media internet emails
121	Female	21	Student	Smartphone	Smsung s8	Monthly contract (includes mobile phone rental/lease)	Facebook Instagram Twitter reddit	Social media
121	Female	29	Student/betting shop manager	Smartphone	iPhone 7	Monthly contract (includes mobile phone rental/lease)	Twitter, instagram, daily mail, sudoku	Maps, contact, social media, news, education,
121	Female	18	Full time student	Smartphone	iPhone 6+	Pay as you go (PAYG)	Facebook, YouTube, snapchat, Netflix™s	Communication, social networking, gaming, photos and music
121	Non-binary	22	Waiter	Smartphone	Samsung	SIM only contract	Reddit	Social/organiser
121	Female	20	Student	Smartphone	iPhone 5S	SIM only contract	Solitaire, Facebook, Wattpad	Work, Social, Relaxation
120	Female	18	student	Smartphone	IPHONE	SIM only contract	TWITTER, INSTAGRAM, CANDY CRUSH, TWITCH, FORTNITE	COMMUNICATION
120	Male	19	uni student	Smartphone	apple	Monthly contract (includes mobile phone rental/lease)	twitter	me
120	Female	30	Nurse	Smartphone	iPhone 8	Monthly contract (includes mobile phone rental/lease)	Facebook, Instagram, snapchat,	Entertainment, socialising
120	Female	19	Student	Smartphone	iPhone XR	Monthly contract (includes mobile phone rental/lease)	Social media apps e.g. Snapchat, Instagram	Stay in contact with family/friends
119	Male	19	Student	Smartphone	I phone 7	Monthly contract (includes mobile phone rental/lease)	Facebook	Ringng people, texting people, social media, sometimes games
119	Female	25	Project Manager	Smartphone	iPhone 8	Monthly contract (includes mobile phone rental/lease)	Spotify, Netflix, instagram, google maps,	Calculator, diary, phone numbers, maps, music, social media, emails
118	Female	20	Warehouse Operative	Smartphone	iPhone XS Max	Monthly contract (includes mobile phone rental/lease)	Messages, Facebook, YouTube	Streaming, calls, texts, social media, work

118	Female	20	Full time psychology student	Smartphone	Iphone 5S	SIM only contract	Facebook, Snapchat, Instagram	Call, text, social media
117	Non-binary	20	Student	Smartphone	Apple iPhone 8+	Monthly contract (includes mobile phone rental/lease)	Safari, Discord, Spotify, Netflix, Prime Video	All uses of a low-end laptop inc. internet access, video streaming, music streaming, sending and receiving emails and reading ebooks, as well as taking and receiving calls and texts and paying for things using Apple Pay
117	Male	18	Student	Smartphone	Apple iPhone 7	SIM only contract	Snapchat, instagram, Facebook, google chrome, google home	Control home smart devices, communicating, news, social media
117	Female	21	full time undergrad	Smartphone	iphone 6s	Monthly contract (includes mobile phone rental/lease)	snapchat, twitter, candy crush, mammal mapper, outlook, derby uni,	every day social media and education
116	Female	19	unemployed	Smartphone	iphone4s	Monthly contract (includes mobile phone rental/lease)	Instagram, Snapchat	Social Media. messaging, calls
116	Female	22	Student	Smartphone	iPhone 6	SIM only contract	Snapchat, instagram	Social media, text family and friends, take photos
116	Female	19	Student/ care assistant	Smartphone	Apple iPhone	SIM only contract	Facebook games	Call text internet apps
116	Female	39	Teacher	Smartphone	Samsung	Monthly contract (includes mobile phone rental/lease)	Good Food, Facebook, Twitter, mobile banking	Social media/networking, email, searching the internet, text, call, photos,
115	Female	23	Administrator	Smartphone	Google Pixel 3	SIM only contract	Instagram, EMTrains, Facebook Messenger, Whatsapp, Reddit, YouTube, Play Books	Alarm, Buying train tickets, social media, reading books, Watching Videos, Checking bus timetable
115	Female	32	Welfare Officer	Smartphone	Apple iPhone 7	Monthly contract (includes mobile phone rental/lease)	Instagram, Strava, Health	Apps, Whatapp, Text, Phone Calls
115	Female	22	Student	Smartphone	iPhone 6s Plus	Pay as you go (PAYG)	Social media	Text, social media, information gathering
114	Female	19	student	Smartphone	Iphone 7+	Monthly contract (includes mobile phone rental/lease)	Snapchat, Facebook, Instagram	Text, Calls, Internet, Social Media
114	Female	34	Court Administrator	Smartphone	Apple iPhone X	Monthly contract (includes mobile phone rental/lease)	Reddit	

114	Female	19	Insurance broker	Smartphone	iPhone X	Monthly contract (includes mobile phone rental/lease)	Facebook, Instagram, snapchat, weather, messages, emails, netflix	To call/text, social media, check weather and emails and to watch videos
113	Female	29	Teacher	Smartphone	iPhone 8	Monthly contract (includes mobile phone rental/lease)	Facebook, Twitter, timehop, snapchat	Social media, search function, time
112	Male	20	student	Smartphone	samsung galaxy	Pay as you go (PAYG)	amazon music and FB messenger	me
112	Female	19	Musical theatre student	Smartphone	I phone 8	Monthly contract (includes mobile phone rental/lease)	Instagram Snapchat Twitter Face tune City mapper Spotify	Map Alarm Dictaphone Camera
112	Female	39	Checkout operator	Smartphone	iPhone 6	SIM only contract	Facebook, Buzzfeed, Bored Panda,	Socialising, communicating, alarm, helping with day to day things
111	Female	19	Nursery Nurse	Smartphone	iPhone 7 Plus in Rose Gold	Monthly contract (includes mobile phone rental/lease)	Instagram, Snapchat, Twitter	Text, facetime, phone call, social media, internet browsing
111	Female	33	Lecturer	Smartphone	Iphone 6S	SIM only contract	Facebook, Twitter	Work and social
111	Male	18	Student	Smartphone	Huawei P20	SIM only contract	Snapchat, Facebook, WhatsApp, Autotrader, Amazon, Gmail	Communication, Photography, Purchasing, Browsing web
111	Female	18	Student/sales assistant	Smartphone	Samsung Galaxy A6	SIM only contract	Facebook, Spotify, Snapchat	Texting, calls, social media, internet
109	Male	34	Student	Smartphone	Iphone XS	Monthly contract (includes mobile phone rental/lease)	Outlook, Maps and Instagram	Everyday uses
109	Non-binary	19	Student	Smartphone	Samsung galaxy A3	Monthly contract (includes mobile phone rental/lease)	YouTube, Instagram, Facebook/Messenger	Internet access, play games, browse social media, text.
109	Female	20	Student	Smartphone	iPhone 7	Monthly contract (includes mobile phone rental/lease)	Facebook, Instagram, YouTube, messenger, Snapchat	Social media, keeping in touch with friends/family, education, entertainment, taking photos and videos
108	Female	18	Student	Smartphone	Apple iPhone 6s	SIM only contract	Snapchat	Texting and social media
108	Female	23	Legal Secretary	Smartphone	iPhone 7	SIM only contract	Instagram	Text, call, social media, photos
108	Female	26	Counsellor (mental health)	Smartphone	iPhone 7 Plus	Monthly contract (includes mobile phone rental/lease)	Facebook, emails, Sky News	Text, call, emails, general browsing on internet

108	Female	27	Pest Control Technician	Smartphone	Samsung S9	Monthly contract (includes mobile phone rental/lease)	Instagram, Chrome, Reddit is Fun, Johns GBC light, Facebook Messenger, Waze	Sat Nav, Access facebook, Facebook Messenger, Whatsapping, Surfing the Net,
107	Female	42	lecturer	Smartphone	Samsung A3	Monthly contract (includes mobile phone rental/lease)	Facebook, Twitter, Facebook Messenger, games (currently Hay Day, Candy Crush Saga, My Hospital, Mahjong Forest Journey)	checking emails, online searching/browsing/ buying, playing games, keeping in touch with family/friends using text/Messenger, the odd phone call
107	Male	20	student	Smartphone	iPhone 6s	SIM only contract	Youtube	Social media/Contacts
107	Female	21	Student teacher and full time sales assistant	Smartphone	Huawei p30 Pro	Monthly contract (includes mobile phone rental/lease)	Email, Google maps, just eat, wordsearch online	Texting, calling, work and personal emails, saving and editing documents, taking photos and some video, social media, work training, Internet browsing via the Google assistant
106	Male	22	Student	Smartphone	Huawei P20 Lite	Monthly contract (includes mobile phone rental/lease)	Google search engine, Wikipedia, YouTube, Music app.	Watching YouTube videos, Reading articles on Wikipedia and Google search engine, Listening to music.
106	Female	22	Student	Smartphone	iPhone 8	Monthly contract (includes mobile phone rental/lease)	Headspace, Instagram, Messenger	
106	Female	18	Student	Smartphone	Apple iPhone 8	Monthly contract (includes mobile phone rental/lease)	YouTube, instagram	Work and personal
106	Female	37	marketing assistant	Smartphone	i phone 7s	SIM only contract	WhatsApp, dojo, banking, sonos, spotify, facebook, Instagram rightmove	calls, texts, social media, music, utilities
106	Male	20	Student	Smartphone	iPhone 8	SIM only contract	Snapchat, Instagram	Messaging friends, playing games
106	Female	21	Unemployed	Smartphone	Iphone5	Monthly contract (includes mobile phone rental/lease)	Instagram, Twitter, Facebook messenger	
106	Female	44	Sales assistant	Smartphone	iPhone 5s	Monthly contract (includes mobile phone rental/lease)	Facebook, BBC News	Telephone calls, email, apps (see above), Messenger

106	Female	19	unemployed	Smartphone	Iphone 7	Monthly contract (includes mobile phone rental/lease)	youtube, facebook, reddit.	calling, texting, internet uses, games, apps
105	Female	25	Document specialist	Smartphone	iPhone 6s	Monthly contract (includes mobile phone rental/lease)	Facebook messenger, whatsapp, Twitter, Instagram	Calls, texts, browsing, IM, social media
105	Female	22	Student	Smartphone	Samsung s7	Pay as you go (PAYG)	Instagram, Pokemon gp	Pokemon go and social media, occasional calls
104	Male	22	Student	Smartphone	Samsung galaxy s8	Monthly contract (includes mobile phone rental/lease)	YouTube and snapchat	Phone, test and watch videos
103	Female	23	full time student	Smartphone	Samsung S7	SIM only contract	snapchat facebook instagram wordchums	calling texting browsing internet sites and apps
103	Female	38	Student nurse	Smartphone	Samsung S9	Monthly contract (includes mobile phone rental/lease)	Facebook, Daily Mail, Whatsapp, coin master	Messaging, calls, social media, games
103	Female	34	Lecturer	Smartphone	iPhone 6	Pay as you go (PAYG)	Twitter	Social media, research, design
102	Female	24	Chef	Smartphone	Samsung S10+	Monthly contract (includes mobile phone rental/lease)	Facebook / instagram / Ovia	Social / gaming
101	Female	19	Full time student/part-time care assistant	Smartphone	iPhone 8 Plus	Pay as you go (PAYG)	Instagram, Twitter, WhatsApp, Spotify, My Fitness Pal, Snapchat, Wordpress	Communicate, take photos, research, check emails, write to-do-lists, fitness tracker, reminders, business
101	Female	22	Student	Smartphone	Huawei p10 lite	Pay as you go (PAYG)	Instagram, Facebook, YouTube, questions diary, Lloyds mobile banking, WhatsApp	Email, social media, contact social group
101	Male	21	Student	Smartphone	Samsung galaxy s9	Monthly contract (includes mobile phone rental/lease)	Whatsapp	Talk to people Google things Use email
100	Female	21	Student	Smartphone	iPhone 6s	SIM only contract	Messenger, google maps, firstbus, you version, weather, banking	Getting around and talking to friends
100	Female	22	Full time carer	Smartphone	Motorola G	Pay as you go (PAYG)	Facebook. Pixel Art	Calls, texts, social media
100	Female	39	Project worker	Smartphone	Apple phone 6	SIM only contract	Facebook	Calls texts games
99	Male	19	Student	Smartphone	Samsung galaxy 7 edge	SIM only contract	YouTube, Instagram and games.	Gaming, social media and wasting time.
99	Female	32	Homemaker	Smartphone	iPhone	Pay as you go (PAYG)	Travel	Calls, texts, social media, research, shopping

99	Male	39	Forklift Engineer	Smartphone	iPhone 8	SIM only contract	Google, Face book, weather,	Work/ home
99	Female	41	Manager	Smartphone	iPhone 7+	Monthly contract (includes mobile phone rental/lease)	Facebook, candycrush, Yahoo, Google	Social media, research, games, communication
98	Female	21	Sales assistant	Smartphone	Huawei P Smart	Monthly contract (includes mobile phone rental/lease)	Spotify, YouTube, or any games on my phone	Calls & texts, email, social media, games, work content, alarm clock, camera, diary, banking
98	Female	55	Carer	Smartphone	Samsung Galaxy	Monthly contract (includes mobile phone rental/lease)	Kindle Amazon candy crush Facebook	Text calls social media
98	Female	24	Self employed	Smartphone	Lg g7	Monthly contract (includes mobile phone rental/lease)	Instagram, Facebook, WhatsApp	Keep in touch with people , browse social media
97	Female	22	Student	Smartphone	Huawei p20 pro	Monthly contract (includes mobile phone rental/lease)	Spotify insta Facebook Twitter snapchat	Everything
96	Female	38	Doctor	Smartphone	iPhone 6S	Monthly contract (includes mobile phone rental/lease)	Todoist, Vora, Happy Scale, My Fitness Pal, Gmail, Facebook, Messenger, WhatsApp	Keep in contact with friends, monitor and improve health
96	Female	19	Student and Support Worker	Smartphone	iPhone 6	Pay as you go (PAYG)	WhatsApp and Facebook	Entertainment and contacting family abroad
95	Male	24	Student	Smartphone	iPhone SE	SIM only contract	Books	Reading, social media, browsing the internet
95	Male	28	PhD Student	Smartphone	Blackberry Keyone	SIM only contract	Facebook, Whatsapp, Amazon Shopping, Netflix, Deliveroo	Navigate the internet, order food, buy online
94	Female	18	Barista	Smartphone	Samsung A8	Monthly contract (includes mobile phone rental/lease)	Snapchat, UDo, Dayforce, online banking & Instagram	Calls, texts, social media, maps,
94	Male	34	Administrator	Smartphone	Samsung Galaxy	Monthly contract (includes mobile phone rental/lease)	Twitter, Guardian, Pokemon Go	Games, reading, email, social media
94	Female	19	Freelance groom	Smartphone	IPhone 7	Monthly contract (includes mobile phone rental/lease)	Facebook, Snapchat, Instagram.	To contact loved ones and keep up to date with social media
94	Female	18	Student	Smartphone	Samsung Galaxy s7	Monthly contract (includes mobile phone rental/lease)	Instlife, Twitter, Spotify	Contacting family and taking up waiting time
94	Female	26	Software engineer	Smartphone	iPhone X	SIM only contract	Instagram, Reddit,	Call, text, internet access

							Facebook, Slack	
93	Female	22	Student	Smartphone	Iphone 6s	Monthly contract (includes mobile phone rental/lease)	snapchat youtube spotify	listening to music, contacting friends, taking pictures
93	Female	31	Administrator	Smartphone	Samsung S8	SIM only contract	Whatsapp, Instagram, Pokemon Go, Fitbit	Personal use only
93	Female	18	College Student/Piano Teacher	Smartphone	iPhone 7	Monthly contract (includes mobile phone rental/lease)	TerraGenesis, Snapchat, Music	Listen to music, text/call people, sending emails.
93	Female	30	Operational Support Assistant	Smartphone	LG K8 (2017)	Monthly contract (includes mobile phone rental/lease)	Instagram, Goodreads	Texts, Calls, Photos, Social Media
93	Gender non-conforming/other	21	Unemployed	Smartphone	iPhone 5se	Pay as you go (PAYG)	Facebook, messenger, Tri peaks solitaire,	Mostly games
91	Female	19	Apprentice early years educator	Smartphone	Samsung J5	Monthly contract (includes mobile phone rental/lease)	Facebook, snapchat and instagram	To talk to friends and family, take photos, play games and watch Netflix
91	Female	27	Postdoc	Smartphone	Huawei honor 9 lite	SIM only contract	Outlook, BBC news, WhatsApp, Facebook	For work, email, personal, contact with family and friends who live far away
90	Female	21	Student	Smartphone	Huawei pro20 lite	Monthly contract (includes mobile phone rental/lease)	WhatsApp	
90	Female	25	Teacher	Smartphone	iPhone 7	Monthly contract (includes mobile phone rental/lease)	Facebook, Instagram, maps, snapchat	Everything!
89	Female	33	Senior Admin Asst	Smartphone	Huawei P20 Pro Lite	Monthly contract (includes mobile phone rental/lease)	Slack, Instagram, Firefox Focus, Trello,	organiser, phone calls, messaging, note taking, camera
89	Female	25	Senior healthcare assistant	Smartphone	iPhone 6s	Monthly contract (includes mobile phone rental/lease)	Instagram, Facebook, Twitter, wordscapes (game), youtube	Keep in contact with friends/family, social media, camera
89	Female	33	Teaching assistant	Smartphone	Moto c plus	Monthly contract (includes mobile phone rental/lease)	Games and just eat app	Text email calls
88	Gender non-conforming/other	28	Teaching assistant	Smartphone	Huawei 7	Pay as you go (PAYG)	Facebook Instagram snapchat	Text call social media
87	Female	42	Researcher	Smartphone	Iphone 5C	Monthly contract (includes mobile phone rental/lease)	Whatsapp, weather, bbcplayer, facebook, banking apps, maps, amazon, amazon music	voice calls, video calls, social media, sms, satnav, radio, music player, camera, internet

86	Female	19	Student	Smartphone	Apple	Monthly contract (includes mobile phone rental/lease)	Instagram, Twitter, Google Play Music	Social media, listening to music and answering emails
86	Female	28	Unemployed	Smartphone	Samsung S8	Monthly contract (includes mobile phone rental/lease)	Facebook, Wizards Unite	Calling, texting, social media
85	Female	23	Post woman	Smartphone	Samsung s8	Pay as you go (PAYG)	Facebook Instagram	Games social media music google maps
85	Female	18	Student	Smartphone	iPhone 6s+	Pay as you go (PAYG)	Snapchat and instagram	Anything I need really
84	Female	22	Student	Smartphone	iPhone 6s	Monthly contract (includes mobile phone rental/lease)	Snapchat	Messaging, calls, social networking
84	Female	22	Student	Smartphone	Samsung	Pay as you go (PAYG)	Facebook	Texting
83	Male	19	student	Smartphone	wileyfox	Pay as you go (PAYG)	Youtube, twitter and reddit	calls, texts messenger, money management
83	Female	20	student	Smartphone	apple, iPhone SE	Pay as you go (PAYG)	twitter	
83	Male	18	Student	Smartphone	iPhone 7+	Monthly contract (includes mobile phone rental/lease)	Spotify, YouTube, Instagram, Google Chrome & Maps	Pretty much everything
83	Female	55	Receptionist	Smartphone	Samsung S7	Monthly contract (includes mobile phone rental/lease)	Candycrush /fb/whatsapp/messenger/ringgo/misfit	Text/email/internet/games
83	Female	18	Student	Smartphone	iPhone 5s	Pay as you go (PAYG)	Messenger, Instagram, Hemptire (game)	Playing games, talking to people, uploading my art onto Instagram
83	Male	20	student	Smartphone	sony xperia xa2	Monthly contract (includes mobile phone rental/lease)	firefox, discord, melon vpn	making phone calls, sending sms and discord messages, browsing internet
82	Female	18	N/a	Smartphone	Huawei	Monthly contract (includes mobile phone rental/lease)	Instagram	All
78	Male	19	Student	Smartphone	Samsung Galaxy S7	Monthly contract (includes mobile phone rental/lease)	Twitter, Facebook messenger, Reddit, Bloody Disgusting, Youtube	Calls, texts, other messaging, passing the time on the toilet, social media, google
78	Male	22	Student	Smartphone	Samsung	Monthly contract (includes mobile phone rental/lease)	YouTube, Snapchat and facebook	Phone, text, watch videos
78	Female	40	Reader	Smartphone	One plus 3t	Monthly contract (includes mobile phone rental/lease)	My fitness pal, garmin connect, camera, Instagram	Fitness apps, social media, photos
77	Male	59	lecturer	Smartphone	i phone 4	Monthly contract (includes mobile phone rental/lease)	BBC Sport, Met Office,	text, internet, phone

							BBC News, Facebook	
77	Female	35	Student	Smartphone	One plus 6	Monthly contract (includes mobile phone rental/lease)	Snapchat and Facebook	Communication with friends and information searches
77	Female	25	Unemployed	Smartphone	HUAWEI P8 lite	Pay as you go (PAYG)	Twitter, Pinterest, homescapes, buddypoke	Text family, take photos of nature/environment, check social media, look at memes and pictures, play games
76	Female	20	Student	Smartphone	LG G5	Pay as you go (PAYG)	Messenger, Skype, Snapchat	Calling, taking photos, texting with friends, browsing the internet, playing music
76	Female	36	Social Worker	Smartphone	Samsung S9	Monthly contract (includes mobile phone rental/lease)	WhatsApp, Facebook, snapchat, twitter,	
76	Female	18	Student and Part Time Customer Assistant	Smartphone	iPhone 7	Monthly contract (includes mobile phone rental/lease)	Twitter, TikTok, Phone	Call, Talk to friends, look at the news, watch funny videos
75	Female	21	student	Smartphone	iphone	Monthly contract (includes mobile phone rental/lease)	instagram	no
75	Female	23	Student	Smartphone	Apple	Monthly contract (includes mobile phone rental/lease)	Outlook Fitbit	Personal and professional
74	Female	42	Mature student	Smartphone	Samsung s9+	Pay as you go (PAYG)	Facebook, my fitness pal. Word, Instagram. You tube. Watsapp, snap chat. Online banking. Uni udo.	Calls, texts, photos. Videos, reminders. Online banking, university apps. Younger son goes on alot to watch youtube toddler videos.
74	Female	24	Student	Smartphone	iPhone 6S	SIM only contract	Instagram, Spotify, Apple Podcast and Google Chrome	Texts, Calls, Social Media and Media (music, spotify and netflix)
72	Female	32	Project delivery lead NHS	Smartphone	Blue vivo xl	SIM only contract	Banking messages web pages	I don't understand
71	Male	18	Student	Smartphone	Motorola	Monthly contract (includes mobile phone rental/lease)	Reddit, Guardian, and UoD	Work, entertainment, pass the time
71	Female	40	Missionary	Smartphone	Moto G5S	Pay as you go (PAYG)	Messenger, Instagram, anything google	Work, social, Web browsing, social, TV (when in hospital), chords for music, leisure
71	Female	28	Administrative Assistant	Smartphone	Nokia (unsure)	Monthly contract (includes mobile phone rental/lease)	email, calendar, maps	call, text, emails, calendar, maps, alarm clock, camera
71	Female	48	Office manager	Smartphone	Samsung s6	SIM only contract	Email/ BBC I player / duolingo	Communication. Entertainment. Education

71	Female	37	full time student and disability	Smartphone	Xaomi 5 plus	Pay as you go (PAYG)	moon-reader-pro, natwest banking, google calendar, Facebook messenger	messaging, reading, calendar, emergency contact
71	Female	22	PSA	Smartphone	Samsung A70	Monthly contract (includes mobile phone rental/lease)	Facebook and Instagram	
70	Female	22	Student	Smartphone	Xiaomi Redmi Note 4x	SIM only contract	Messenger	To communicate with friends, use callendar, track my diary
69	Female	38	University Manager	Smartphone	Huawei Honor 6	Monthly contract (includes mobile phone rental/lease)	BBC News, Email, Camera, whatsapp	Internet, email, whatsapp, calls
69	Female	19	Student	Smartphone	iPhone x	Monthly contract (includes mobile phone rental/lease)	Facebook	Social media
69	Female	42	Finance Manager	Smartphone	Iphone	SIM only contract	Facebook, Instagram, Daily Yoga, Gmail, Outlook, Ryanair	Texting, calling family, social media, email, work
69	Female	28	Chef	Smartphone	iPhone 8	Monthly contract (includes mobile phone rental/lease)	Facebook, camera, wordesearch, disneyland	Games, internet, texting/whastapping, pictures
67	Female	40	student	Smartphone	samsung S9	Monthly contract (includes mobile phone rental/lease)	whatsapp	communication of all sorts,internet browsing,waching movies,listening to music,making lists,etc
67	Female	41	Library assistant	Smartphone	Fairphone 2	Monthly contract (includes mobile phone rental/lease)	Text messages, Keep notes	Texting, recording to-do jobs, alarms
67	Female	33	Chef	Smartphone	Huawei	Monthly contract (includes mobile phone rental/lease)	Facebook, Instagram	Calls, text and internet
66	Female	46	student	Smartphone	samsung galaxy 6s	SIM only contract	uod banking, emials, games	evrything
66	Female	30	lecturer	Smartphone	iphone 6plus	Monthly contract (includes mobile phone rental/lease)	facebook, you tube, instagram	call and text
66	Female	34	Student	Smartphone	iPhone XR	Other (please describe briefly) Monthly subscription	Seaport	Games, keeping in contact with friends/family
65	Female	58	lecturer	Basic mobile phone	Nokia	SIM only contract	n/a	phoning or texting
65	Female	47	Strategic Advisor	Smartphone	iphone SE	Monthly contract (includes mobile phone rental/lease)	WhatsApp Messanger Facebook FaceTime Maps Voice	Internet Email Camera Banking

							recorder Notes Snapchat Spotify Camera Lloyds	
63	Female	38	Student	Smartphone	Apple iphone 6	Monthly contract (includes mobile phone rental/lease)	my fitness pal, twitter	contact, pictures, messages, fitness tracking, calorie counting, directions
63	Female	19	student	Smartphone	iphone 6	Pay as you go (PAYG)	twitter, messenger	as a phone
61	Male	36	Student	Smartphone	Sony Xperia XZ2	Monthly contract (includes mobile phone rental/lease)	Facebook. Discord. Reddit. Sky Sports Football. Instagram.	Primary phone, texting, quick information gathering, email
61	Female	26	Self Employed	Smartphone	LG G5	Pay as you go (PAYG)	FB messenger	Passing time
59	Female	36	Retail & Reception Manager	Smartphone	Samsung galaxy (not sure of model)	Monthly contract (includes mobile phone rental/lease)	Trainline, BBC weather, Facebook, email, bus tracker	Phone, camera, messenger, text, internet, bus tickets
59	Female	39	Clinical Scientist	Smartphone	Iphone	Monthly contract (includes mobile phone rental/lease)	Facebook WhatsApp	Text, internet
58	Male	38	Lecturer	Smartphone	Samsung S8	Monthly contract (includes mobile phone rental/lease)	Facebook, Twitter, BBC oplayer, various banking apps, ebay, airbnb, booking.com	calls, browsing web, social media. messaging
58	Female	36	Student	Smartphone	iPhone 7	Monthly contract (includes mobile phone rental/lease)	Twitter, Facebook, email	
56	Female	18	University	Smartphone	Iphone 6s +	Pay as you go (PAYG)	Snapchat, facebook, Instagram	Many
55	Female	20	Freelance equestrian groom	Smartphone	iPhone	Monthly contract (includes mobile phone rental/lease)	WhatsApp and Facebook	Social media and networking, contact and internet access
53	Female	28	College Support Officer	Smartphone	iPhone 6s	Monthly contract (includes mobile phone rental/lease)	None	phone, text
50	Female	35	Hairdresser and bar aid	Smartphone	iPhone x	SIM only contract	Facebook	Online banking email text phone calls shopping pictures
48	Male	54	Business Improvemen t	Smartphone	Apple 6sPlus	Pay as you go (PAYG)	Safari	Reading, browsing (looking up, news), weather, minor social media and keeping in contact
47	Female	57	Lawyer	Smartphone	Nokia	Monthly contract (includes mobile phone rental/lease)	BBC news	News, texts, calls
46	Female	53	Lecturer	Smartphone	Sony Xperia	SIM only contract	Twitter, Facebook (FB)	Texts, Twitter, occasional FB,checking work

								calendar, camera (when it works!)
46	Female	29	Teacher	Smartphone	iPhone 5s	SIM only contract	Banking app, facebook	Calls, texts, online banking, facebook
45	Female	56	Health Care Assistant	Smartphone	Samsung Galaxy S9 Plus	Monthly contract (includes mobile phone rental/lease)	Banking	5
44	Male	61	Academic	Feature phone (ability to access the Internet but lacks the advanced functionality of a smartphone)	Nokia	Monthly contract (includes mobile phone rental/lease)	None	Calls, text
44	Male	53	University Lecturer	Smartphone	Huawei P Smart	SIM only contract	Google Chrome	Text, phone, Internet (Web browsing), stopwatch, calculator
43	Female	57	Student support	Basic mobile phone	Nokia - no further information given on phone. 13 years old	Pay as you go (PAYG)	none	phone calls, texts, on an occasional basis
31	Female	23	Self-Employed	Smartphone	Iphone 4S	Pay as you go (PAYG)	Google Maps, WhatsApp.	Calling, Directions.

Table S2

Summary of the Demographic Information Reported by the 424 Participants Who Completed the MPPUS Questionnaire Between 07 February and 19 August 2019.

MPPUS score (/270)	Gender (Number of participants)	Age range (Number of participants)	Mobile phone description selected (Number of participants)	Mobile phone brand reported (Number of participants)	Service contract type reported (Number of participants)
Minimum 31 Maximum 261 Percentiles 25% 103 50% 133 75% 162.75 80% 171 90% 189	424 participants Female (354) Male (61) Non-binary (4) Gender non-conforming /other (3) Do not wish to disclose (2)	18 – 61 years Mean 25.47 SD 8.68 Median 22 IQR 9 18-25 (283) 26-35 (81) 36-45 (42) 46-55 (12) 56 -61 (6)	Smartphone (421) (ability to access the internet and supports the use of apps) Basic mobile phone (2) (talk and text only) Feature phone (1) (ability to access the Internet but lacks the advanced functionality of a smartphone) Note: Two of the four participant that reported that they used a basic mobile phone, but the mobile phone brand and model that they reported (Apple iPhone 7 and Samsung S6) met the criteria of a smartphone.	Apple (266) Samsung (83) Huawei (27) Sony (7) Honor (7) Motorola (6) Nokia (6) LG (5) Google (4) OnePlus (4) Xiaomi (3) Wileyfox (2) Blackberry (1) BLU (1) Fairphone (1) ZTE (1)	Monthly contract (includes mobile phone rental/lease) (271) SIM only contract (105) Pay as you go (PAYG) (46) Other (please describe briefly) (2) Monthly subscription (1) Rolling monthly pay as you go with data/mins etc included (1)

Appendix T

Study 4: MPPUS Cut-off Score Calculations

SPSS Output Table for the 80th and 90th Percentile Score for 424 participant MPPUS Scores

Statistics

MPPUS Score

N	Valid	424
	Missing	0
Percentiles	80	171.0000
	90	189.0000

Appendix U

Study 4: Interview Phase Participant Demographic Information

Table U1

Demographic Information Reported by the 20 Participants Who Participated in the Interview Phase of Study 4 Between 13 February and 19 August 2019.

The participants are listed in ascending MPPUS score order. This is because the MPPUS scores, particularly high MPPUS scores, are meaningful to the study.

Participant pseudonym	MPPUS score (/270)	Interview type	Gender	Age	Occupation reported	Mobile phone description Selected	Mobile phone brand and model reported	Service Contract type	Favourite Apps reported	Mobile phone uses reported
Aisha	244	Mobile phone	Female	21	Student	Smartphone	Iphone 7	Sim only contract	Instagram	Emailing, Texting, Calling, Video Calls, Social Media
Lucy B.	210	Mobile phone	Female	18	Student/ Waitress	Smartphone	iPhone 8	Monthly contract	Facebook, Snapchat & Instagram	Social media
Emma	200	Mobile phone	Female	24	Developer	Smartphone	iPhone 6s	SIM only contract	Animal Crossing Pocket Camp; Facebook; Messenger; Safari; Twitter; Instagram; Youtube; Signal; Pokemon Go; Ingress	Social Media, Banking, Research, Gaming, Photo/Video editing, Calling
Sam	199	Mobile phone	Female	39	Teacher	Smartphone	iPhone X	Monthly contract	Safari, Facebook, reminders, audible, calendar, messages	Communication , listening to audio books/reading, tv on occasion, social networking
Book Girl	196	Mobile phone	Female	26	Support Worker	Smartphone	Huawei p20 lite	Monthly contract	Facebook, Instagram, Twitter, WhatsApp, Outlook	Personal. For watching Netflix, streaming Netflix, watching YouTube videos and social media.
Emily	191	Face to face	Female	18	Student	Smartphone	Huawei P8 lite 2017	Monthly contract	Snapchat, Instagram, Tumblr	Call, text, message, email, social media

Danni	190	Mobile phone	Female	21	Student	Smartphone	iPhone 7 Plus	Monthly contract	Facebook, FB messenger, Tumblr, Instagram,	For university (to access and edit docs for assignments). For social media. For communicating with people both in the same country and abroad. As a GPS beacon for my family to know I am safe. For emails to be up to date. For music and films.
Leah	188	Face to face	Female	19	Student	Smartphone	iPhone XR	Monthly contract	Spotify, Instagram, snapchat	Calls, texts, engaging with friends and family
Rose	185	Mobile phone	Female	33	Fulltime postgraduate student	Smartphone	Samsung S9	Monthly contract	Pinterest, Instagram, focus, online banking, youtube	Phone calls, messaging, browsing internet, camera
Matthew	184	Mobile phone	Male	27	Civil servant	Smartphone	iPhone	Monthly Contract Sim only contract stated during interview	Telegram, Instagram, Facebook	Trading, social, communication
Sophia	183	Mobile phone	Female	35	Dental ceramist	Smartphone	Samsung s9	Monthly contract	Facebook, Instagram, WhatsApp, candycrush	Keeping in touch with family and friends, satnav, shopping
Lucy	180	Mobile phone	Female	24	Dental technician	Smartphone	Google Pixel	Monthly contract	Keeping in touch with family and friends, satnav, shopping	Social, music, photos
Julia	179	Mobile phone	Female	19	Student	Smartphone	iPhone 8	Monthly contract	Snapchat, instagram, Netflix, Apple music	Talk to friends and family, social media, taking photos, listening to music, Callander app, alarm clock, timer, FaceTime and calls
Lily	177	Mobile phone	Female	20	Student	Smartphone	Samsung A5	Pay as you go (PAYG)	Games and Facebook	Social media, Games, Contacting people
Louise	177	Mobile phone	Female	26	Student mental health nurse	Smartphone	Apple iPhone 8	Monthly contract	WhatsApp, Spotify, Instagram, Facebook	Text, call, social media
John	177	Mobile phone	Male	24	Accountant	Smartphone	Samsung Galaxy S8	Monthly contract	Social Media	Calls, Texts, Music and Video Streaming and General Internet use

Alice	176	Mobile phone	Female	23	Teaching assistant	Smartphone	iPhone 7	Sim only contract	Spotify, Netflix, Facebook, Whatsapp, messenger, snapchat, duolingo, Waze, GinRummyPlus, clue, hyperlapse	Social media, contact family, photo and video editing, emails
Rebecca	175	Mobile phone	Female	30	Full time student	Smartphone	iPhone 7	Monthly contract	What's app, Facebook, Instagram	Calls, entail, file sharing, shopping, organising
Alison	174	Mobile phone	Female	24	Postgraduate student	Smartphone	Apple iPhone 7	Monthly contract	Chrome, prime video, NatWest, Snapchat, Instagram, tinder	Entertaining, bus pass, camera, communication with others
Lillian	172	Mobile phone	Female	35	Psychiatric nurse	Smartphone	iPhone xr	Monthly contract	Instagram Facebook	Music social media texting

Table U2

Summary of the Demographic Information Reported by the 20 Participants Who Participated in the Interview Phase of Study 4 Between 13 February and 19 August 2019.

MPPUS score /270 (Number of participants)	Interview type (Number of participants)	Gender (Number of participants)	Age Range (Number of participants)	Mobile phone description Selected (Number of participants)	Mobile phone brand reported (Number of participants)	Service Contract type reported (Number of participants)
Minimum 172 Maximum 244 Between the 80 th – 90 th percentile (13) Above the 90 th percentile (7)	Mobile phone (18) Face-to-face (2)	Female (18) Male (2)	18 – 39 years Mean 25.30 SD 6.17 Median 24 IQR 9 18-25 (12) 26-35 (7) 36-39 (1)	Smartphone (20) (ability to access the internet and supports the use of apps)	Apple (13) Samsung (4) Huawei (2) Google (1)	Monthly contract (includes mobile phone rental/lease) (16) SIM only contract (3) Pay as you go (PAYG) (1)

Thank you for reading this thesis.

Michael