

The Impact of Mobile Phones on social Interaction



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ABSTRACT

This dissertation attempts to understand the reasons behind the growth of mobile phones and the impact of this growth on social interaction.

In order to achieve this aim, the study looks at two separate communities. It firstly looks at the impact the mobile phones have had on the social interaction of the general public, and secondly it take a more concentrated look at the subject by studying the impact on the 13-18 year old community.

This aim was achieved through the use of questionnaires, a focus group and a literature search. The questionnaires were conducted on both the general public and 13-18 year old community. Similarly, the focus group was also conducted on the 13-18 year old community to gain a deeper understanding of the questionnaire results. Analyses of these questionnaires and focus group, combined with the literature search form a major part of the project.

Findings suggest that there is no single reason behind the growth of mobile phones and different factors hold varying levels of importance depending upon geographical, economic, political and social factors. Similarly, whilst mobile phones have had both a positive and negative effect on social interaction, it may be fair to conclude that the positive effects outweigh the negative effects. It is concluded that, it is vital to sustain these benefits whilst attempting to reduce the risks involved through taking a cautious approach in using this technology.

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1- Background & context

1.1 - History

The basic concept of mobile phones began in 1947, when researchers looked at crude mobile (car) phones and realized that by using small cells (range of service area) they could increase the traffic capacity of mobile phones substantially. However the lack of technology combined with Federal Communication Commission (FCC) regulation meant that it was not until 1968 when the FCC reconsidered its stance that AT&T and Bell Labs proposed a cellular system to the FCC of many small, low-powered, broadcast towers, each covering a 'cell' a few miles in radius and collectively covering a larger area. The system proposed that each tower would use only a few of the total frequencies allocated to the system and as the phones travelled across the area, calls would be passed from tower to tower (1).

Dr Martin Cooper, a former general manager for the systems division at Motorola, is considered the inventor of the first modern portable handset. Cooper made the first call on a portable cell phone in April 1973. He made the call to his rival, Joel Engel, Bell Labs' head of research. Bell Laboratories introduced the idea of cellular communications in 1947 with the police car technology. However, Motorola was the first to incorporate the technology into a portable device that was designed for use outside of an automobile.

However, despite registering one million users by 1987 (1), it was not until the mid – late 1990's that mobile phones became more than a *yuppie status symbol* and began to become one of the fastest growing technologies in today's society.

1.2 – In current context

In the words of Ericsson president Kurt Hellstrom, “the mobile phone revolution will have the same impact on society in the 21st century that the industrial revolution had on society in the 18th century” (Cited in (2)).

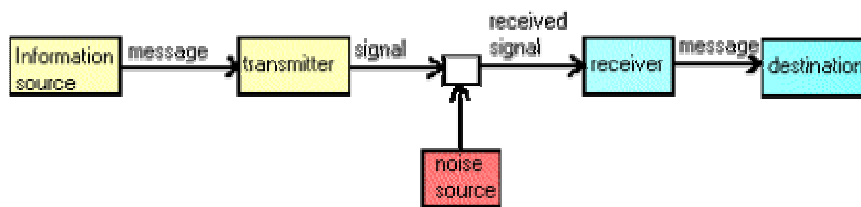
This statement by Hellstrom is based upon the unprecedented growth that the mobile phone industry has experienced in the last 5 years. This growth is reflected in a recent BBC online new report entitled *the future is mobile* (3), which shows that over 50% of Britain’s population now owns a mobile phone. Similar growth has been seen throughout Europe with figures from leading management consultants Mckinsey (4) showing a mobile phone penetration rate in Europe of 39% in 1999, increasing to 68% in 2001 and expecting to grow to 83% by 2003.

Region	1998	1999	2000	2001	2002	2003
Europe	28	39	55	68	77	83
Japan	38	42	50	58	62	68
US	25	30	38	48	50	60

Mobile phone penetration rate by region 1998 – 2003 (4)

This growth is expected to continue with sales expected to be driven by the next generation of mobiles coming into service in the next few years that are expected to offer internet access, e-mail, video conferencing and computer services, all through a single handset.

It is feared that this growth in technology will have a direct effect on traditional methods of social interaction. This fear is summed up by Norman Lamont's description of mobile phones as *"the scourge of modern life"* (5). Social interaction is defined by R.J.Rummel (6) as *"the acts, actions, or practices of two or more people mutually oriented towards each other's selves, that is, any behaviour that tries to affect or take account of each other's subjective experiences or intentions"*. This response is not limited just to friends, family and close ties, but incorporates the ways in which people respond to everyone that they interact with. This can be further defined using the Shannon and Weaver communication model (7) which is a transmission model for communication. This model identifies six key elements of source, encoder, message, channel, decoder and receiver which must be present in all communication. It is the channel aspect of the model where the mobile phone is becoming an increasingly used tool and as a result this growing use may have a direct effect on the interaction habits of the user.



Conversely, many such as Norman Lamont (5) argue that mobile phones are having a direct impact on traditional methods of social interaction such as physically meeting people and going out with friends. It is argued that mobile phones isolate individuals with their ability to be ever present to interrupt an important conversation, family gathering or night out with friends.

In contrast, the traditional view on the effect of mobile phones on social interaction is summed up well by Timo Kopomaa's statement "the mobile phone has accelerated the experience of freedom" (8). Many believe that mobile phones increase the speed, accessibility and freedom to both information and people and therefore mobile phones have not only introduced new and more efficient methods of interaction but also increased traditional methods as people now have greater accessibility to each other.

Finally, mobile phone technology continues to grow with the introduction of Wireless Application Protocol (*WAP*) following the recent sale of third generation (*3G*) licensing. WAP is defined (9) as a protocol that allows wireless devices such as phones, pagers and PDA's to retrieve information from the Internet and display it on a wireless browser. This allows mobile phones the capability to send and receive email, indulge in video conferencing and access information. Furthermore this technology is seen as the stepping stone towards m-commerce which is defined as "next generation e-commerce" and allows the buying and selling of goods, services and information through a wireless handheld device such as the mobile phone. According to Boston consulting figures (4), m-commerce is expected to be a \$122.6 billion industry by 2004.

This study will attempt to research, analyse and understand the reasons behind this growth and the impact that this growth has had on social interaction.

1.3 – Aims & Objectives

The main aim of this dissertation is to investigate the impact that the growth of mobile phones have had on social interaction. It will also assess the reasons behind this growth, whether this growth has helped or hindered social interaction and the future impact of this continuing growth and technological advancement.

The following objectives will be used to achieve this aim:

- To investigate the reasons behind the growth of mobile phones

- To investigate whether mobile phones have had a positive or negative effect on social interaction

- To investigate the impact mobile phones have had on the 13 – 18 year old age group

I have chosen these objectives as I believe that they allow me to successfully draw conclusions and answer my aim. The first objective that seeks to understand the reasons behind the growth of mobile phones, offers good background knowledge regarding the growth of this tool and reasons why it has become so popular. The second objective seeks to understand the effect that this growth has had on social interaction on society in general and provides a very broad and generalised overview. Finally, the third objective compliments the second objective by looking at a particular community such as young people aged 13-18 and the effect that mobile phones have had on the social interaction habits of this particular

segment of society. This objective therefore looks at the effect of mobile phones on social interaction in a much more focused way by concentrating on a particular community and segment whereas objective two looks at the general impact.

I therefore feel that these three objectives combined will allow me to gain a good understanding of the impact of mobile phones on social interaction and allow me to form appropriate conclusions. Similarly, they will allow me to make recommendations on how to maintain the balance of social interaction in the face of the growth in mobile phone technology.

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2 – Methodology

2.1 – Methodology overview

The data collection consisted of three main methods of research. The first method of data collection was through questionnaires whilst the second method was through the use of a focus group.

I decided to conduct two separate questionnaires as two of my objectives were looking at two separate communities. My first questionnaire aimed at collecting data to analyze the following objectives:

- To investigate whether mobile phones have had a positive or negative effect on social interaction
- To investigate the reasons behind the growth of mobile phones

My second questionnaire aimed at collecting data to analyze the following objective:

- To investigate the impact mobile phones have had on the 13 – 18 year old age group

This questionnaire was combined with a focus group as I felt that questionnaires offer a general overview of the issues involved whilst a focus group will allow me to gain a better in-depth understanding of the specifics of the issues involved. Similarly, I felt that the two approaches would give me a good balance between quantitative and qualitative data as questionnaires offer a more quantitative approach whilst focus groups offer a more qualitative approach.

Finally, the third method of research was through desk based research using the Internet, books and journals. However perhaps the biggest problem that I encountered was that although there is wide spanning literature on the topic of mobile phones, nevertheless there is very little authoritative work in regards to the impact of this technology on social interaction. I was therefore largely restricted to using the Internet for my desk research and tried to get as much authoritative information as was available. Similarly, due to the shortage of authoritative information on this topic, I was forced to use and incorporate the opinions, comments and work of sources that are somewhat less reliable and lacking authority.

2.2 – Questionnaires: Basis for choice

- Questionnaires are easy to analyse. Data entry and tabulation for nearly all surveys can be easily done with many computer software packages.
- Questionnaires are familiar to most people. Nearly everyone has had some experience completing questionnaires and they generally do not make people apprehensive
- Questionnaires reduce bias. There is uniform question presentation and no middle-man bias. The researcher's own opinions will not influence the respondent to answer questions in a certain manner.
- Questionnaires offer a broad quantitative set of results that provide a good overview of the issues

2.3.1 – Questionnaire 1: The data collection process

I conducted the data collection in Northampton town centre on Saturday, February 16th 2002 (*see appendix 8.1*). I chose to conduct the questionnaires on a Saturday as this is usually considered to be the busiest shopping day of the week.

A sample size of 50 was chosen as I felt that this would be an appropriate representation. Similarly I felt that not many people would be willing to spare a few minutes from their busy shopping day and thus a sample size of 50 would be a realistic number of respondents I could expect to gain.

The data collection was done using the systematic sampling method by which respondents are chosen at regular intervals. As a result, I followed this approach by choosing every tenth person that walked past who owned a mobile phone and thus eliminating bias through the use of this method.

I attempted to keep the questions as simple as possible by developing a scale format for the answers from *strongly agree* to *strongly disagree*. I felt that by keeping a uniform approach, the questionnaire would be easier to understand, complete and would be more efficient in terms of time. I also kept questions as simple as possible as people are less likely to answer questions that are confusing, difficult or time consuming. By keeping the questions simple, this also reduces the likelihood of people not understanding the question very well and thus affecting the accuracy of the results by inserting answers that may not be accurate.

Finally, the questionnaire consisted of a short sixteen questions which meant that the questionnaire was simple and easy to complete in a short space of time.

2.3.2 – Questionnaire 2 – The data collection process

The data collection process consisted getting in touch with my old secondary school and requesting their assistance in my data collection. The headmaster of the school was kind enough to give me authorization to conduct my research on the grounds that the name of the school would not be revealed in the study.

I chose a sample size of 48 students to participate in the questionnaire due to the stratified sampling method which allowed me to divide up the population into sub-populations (groups / strata). I divided this strata into age groups with a sample size of 8 taken from each age group between the ages of 13 – 18.

I emailed the questionnaire (*see appendix 8.2*) to the school requesting that eight questionnaires each be randomly distributed between the six age groups between 13 – 18. Similarly, I decided to keep the size of the questionnaires very short and limited it to thirteen questions to ensure efficiency of time and to avoid students losing concentration, getting bored and thus affecting the accuracy of the data. I also attempted to keep the phrasing and layout of the questionnaires as simple as possible so that they are easily understood by all the age ranges involved.

2.4.1 - Questionnaire 1 – Issues & problems experienced

Perhaps the biggest problem that I experienced was the number of people who were unwilling to take part in the data collection. This lack of interest slightly distorted my systematic sampling method as when the tenth person refused to take part, I automatically chose the next person walking past. Secondly, this lack of interest also meant that it took me over eight hours to complete forty questionnaires. As a result, I returned on Monday 17th February 2002 to complete the remaining ten questionnaires. Most of the people who completed the questionnaire, took an average of between 3 – 4 minutes to complete it, with a couple of them interrupted with the irony of their mobile phone ringing whilst they were completing the questionnaire. Another issue that came up was that the questionnaire limited the respondent to giving a broad general answer and thus due to the generalist nature of the questionnaire.

Finally, due to the nature of the questions, I found it very difficult to phrase some of the questions in a neutral manner and thus some questions may seem to be favorable towards a certain viewpoint. This is seen in the following example “*owning a mobile phone has helped to increase my interaction with people*”. However, despite great thought I eventually concluded that due to the nature of the question, it is very difficult to phrase it in a neutral manner as phrasing it differently i.e. “*owning a mobile phone has made no difference to my interaction with people*” fails to achieve that aim as well.

2.4.2 – Questionnaire 2 – Issues & problems experienced

The school was very helpful throughout the research process which played an important part in the whole process going very smoothly and no real issues or problems were experienced. Within 3 days of the email of the questionnaires, I was told that I could collect the completed questionnaires. The questionnaires were divided up in the age groupings and thus I had an equal sample size from each age group which in turn gave me a better overview of the age group of 13-18 year olds as a whole.

2.5 – Focus group discussion

Following the questionnaire, I also requested the school if I could conduct a focus group with six volunteers who had taken part in the initial questionnaire so that I may gain a more in-depth understanding to some of the issues that the questionnaire had raised. As an incentive and method of motivation, I offered each volunteer £5 cash for their time. I once again also requested that there is only 1 person from each age group between 13-18 so that I may gain a fair balance of opinions between the age groups. Once the school informed me that they had a group of volunteers for the focus group, I arranged the focus group discussion for approx. 1 hour after school on Friday 1st March 2002. I prepared for the focus group by preparing a list of questions in advance (*see appendix 8.3*) that I was looking to gain a greater in depth understanding of during the focus group. These questions had been derived from the results that I gained back from the questionnaires and thus mainly centered on issues that appeared too vague in the initial questionnaire or issues that were surprising in the initial questionnaire and thus required further expansion and explanation. Once again the focus group went very smoothly on the whole with the only major issue being that

some focus group members were slightly more dominating and willing to express their opinions whilst others were less vocal. However I attempted to deal with this issue by using a “round robin” approach to discussion and thus attempted to gain equal levels of input from all members and thus avoiding bias of one age group being over or under represented due to their lack or strength of vocal input.

2.6 – Research methods used for each objective

➤ *To investigate the reasons behind the growth of mobile phones*

This objective was fulfilled using desk based research through the internet.

➤ *To investigate whether mobile phones have had a positive or negative effect on social interaction*

This objective was researched through conducting a questionnaire (questionnaire 1) and was combined with desk based research using the internet.

➤ *To investigate the impact mobile phones have had on the 13 – 18 year old age group*

This objective was researched through conducting questionnaires (questionnaire 2) and conducting a focus group. The results of this research were then compared and contrasted to desk research and the work of Harper and Taylor who have conducted research on the 13-18 year old segment and the impact of mobile phones.

3 - Literature Search

3.1 – Impact of mobile phones on social interaction

The last decade has seen a forty fold increase in mobile phone ownership (1) with Glenn King, chief of the statistical compendia branch of the Commerce Dept (cited in (2)) commenting *“the cell phone industry has shown remarkable growth over the decade, it’s doubled over the last three years alone”* . According to the secretary General of the International Telecommunication Union, Mr. Yoshio Utsumi, this phenomenal growth is expected to continue well into the first decade of this century when access to telecommunications services through mobile phones will soon exceed access via traditional fixed line networks (1). This rapid penetration of mobile phones over the past ten years is also seen through statistics provided by Mckinsey (3) which show that in Europe, the penetration rate for mobile phones is expected to increase from 10% in 1995 to 85% by 2005. Continental Research’s eighth annual mobile phone report describes the impact of this rapid growth by commenting *“mobile phone ownership is moving away from being a luxury to a necessity, which reflect s a change in the social structure in the UK”* (4).

This growth and change in the social structure has seen mobile phones have a direct impact on changing our culture and how we interact with each other. A report by Motorola (5) that was seeking to understand Britain’s mobile phone users showed this shift in culture with 41% of people interviewed saying that mobile phones made them more productive at work. Similarly, the report (5) also outlines one of the major reasons behind this growth with 93% of people interviewed valuing the convenience their mobile phone offers them. The advantage offered by this increased accessibility

feature that has played a major role in this growth and in helping to increase interaction is summed up very well by senior analyst Charles Golvin (cited in (2)) of Forrester research who comments “*people can be in touch anytime and anywhere they want to*”. Timo Kopomaa (6) also outlines the freedom offered by mobile phones as another key feature that has been a major reason in this growth by commenting “*the freedom provided by the mobile phone means that people are always available, even when moving, i.e. they are maximizing their contact potential*”. Similarly, according to research by Taylor and Harper (8) at Surrey University, the introduction and growth of *short messaging service* (SMS) or “text messaging” from 5.4 billion messages sent in the world per month in 1999 to this figure expecting to increase to 100 billion per month by December 2002 (7), has given phones a “*performative value and allowed youngsters to demonstrate their involvement in a social network*” (8).

In the seminar, *M-Commerce: The rise of the mobile phone* (October, 2000) Douglas Hunter, Consumer Insights Manager, Motorola (cited in (10)) commented how the future of this device will continue to change over time and “*Consumers will come to expect to use this device for a range of operations from simple communication to information searching, purchasing, banking, word processing, listening to the radio, playing music and more*”. This change in the role of the mobile phone will have a direct impact on interaction as it will offer the user even increased accessibility to information, people, products and services

In contrast, the issue of “*mobile etiquette*” (1) has raised issues about the negative effects that the growth in mobile phones have had on society. Helen Gilchrist (9) argues that just because friends are physically together at the same place, does not

mean they will necessarily talk to each other due to the interruption caused by the ringing mobile phone. Timo Kopomaa (6), lecturer at Helsinki University describes this problem caused by mobile phones as creating a *“culture of interruption”*. However in regards to this issue, Charles Golvin, a senior research analyst at Forrester research (cited in (2)) comments *“as more people begin using cell phones, they're also learning to be more socially aware”*. Similarly, Golvin also states (cited in (2)) that *“Every change in technological capabilities carries with it hiccups associated with its adoption,”* he says *“these are humps that we get over”*.

Michael Hulme and Sue Peters, researchers at Lancaster University also outline in their report *me, my phone and I: The role of mobile phones* (10) the reliance that society has on mobile phones as a result of this growth. To outline this point, Hulme and Peters argue that *“no other device has infiltrated society so widely and so quickly and as such has had a consequent change on lifestyle. The mobile is becoming imbedded within society and is indeed becoming part of the culture of late modern societies; the reliance on this device is profound”*.

Similarly, the report also outlines the effect that the growth of this technology is having on the demise of other technology as a means of interaction such as the personal computer with mobile phone giants Nokia stating (cited in (10)) that *“a mobile phone is the most intimate communications device in the modern world”* . This has led Hulme and Peters to declare that *“PCs are seen as just too much trouble to be regarded as an integral part of their lives. This partly relates to limitations in their not being permanently connected and also often to their location within the home, which is perhaps typically not the main living area. Quite simply the PC in its current*

form looks like a device that may well see itself squeezed out. This may lead to the death of the PC as we know it for this group and a return to its original purpose and a surge in its use for games and entertainment” (10).

3.2 – The impact of mobile phone on young people aged 13 -18

In order to assess my objective of the impact that mobile phones have had on young people aged 13 – 18, I will be comparing and contrasting my questionnaire and focus group findings to similar research conducted by Richard S. Harper and Alex S. Taylor at Surrey University (8). The research conducted by Taylor and Harper, entitled *Talking activity: young people and mobile phones* (8) makes the following basic assumptions regarding the role, behaviour and effect of mobile phones on the 13-18 year age community:

- Ownership of mobile phones in this age group is relatively high with 50% of 13-14 year olds owning mobile phones whilst this figure was as high as 80% amongst 17-18 year olds
- The type of communication service used was dependent upon who they were calling. Voice communication was predominant when calling family members whilst SMS was predominant when communicating with peers
- Mobile phones are valued in this community as they foster and preserve a sense of community. At functional and symbolic levels, the phone allowed the youngsters to demonstrate that they were part of a social network and their

status within that network. At the functional level, the phone provides performative value and allows them to demonstrate their involvement

- The physical appearance and the manner in which the phone was used, holds symbolic value to the users and allows them to demonstrate their “Street cred” (8)
- The use of SMS consolidates a community of peers and allows them to differentiate themselves and their peers from others, such as adults
- The use of particular words and symbols becomes “tacit knowledge” amongst peer groups and provides a way of signifying community or group membership, and a way of marking outsiders
- The phone allows youngsters to demonstrate their social status just like they use other cultural artefacts such as brand name clothing
- Through the act of using phones, young people appear to consolidate their peer relationships, differentiate themselves from family or household relations and contribute to a growing sense of independence from both family and collectively (from peers)

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4 - Growth of Mobile Phones

Over the last decade, mobile phones have seen a forty fold increase and now account for one in three of all telephone lines (1) with predictions that by the end of this decade, they will overtake fixed line connections (1).

A recent report (2) by the centre for regional tourism and research in Denmark concluded that by 2003, 63% of western Europeans will own at least one mobile each in comparison to 45% having Internet access at either home or work. Looking into the future, it seems that mobile phones will be the next step up from personal computers as they begin to eclipse the Internet penetration rate in Western Europe. Furthermore, this report predicts that by the end of 2003, 9% of Western Europeans will be WAP service users i.e. one-fifth of the current Internet users will use mobile phones to access this service.

As the mobile phone market looks set to exceed 1.22 billion phones in use worldwide by 2003 (2), it is important to understand the reasons behind this phenomenal growth. Although no single reason can account for this unprecedented growth, it is clear that there are a number of factors behind this growth which have had varying levels of effect depending upon the social, economic, political and geographical situation of the area involved.

Region	Mobile Users	Mobile Consumers
Africa	4,900,000	1,650,000
Asia-Pacific	206,500,000	131,750,000
Europe	68,850,000	39,350,000
Central/South America	18,250,000	11,850,000
North America	133,290,000	86,790,000
Australia	5,250,000	3,100,000
Former USSR	11,191,500	8,191,500
World	448,231,500	282,681,500

Worldwide Number of Mobile Users and Consumers, 2001 (10)

4.1 – Changing Culture

The growth of technology in the 1990's which saw the Internet and personal computer boom offset a technological culture where people were making increased use of new technology in their daily lives and felt that they had to "keep up to date" with the latest technology to compete with "the Johnson's next door". Similarly, this technological culture had a direct impact on the work environment as the boundaries of time and space were removed and the 24 hour work place was born. This new culture in the work environment was perfectly suited to mobile phones with the introduction of phones with email, personal organiser, voicemail, fax, Internet access, etc. This led to one mobile phone Company summing up this new work culture perfectly with the phrase "why wait till you get to the office?"(3). This attitude is

reflected in a 1998 report by Motorola (4) which showed that 41% of the people interviewed felt that the mobile phone makes them more productive at work.

4.2 – Increased accessibility, freedom and safety

Mobile phones have removed the barriers of distance and allow users increased accessibility and freedom. A report conducted by Motorola on the mobile phone habits of British users (4) commented that one-third of respondents use their mobile phones for keeping in touch with family while away on business and 93 per cent of users valued the convenience their phone offers. Charles Golvin, a senior analyst with Forrester Research (cited in (5)) echoes this view by saying “*people can be in touch anytime and anywhere they want to*”. Ray Oldenburg (cited in (6)) defines the freedom aspect of the mobile phone by describing the mobile phone as a “third place” outside of work and home. Oldenburg (cited in (6)) describes the role of the mobile phone as “*a meeting place, a popular place for spending time whilst simultaneously being a non-place, a centre without physical or geographical boundaries*”. Similarly, alongside freedom and increased accessibility, mobile phones also help increase personal safety with 81% of those surveyed in a 1998 Motorola report (4) stating that they felt that having a mobile phone increased their safety. This aspect of mobile phones played a key role in the growth of mobile phones amongst young people as parents felt a peace of mind with their children being more secure and accessible through the possession of a mobile phone.

4.3 – Decreasing costs and increased choice

A recent report by ABCnews.com (5) states that the average monthly mobile phone bill in the United States has almost halved from \$81 to \$45 over the past decade.

These falls in prices are also prevalent in Europe with a report by Continental Research (7) stating that the average monthly mobile phone bill in the United Kingdom fell by over 40% between 1996 and 2000 from £20.23 per month to £14.40 per month. These decreasing costs are largely associated with the growth in this sector which has led to increased competition between service providers and lower prices for consumers. Similarly, in contrast to landlines, mobile phone tariffs allow users to customise the service to be cost effective and best serve their needs. Many such tariffs offer users “free minutes” as part of the line rental each month which are very cost effective for long distance calling in contrast to fixed network landlines.

This increased competition amongst mobile service providers has meant that all but 1% of mobile phone subscribers have a choice of supply (8). Similarly, whilst almost 100 countries have a competitive mobile market, less than a third of that number have similar competition in basic telephones (8). Due to these decreasing costs and other cost and accessibility features associated with mobile phones in contrast to landlines, a report by the International Telecommunication Union (ITU) predicts that the mobile market will outstrip that of landlines by 2004 (8).

4.4 – Growth of pre-paid phones

The introduction of pre-paid phones which allow customers to purchase the phone outright and then purchase further credit as required without the hassle of contracts and bills is seen as one of the major contributors to the growth of mobile phones.

<i>Year ending</i>	<i>Million users</i>
1995	10
1997	25
1999	70

Growth of pre-paid services (11)

During the initial growth, mobile phones were seen with great suspicion and distrust as people feared hidden costs that may be associated with contracts. However the introduction of pre-paid phones helped lay these fears to rest as customers are not tied down to contracts, there are no hidden costs as they only pay for what they purchase in advance and there are no surprises of large phone bills at the end of the month. Zaiba Nanji, partner of telecommunications and energy services-Europe at J.D. Power and Associates (cited in (9)) describes the impact of pre-paid phones on the growth of mobile phones by commenting *“the affordability and popularity of pre-pay service has been the engine driving the mobile marketplace, and this option remains the most popular for new mobile users”* . Pre-paid phones perhaps had the greatest impact on certain segments of society with a report by Continental Research (7) stating that a key development in 1999 was the increased usage of the mobile phone amongst blue-collar (C2DE’s) as a result of the pre-pay boom as it gave people with low or irregular incomes who would not normally qualify for a contract, access to a phone. Similarly, this pre-pay boom also played a major role in increasing mobile phone sales amongst

young people who are too young for a contract but in order to interact, socialise and network with peers feel it important to purchase a mobile phone and are therefore very well suited for the pre-pay plans as they remain in control of how much they spend. This growth in pre-pay is reflected through figures from Vodafone in 2000 which claim that they now have more pre-paid customers (53%) than contract customers (7). An International Telecommunication Union report comments on the pre-pay boom by saying “*pre-paid only systems may be the wave of the future*” (8). Similarly, the report also outlines the global impact of pre-paid phones with two-thirds of Italy’s mobile phone users, using the pre-paid system, whilst this figure is 60% in Mexico.

4.5 – Lack of fixed networks

Outside Europe and the United States, the reasons for mobile phone growth are slightly different. In Rwanda, 58% (8) of all phones are mobile phones whilst this figure is as high as 72% (8) in Cambodia. The main reason behind this growth in these countries is both geographical and political as it is very difficult to run phone lines across landmine strewn terrains compared to erecting mobile phone antennas. International Telecommunication Union’s Tim Kelly (cited in (4)) predicting that mobile phones will overtake landlines by 2006/2007.

4.6 – Wireless application protocol (WAP) & Personalisation

Looking at the present situation, the mobile phone market is far from saturated and the growth trends of recent years look to continue with the introduction of wireless application protocol (WAP) which allows mobile phones and other wireless devices, access to the internet. A report by Carl H. Marcussen, a senior researcher at the centre

for Tourism and Research in Denmark (2) indicates that as mobile phone penetration continues to grow at a faster rate than internet penetration, by 2003, one-fifth of all Internet users will use their mobile phones to access the internet. This internet access offers users two key features, (1) access to information (2) mobile commerce (M-commerce), which allows users to buy and sell goods and services over the internet using their mobile phones. Similarly, Marcussen's report outlines 9 key elements of Mobile commerce:

- Content
- Ease of use (easy navigation within given sites)
- Portals and search engines
- Security and payment
- Location based services
- Low costs of use
- Timeliness (up to the minute information)
- State-of-the-art handsets
- Personalisation of content

Region	2000	2001	2002	2003	2004	2005
North America	0.0	0.1	0.2	0.7	1.8	3.5
Western Europe	0.0	0.1	0.5	1.7	4.6	7.8
Asia	0.4	1.3	2.6	5.0	7.4	9.4
Latin America	0.0	0.0	0.0	0.1	0.2	0.5
Other	0.0	0.0	0.1	0.2	0.4	1.0
Global	0.4	1.5	3.4	7.6	14.5	22.2
US	0.0	0.1	0.2	0.6	1.7	3.3
Japan	0.4	1.2	2.1	3.5	4.5	5.5

Global Mobile Commerce Revenues, 2000 - 2005 (USD millions) (10)

It is these elements and the growth of mobile commerce combined with the personalisation of mobile phones through features such as games, MP3 players, radios, personalised tariffs etc that will play a key role in retaining and continuing this growth in mobile phones in the future.

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5 – Results & Discussion: The effect of mobile phones on social interaction

5.1 – Profile of people interviewed:

- **Average age** = 27
- **Average phone use per week** = 2 hours
- **Network choice:** Vodafone (40%), BT Cellnet (32%), Orange (24%)
One2One (4%)
- **Choice of tariff:** Contract (40%), Pre-paid (40%), All in one package (20%)

5.2 – Society's perception of Mobile phones

A recent United Nations report (1) has commented that there are nearly 400 million mobile phones in use globally with another 250,000 being added everyday. Similarly, a 1999 House of Commons science and technology report (2) predicted that by 2000, 50% of all calls would be made using mobile phones. Although these figures clearly reflect the popularity and growth of mobile phones in society, nevertheless it is important to understand how society has perceived mobile phones and the impact that they have had on their social interaction.

The questionnaire research carried out in Northampton showed that 92% of people interviewed either agreed or strongly agreed to the statement that owning a mobile phone is essential for today's society. The basis for this opinion was largely due to the mobile phones capacity to increase accessibility to people, increase safety, being more personalised and therefore cost effective compared to fixed line phones and their ability to offer features such as SMS, WAP, personal organisers, MP3 players etc. However although there is a perception of mobile phones as being an important part of our lives and essential in today's society, nevertheless in order to understand the

reasons behind this belief, it is vital to gain a greater understanding of the both the positive and negative effects that mobile phones have had on social interaction and how these have impacted societies perception.

5.3 – Positive impact on social interaction

92% of people interviewed, either agreed or strongly agreed with the statement that owning a mobile phone has increased their interaction with people. This statement is further supported by results that show that 80% of those people either agreed or strongly agreed to the statement that owning a mobile phone has increased their contacts and network of friends. Similarly, 80% of people strongly agreed that owning a mobile phone has allowed them to keep in greater touch with friends and family.

These results clearly show that mobile phone have had a positive effect on helping to increase interaction. One of the reasons for this view was seen through results which showed that 88% of people who were interviewed said that their biggest reason for owning a mobile phone was due to the increased accessibility and interaction that it offers and a feature defined by Ray Oldenburg (cited in (4))as “*a centre without physical or geographical boundaries*”. Similarly, this increased accessibility and interaction is not just limited to the voice communication feature offered by mobile phones but is also increased through very high use of SMS, with results showing that 72% of people sent between 41-50 SMS messages a week. This method of communication and interaction is both cost and time effective which makes it a very popular tool for interaction.

SMS sent in month (billions)	December 1999	December 2002
Japan	2.0	36
North America	0.2	10
World	5.4	100

Worldwide Growth of SMS by region (10)

The results also contrasts with Norman Lamont’s (cited in (3))description of mobile phones as “the scourge of modern life” when he attempted to reflect the opinion that mobile phones have a negative impact on society’s interaction habits and the mobile phone is more detrimental to society then a benefit..

Furthermore, although the results clearly show that mobile phones have had a very positive effect on increasing general interaction, it is also important to assess the impact that mobile phones have had on physical interaction. A major fear associated with mobile phones was that it would decrease physical interaction as people would prefer to use their mobile phones to communicate and interact with each other instead of physically meeting. However the research results showed that 76% of people disagreed with the statement that they prefer to keep in touch with friends and family through the phone instead of physically meeting them. To further support this finding, 92% of people either agreed or strongly agreed that owning a mobile phone has increased their physical interaction with people. The reason behind the role mobile phones have played in increasing physical interaction is once again largely down to the convenience and accessibility that they offer. This is best summed up in the words of Helsinki University of Technology lecturer Timo Kopomaa who defines the growth of mobile phones and their impact on social interaction by saying “*they are maximizing peoples contact potential*” (4). People are no longer as difficult to reach

and so a simple SMS message or phone call is often enough to arrange a physical meeting and night out with friends.

Another important finding that the research showed was that 72% of people agreed that the mobile phone has helped increase interaction and contact with geographically long distance contacts. The personalisation of mobile phones in contrast to fixed lines through offering personalised tariffs and free long distance minutes is a major factor for this increase in interaction with geographically long distance contacts where in the past accessibility and large long distance call charges were a deterrent.

Finally, it may be argued that through offering features such as personal organisers, combined with other time saving features such as increased convenience and accessibility, mobile phones help users create more spare time by making their lives more efficient and thus this spare time may be used to interact with friends, family and other contacts.

5.4 – Negative impact on social interaction

As mobile phones continue to grow at a phenomenal rate and continue to become an integral part of our lives, it may be said that we are moving close to a time where people are becoming overly reliant on their mobile phones. This is supported by the research results which show that 78% of people agreed or strongly agreed that they are reliant upon their mobile phone and would find it difficult to give up. Such over-reliance upon a single tool of interaction may be dangerous and lead to other methods of communication, interaction and information dying out. This is seen with the growing use of mobile phones being used to access the internet through WAP with

predictions that by 2003 one-fifth of all internet users will use their phone to access the internet (5); thus fuelling the belief that mobile phones will eventually overtake PCs as the major tool for internet and information access. This will therefore mean people becoming more and more dependant upon a single communication tool such as the mobile phone and this over reliance on a single device may create problems such as an interaction and communication divide between mobile phone users and non mobile phone users.

Another major issue associated with mobile phones is that of “*mobile etiquette*” (7). Helen Gilchrist (6) argues that just because friends are physically together at the same place, does not mean they will necessarily talk to each other due to the interruption of the ringing mobile phone and what Kopomaa (4) has described as “*a culture of interruptions*”. Due to the increased accessibility that mobile phones offer, this increased accessibility may not always offer convenience. Through this feature, unless the phone is switched off, the user is on call 24 hours a day and whether he/she is spending time with children, attending a funeral or in a meeting, the mobile phone will always be a third entity to pose as an interruption. However, more and more people are realising this threat to mobile phones pose and are increasingly adhering to mobile etiquette with cinemas, hospitals and other public places reminding users of mobile etiquette whilst some train companies such as Midland Mainline are offering customers “mobile free carriages”. This view is reflected by Charles Golvin (Cited in (8)), a senior research analyst at Forrester research who comments “*as more people begin using cell phones, they're also learning to be more socially aware*” .

There are also fears that the increase use of mobile phones and the accessibility it offers has laid the ground for the 24 hour workplace. Many companies are now giving their employees a mobile phone for company use and more importantly to allow them easy accessibility to their employees. This has led to fears that the traditional 9-5pm work day is now a myth and this may have a direct impact on producing an over-worked society with an increase in problems such as stress as a direct result.

Finally, the focus group research conducted on the 13-18 year age segment showed that games on mobile phones are regularly played whilst travelling or during lunch and break times. It may be said that these are replacing moments of interaction i.e. during travelling to school or work and during lunch and break times and thus time that may have been spent interacting with friends and colleagues is now spent tapping on the mobile phone.

As functional features such as Games become increasingly popular and phone companies such as Nokia increasingly use this feature as a selling point to customers with the introduction of new features such as the vibra-shock tactile feedback “*to improve the game playing experience*” on the new Nokia 3395 (9), there are growing fears of the impact of this feature on interaction.

5.5 – Conclusion

Whilst it is clear that there is no definitive answer on whether mobile phones have a positive or negative impact on social interaction, however I believe that the positive effect that mobile phones have had on social interaction through offering increased accessibility and interaction outweigh the negative impact associated with this technology. Mobile phones are playing a key role in allowing people to cut back the

barriers of distance and accessibility and as a result are not only allowing users to keep in greater contact but are also allowing them to increase their physical interaction.

However due to the negative aspects such as the move towards a 24 hour work place problems of over reliance and poor etiquette, it may be fair to describe the dilemma as a two edged sword. Nevertheless, to ask for technology without any problems is like asking for a vacuum cleaner that is noise free and thus I feel that as the benefits offered by this communication tool outweigh the negatives, we must learn to reap these benefits but with caution. I therefore feel that if the future of this technology is to remain as bright as its past has been in recent years, it is vital to sustain these benefits whilst attempting to reduce the risks involved through taking a cautious approach in using this technology.

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6 – Results and Discussion:

The impact of mobile phones on young people aged 13-18

The analysis below is based upon the data gathered during the focus group and is being compared to similar research conducted by Alex S. Taylor and Richard Harper at Surrey University (1).

6.1 – Usage and rate of growth of mobile phones amongst 13 -18 age groups

Following a short questionnaire and discussion group, the results showed that 80% of individuals interviewed between the ages of 13-18 owned a mobile phone. Similarly, 96% of these individuals had the “pay as you talk” plan by which the user purchases credit when needed in the form of “top up cards” and therefore is not tied to a contract. This also places a limit on only being able to use the amount of credit that they have already paid for in advance and thus allows the user to keep tabs and control over their usage.

The results also showed that from all the people interviewed, 92% were looking to purchase a new phone in the next 12 months. Taking into consideration that 80% of this 92% already own a phone, this raised an important issue in the discussion group as to why they were looking to re-purchase a commodity that they already possess. The reasons behind this decision was to maintain “street cred” amongst peer groups and social networks, keeping up to date with latest technology and being involved in the business of trading mobile phones. All these reasons will be looked at in greater depth later in this report. Nevertheless, the underlying feature is that mobile phones are very common amongst 13-18 year olds and this trend of growth seems like continuing.

6.2 – Situational factors determine form of communication

The questionnaire results showed that in 72% of cases, SMS was the preferred method of communication in this age group. The research also showed that the underlying reason for this behaviour was not the environment and the time constraint but instead the issue of cost. The average price of an SMS message is ten pence with some networks even offering users 500 free SMS messages a month. In contrast, the “pay as you talk” tariff which was used by 96% of participant’s charges anything between 35 pence and 50 pence a minute at peak time to make voice calls. Similarly due to this cost issue, SMS has become such a common method of communication amongst peer groups that it has now become a “mindset” or “norm” amongst this community and age group and is no longer something that users even think about when using. Another finding that was also made was that users felt that the only time that they chose to use voice communication with peers was in the case of urgency.

Another major finding of the focus group was that many young people felt that SMS allowed them to feel more comfortable contacting people that they did not know very well as in contrast to voice communication, SMS is considered less personal. Furthermore due to this feature, SMS was seen as an easier method to get certain messages across such as “breaking up with a girlfriend” as one individual put it. The focus group showed that it is a combination of the cost factor and impersonal feature that is associated with SMS that has made it such a popular tool for interaction amongst peer groups.

Some of these results were supported by the findings of Taylor and Harper of Surrey University who concluded that the type of communication used by young people

depended upon who they were calling. The study stated that voice calls were exclusively used when calling relatives and family, however SMS or text messaging was the dominant form of communication when communicating amongst peer groups. However, the Taylor and Harper findings also concluded that this pattern was one which had evolved due to the environment that this particular age group was in. According to their findings, SMS was the dominant form of communication between peer groups as due to the school environment in which they spent a large part of their day, they are forced to switch their phones off most of the day and therefore only make use of them in the strict time constraints of breaks and lunch. This time constraint that was placed upon them was the underlying factor according to Taylor and Harper in using SMS as a preferred method of communication amongst peer groups. The focus group research disagreed with this particular finding as it showed that cost rather than the environment was the underlying factor in the growing use of SMS.

However whilst the focus group did not totally dismiss the assumption made by Harper and Taylor and recognised that the environment is a partial factor in the growth of SMS as the dominant form of interaction amongst peer groups, nevertheless the research dismisses it as being the main underlying factor.

6.3 – Mobile phones as a symbol of status

What was perhaps most evident from the focus group discussion was that in the case of this particular age group, mobile phones are seen as more than just a tool for communication and interaction. The mobile phone was seen as a tool for forming and fostering social networks and preserving a sense of community. In this particular function, mobile phones play two key roles. Firstly, the mobile phone allowed the

individuals to establish a belonging to a social network and their status within that network. At a more practical level, the use of the phone's functions and interaction tools such as SMS, voice communication, games and WAP allowed them to *demonstrate* this belonging to a social network and their status within this network.

The "status" that their mobile phone gave them within this network can be further defined as being largely based upon how the individual felt other members of the group perceived this person's phone. The make, model, brand, size, features and colour of the phone are all key variables in determining this perception and giving the phone what Harper and Taylor describe as "street cred". Furthermore, the focus group also concluded that it is the norms, values and mindsets within such small social networks that play a crucial role in determining the method of interaction that was dominant in this age group.

Harper and Taylor also concluded that within these small social networks, the use of particular words and symbols that were incorporated as "SMS language" also helped differentiate the networks through such common and "tacit" knowledge that was only shared by the community members. Similarly, according to this report, it provided a way of signifying group or community membership, as a way of marking outsiders and giving the group a clearer identity.

However, input from the focus group showed that although this may have initially been the case when SMS first became common, nevertheless as the service and its popularity grew, the language became much more unified and such symbols that were originally used to differentiate communities are now commonly recognised and used through most networks due to their characteristic of saving typing and the restrictions

of the amount of input that can be placed in each SMS. As a result, the focus group discussion showed that language and symbols no longer differentiate networks and have now evolved to being used merely as a method of making SMS more efficient, less time consuming and easier.

6.4 - Functional use of mobile phones

Beside the voice communication feature that acts as the mobile phone's main feature, the users of this age group also actively used the product's other features such as Games, SMS and WAP.

82% of users spend between 2 – 3 hours a week playing games on their mobile phones. Perhaps more significantly, they used this service most commonly when travelling or during break and lunchtimes. This raises the issue of this feature of the phone having a detrimental effect on interaction as users are now choosing to play games on their phone during breaks and when travelling rather than being involved in traditional methods of interaction such as talking and interacting with friends. This could have an important long term effect on culture, interaction and attitudes of this age group within society.

WAP is one of the more recent features that has been incorporated into the mobile phone evolution compared to other features such as SMS. The use of the internet through mobile phones is currently very limited in contrast to the general World Wide Web as only a limited number of sites can be accessed. Similarly the user can make use of this service in two main ways: (1) commercial use – to buy and sell products and services through WAP (2) Information retrieval – to use the WAP to access information.

Research showed that WAP is perhaps one of the least used features as only 28% of people interviewed who owned phones had WAP capable phones. Similarly, only 24% of users who had WAP capable phones used it on average between 0 – 15 minutes a week, whilst 60% of those who had WAP capable phones have never used this feature. Another significant finding that was made showed that 96% of individuals, who had used WAP from their phone, used it for information retrieval purposes and to check information such as the latest football scores, email and news. Only 4% had used their WAP phone for commercial use. Following further discussion of this issue in the focus group it was concluded that it was the “hassle” aspect combined with the distrust associated with this method of purchasing that was responsible in such a low usage. Similarly, many people in this age group did not feel that there were any significant items that they would want to purchase in a hurry over their phones rather than waiting and physically purchasing them. This combined with WAP purchases largely being reliant upon credit/debit cards as payment methods, has made it into a feature that has more negatives than positives in relation to this particular age group as not many people in this age group possess such payment methods. Finally, following the research and focus group, I gained a general feeling that this age group was not educated very well about WAP and this is an area with a lot of potential but has been lagging behind due to this lack of education, distrust and limitations of use.

6.5 – The pressures associated with mobile phones and their effect on social interaction

As described in the previous section, due to the formation of mini social networks, individuals in this age group are under increased pressure to keep “up to date” with the latest technology in order to maintain their “street cred”, perception in the eyes of their peers and their influence and reputation within their social networks.

As a result of these pressures, an important finding that was made was that 64% of individuals financed their mobile phones through pocket money, 20% financed it through a part time job and 12% financed it through the business of buying/selling mobile phones within their networks.

Perhaps even more notably, the research showed that approx. 60% of the “earnings” made by this group of individuals through pocket money and part time jobs were spent on their mobile phones. This spending took the form of purchasing new credit for their phone, purchasing accessories such as phone covers and finally, towards the purchase of new phones due to the pressure to keep “up to date” and maintain their “street cred”.

Furthermore, this raises the issue that if young people in this age group are spending such a large percentage of their total “earnings” on their mobile phones, then in the process they are abandoning other forms of interaction such as going out with friends for recreational and leisure purposes such as the theatre, bowling, shopping etc.

As a result, the money that would have previously been spent on traditional forms of social interaction such as those described above is now being spent on purchasing new credit, accessories and phones.

6.6 – Mobile phones as a business amongst young people

The focus group allowed me also gain a greater understanding of the role of mobile phones as a business amongst the 13-18 year age segment. Due to the pressure to maintain “street cred” and keep “up to date” with the latest technology, youngsters in this age group are becoming increasingly involved in the business of making money through the buying and selling of mobile phones within their communities and networks. One individual in the focus group described the reasons for its growth as “it’s the cheapest way to have the latest phone”. This system can allow youngsters to purchase or trade their phones for different phones for approx. 1/3 the price the phone would cost when purchased new on the High Street. The focus group input informed me that the average profit made by the seller is approx 15%, however this is often enough for the seller to finance their own phone needs such as new credit, accessories etc.

Similarly, this business is becoming increasingly successful due to the fast depreciation rate associated with mobile phones combined with the pressure to have the latest technology.

Finally, it may be speculated that the long term effects of this new culture may be linked with an increase in recent “mobile phone muggings”.

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7 – Conclusion

This dissertation aimed to understand the growth of mobile phones and the impact that this growth has had on social interaction. It is clear that there is no single underlying reason behind the growth of mobile phones and different factors have held varying levels of importance depending upon geographical, economic, political and social factors.

In contrast, what is clear is that mobile phones have changed the way in which we interact and communicate and will continue to do so in the years to come judging by the growth and impact of mobile phones in the 13-18 year age group and this trend continuing in future generations. Similarly, the impact of this change has had both a positive and negative effect on social interaction. Whilst mobile phones have increased physical interaction and communication and expanded our network of contacts through ease of accessibility and through offering greater freedom, at the same time, there are risks associated in terms of over reliance, issues of mobile etiquette and the development of a *culture of interruptions*. However, I believe that the positive impact of this change outweighs the negative impact of this technology. Similarly, no new technology is “*hiccup free*” and thus I believe that over time as this growth continues, many of the negative impacts associated with mobile phones will automatically remedy themselves as people become increasingly socially aware of this impact.

Nevertheless, it is vital that in order to maintain this positive impact in the face of inevitable future growth of this technology, it is important to reap the benefits of this technology with caution.

I therefore feel that if the future of this technology is to remain as bright as its past has been in recent years, it is vital to sustain these benefits whilst attempting to reduce the risks involved through taking a cautious approach in using this technology.

Finally, I feel that social interaction and mobile phones is a very new subject area and still requires a lot of study. The very recent publication of the book *perpetual contact* by *James E. Katz and Mark Aakhus* (1) has shown that researchers, academics and professionals are looking to study this area in greater depth in the future. However, I feel that other interesting angles to look at this subject area may include:

- Impact of mobile phones on the work environment
- Impact of mobile phones on social interaction between varying age groups
- Impact of mobile phones on privacy

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Appendices

8.1: Questionnaire 1

I am conducting research on the impact of mobile phones on social interaction as part of my final year undergraduate dissertation. I would appreciate it if you could take a few moments to complete this questionnaire to aide my research. All information is confidential and will not be used for any other purpose other than this study.

1. Age (optional) _____

2. How long on average do you use your mobile phone each week?

- Less than 30 minutes
Between 30 – 60 minutes
Between 1 – 2 hours
Between 2 – 5 hours
Over 5 hours

3. Which mobile phone supplier do you use?

- BT cellnet Vodafone Orange One2One
Virgin Other (please specify) _____

4. Which type of tariff/package do you subscribe to? (Please tick one only)

- Pre-paid package (after initial one-off purchase of the phone, “top up” credit is purchased when required)
- Monthly contract (line rental and call charges are paid each month)
- All in one package (line rental and phone is purchased in advance and call costs are charged each month or purchased through credit vouchers)

5. How many text messages do you send on average a week?

- 0 – 10
11 – 20
21 – 30
31 – 40
41 – 50
50+

6. Using the scale below, please indicate your use of the following mobile phone features (1= regularly, 2= occasionally, 3= never)

SMS (text messaging)

WAP (Internet)

Games

MP3/Radio

Personal organiser

Please indicate your level of agreement with the following statements based on the scale below:

1 = strongly agree

2 = agree

3 = neutral

4 = disagree

5 = strongly disagree

7. Owning a mobile phone has allowed me to keep in touch with friends and family more

8. Owning a mobile phone has meant that I now prefer to keep in touch with friends and family through the phone instead of physically meeting them regularly

9. Owning a mobile phone has allowed me to increase my interaction with my geographically long distance contacts

10. Owning a mobile phone has helped to increase my interaction with people

11. Owning a mobile phone has allowed me to increase my contacts/network of friends

12. Owning a mobile phone has given me greater accessibility to people

13. Owning a mobile phone has allowed me to increase my physical interaction with people

14. Owning a mobile phone has meant that now I am reliant upon it and would find it difficult to give up

15. Owning a mobile phone is essential in today's society

16. My main reason for owning a mobile phone is: (please tick one answer only)

Increased accessibility

Increased interaction

Personal safety

Status symbol

Other (please specify)

Thank you for your valuable time and co-operation.

8.2: Questionnaire 2

I am conducting research on the impact of mobile phones on social interaction as part of my final year undergraduate dissertation. I would appreciate it if you could take a few moments to complete this questionnaire to aide my research. All information is confidential and will not be used for any other purpose other than this study.

1. Age

2. Do you own a mobile phone? Yes No

3. Are you looking to purchase a mobile phone in the next 12 months?

Yes No

(If you do not currently own a mobile phone then this is the end of the questionnaire, thank you for your time)

4. What is your preferred method of communication between SMS and verbal communication? SMS Verbal communication

5. In order of preference, please indicate your reasons for owning a mobile phone
Using 1 for the most important reason and 2 for the second most important reason

To interact with friends/people	<input type="checkbox"/>
Because everybody else has got one	<input type="checkbox"/>
Status symbol	<input type="checkbox"/>
Games	<input type="checkbox"/>
WAP	<input type="checkbox"/>
MP3/Radio	<input type="checkbox"/>
Other (please specify) _____	

6. How long on average do you spend playing games on your phone each week?

I don't play games on my phone	<input type="checkbox"/>
1 – 30 minutes	<input type="checkbox"/>
31 – 60 minutes	<input type="checkbox"/>
61 - 90 minutes	<input type="checkbox"/>
91 minutes – 2 hours	<input type="checkbox"/>
2 – 3 hours	<input type="checkbox"/>
3 hours +	<input type="checkbox"/>

7. Is your phone WAP capable? Yes No

8. How long on average do you use WAP per week?

I don't use WAP	<input type="checkbox"/>
0 – 15 minutes	<input type="checkbox"/>
16 – 30 minutes	<input type="checkbox"/>
31 minutes – 1 hour	<input type="checkbox"/>
1 – 2 hours	<input type="checkbox"/>
2 hours +	<input type="checkbox"/>

9. Do you use WAP for informational purposes, commercial purposes (to buy goods and services using your phone) or both?

Informational Commercial Both

10. How many SMS messages do you send on average each week?

0 – 10
11 – 20
21 – 30
31 – 40
41 – 50
50+

11. How do you finance your mobile phone?

Job
Parents (pocket money)
Savings
Other (please specify)

12. Approx. what percentage of your weekly money goes towards your mobile phone?

0 – 20%
21 – 40%
41 – 60%
61 – 80%
81 – 100%

13. Which tariff/package do you subscribe to? (Please tick one only)

- Pre-paid package (after initial one-off purchase of the phone, “top up” credit is purchased when required)
- Monthly contract (line rental and call charges are paid each month)
- All in one package (line rental and phone is purchased in advance and call costs are charged each month or purchased through credit vouchers)

This is the end of the questionnaire, thank you for your time

8.3: Focus Group Questions

Following the questionnaire results, I created the following lists of areas that I would be looking at during the focus group. By creating this list in advance, I was able to form a structured agenda during the focus group exercise and gain maximum efficiency from the process.

- Discover the reasons behind the popularity of the “pay as you talk” tariff
- Discover why so many people were looking to purchase a new phone on the next 12 months, despite a high number of people already owning one
- Discover what factors determined their choice of communication (SMS or voice communication)
- Discover why SMS usage was so high in this community
- Attempt to gain a better understanding of the role of the mobile phone as a “status symbol”
- Attempt to gain a better understanding of the role of mobile phone games in this community
- Attempt to gain a better understanding of the reasons behind the minimal use of WAP
- Attempt to gain a better understanding of the pressures this age group faces in its efforts to finance their mobile phones
- Attempt to gain a better understanding of mobile phones as a business amongst young people