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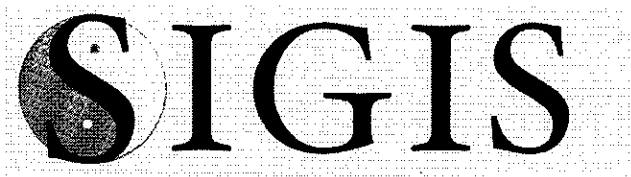
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Diffusion as inclusion?
How adult men and women become
users of mobile phones

STS-working paper 04/03

arbeidsnotat
working paper

Diffusion as inclusion?

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DIFFUSION AS INCLUSION?
HOW ADULT MEN AND WOMEN BECOME USERS OF MOBILE PHONES

Hege Nordli og Knut H. Sørensen

Content

1. Introduction

In 2001, about 80% of the Norwegian population over 15 years of age have access to a mobile phone.[1] More than 65 % have their own mobile phone. Table 1 shows how ownership is distributed according to gender and age, while table 2 shows similar figures for daily use.

Table 1. Ownership of mobile phone, according to sex and age. 2000. Per cent.

	Men	Women
Total	77	59
9-15 years	42	46
16-24 years	90	86
25-44 years	86	62
45-66 years	77	55
67-79 years	69	28

Source: Norsk mediebarometer, table 4.

Table 1 shows that there is still a considerable difference in terms of ownership between adult men and women, but not among adolescents. Among the elderly, the difference is very large. However, this may be caused by the tradition that artefacts that are commonly owned among couples are registered as owned by the male partner. Thus, there is little doubt that very many Norwegian women either own a mobile or have access to one. However, table 2 indicates a larger gender difference when we look at daily use, except for the very young and the elderly. The difference is particularly striking for the age groups of 16-24 and 25-44 years of age, given the expectation that younger women are keen users of mobiles. Thus, the mobile phone is not a technology of numerical equality. In fact, we may note a paradoxical situation with regard to gender. On the one hand, there is no doubt that women have been included as users of mobiles on a large scale and within a quite brief period of time. The diffusion of mobiles among women has been swift. On the other, the difference in terms of daily use between men and women suggest that there the mobile have a gendered function and meaning.

With regard to function, it is important to note that, on the average, Norwegians tend to use their mobiles more frequently to send messages than to make calls (Ling and Vaage 2000). Thus, this technology transcends the category of the telephone. It is a technology where voice is combined with text and images. More than half of Norwegian mobile-users send text-messages on

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[1] Norsk gallup 2001: www.gallup.no/telecom

a daily basis.[2] 86% of Norwegian mobile-users, equivalent to 2,7 million people, use this feature. This means that sending text-messages is a more frequent way of communicating than email and the Internet. Adolescents between 15 and 25 are the most eager ones. Nine out of ten of them send text messages daily. For those between 25 and 35, six out of ten do this, four out of ten for those between 36 and 55, and two out of ten for those older than 55. In addition, we should note that more women (45%) than men (37%) send text-messages daily. However, men make calls more frequently.

Table 2. Daily use of mobile phones, according to sex and age, 1999. Per cent.

	Men	Women
Total	31	15
9-15 years	14	13
16-24 years	56	42
25-44 years	44	15
45-66 years	20	9
67-79 years	6	5

Source: Ling & Vaage 2002.

Two thirds of mobile owners pay their own use of the mobile, but three times as many men as women say that their employer pays this cost. On the other hand, 20 % of the women say that they do not themselves pay their mobile bills, while 5% share the bill with someone else within the household (Ling and Vaage 2000).

Katz and Aakhus (2002) notes that there has been a quite limited scholarly interest in mobile telephony. This is particularly striking in contrast to the extensive research on computers and the Internet, but perhaps not so surprising when we consider the cavalier treatment of telephones in general by social sciences. Thus, it is rather unclear what it means to be included as a user of a mobile phone. What is the role of the mobile phone in the Information Society?

Agar (2003) argues that the GSM system is a highly complex technological system, and that mobile telephony has been very demanding to establish for technological as well as social reasons. However, many of the national stories about the rapid diffusion of mobile telephony reported in Katz and Aakhus (2002) tend to be focussed on issues like fascination, identity and the particular quick adoption of this technology among teen-agers and young adolescents. The main surprise is the speed of the diffusion, not its implications.

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[2] Norsk Gallup 16.01.2003:
http://www.gallup.no/index.asp?did=181846&active_color=&aid=1210&sid=tid=1200.

The focus on the relationship between teen-agers and mobile phones has probably contributed to an emphasis on symbolic aspects. For example, Truls Erik Johnsen (2000) followed a group of teenagers between 15 and 19 and found that they commonly talked about nothing on the mobile phone. However, he claims that this talk about nothing is important. The significant issue is to be in communication, not what is said. To teenagers, such talking implies to strengthen and build social networks. Therefore, it is important to possess a mobile phone if one is to take part in the youth culture. By being accessible through their mobile phones, the teenagers got the possibility to take control over their own and others' movements and actions. Johnsen also found that text-messages had an important function. He draws a parallel to sending postcards. The point is to show the receiver that you think about him or her.

A study of Swedish teenagers has similar findings (Larsson 2000). The mobile is a necessity if you are to be a part of the community. The planning of tonight's and the weekend's activities frequently happens spontaneously. This is the reason why the mobile becomes the ticket to the community. Also, the mobile is very visible among the teenagers. Usually they will leave it on the table if they meet at a cafe or pub. According to Larsson, this signifies that it is acceptable to be virtually present through the mobile at the same time as taking part in 'real life' social community.

While available statistics like in tables 1 and 2 show that there are differences related to age and gender, it does not support the widespread belief that mobile telephones are mainly something used by teenagers and young adults. Rather, we should assume that mobile phones are contributing to substantial changes in the way people communicate and perform social coordination, independent of gender and age. Gergen (2002) sees mobile phones as a technology that facilitates absent presence and thus what Giddens (1991) perceives as time-space compression. In more concrete terms, we could with Licoppe and Heurtin (2002) point to the way mobile phones allow people to synchronise by telling each other what they do and where they are at a particular point in time. Also, like Ling and Yttri (2002), one may emphasise the way mobile phones allow 'hyper-coordination'. This means not just the instrumental possibility of exchanging information about time and space coordinates, but also the expressive use of mobiles and the establishment of norms about its utilisation.

Such observations invite assumptions about gender differences. Fortunati and Manganelli (2003) claims that, for Italian women, the mobile phone is their main path of entrance to the Information Society. Skog (2002) argues that among teenagers, there are gender differences in the way mobiles are appreciated and used. For example, she found that design is more important to girls than to boys. Both the colour and the shape of the mobile are important. More girls than boys also said the sound was important, while the boys to a larger degree mentioned logos. However, most of all it is important that the mobile is simple and easy to use for boys as well as girls. This is reflected in

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Skog's findings that boys and girls overall appreciate the main features of the mobile phone in the same way. The statistically significant differences do not invite a dualist interpretation, but rather a more nuanced perception of how mobiles and mobile use are gendered. In this report, we will pursue a similarly nuanced analytical strategy when looking at the various ways in which mobiles and gender are co-constructed.

Norwegian research on mobile telephony has had a focus on teen-agers (e.g., Ling and Yttri 2002, Skog 2002). In this case study, we have studied adults, both men and women, between 25 and 60 to learn more about how they use and relate to the mobile. In this respect, our research is explorative. Is it for example true that their use is very different from that of teenagers? When we observe from the statistics that women over 25 tend to own mobiles less frequently than men and also use it more seldom, is there an underlying gendered pattern of relating to mobiles?

In the latter respect, a main aim is to study how inclusion and exclusion mechanisms may work. Is there a gendered pattern of acquiring and using mobiles? Do gender dissimilarities mainly express the traditional male role as formal head of the family and traditional gender differences at work? What are the consequences of owning or not having access to a mobile?

In the SIGIS context, we have found it useful to emphasize that inclusion is not just related to recruitment – in this case to get access – but also to socialisation – to remain a user and developing a way of utilising the technology (cfr. Sørensen 2002). We need to study how men and women cater for needs related to initiation into the world of mobile telephony, their acceptance or non-acceptance of the technology, the shaping of identity and practises in relation to the artefact, their recognition, well-being, etc. Moreover, we are interested in the way that gender and ICT are co-constructed as a way of understanding inclusion/exclusion. Thus, in this case, we will not only focus on the reasons people give for getting a mobile phone, but also on how their use have developed after they got it and how they relate to it today. Having a mobile phone is probably not in itself enough to feel included in the world of mobile phone users. People may still feel uncomfortable. And some may also feel that the choice to acquire a mobile was not their own, but rather a decision others made on their behalf.

In this way, we will approach the issue of non-use and non-users. As we are reminded by Wyatt et al (2001) and Wyatt (2003), non-use may be a rational choice based on information and experience. As emphasised also by Selwyn (2003), it is important to avoid the use of deficit models in the analysis of non-use of ICT related to everyday life. However, we have chosen not to look explicitly for people who do not use mobile telephones, but rather for informants who use it only seldom. With respect to our research questions, we believe that variation in the frequency and way of using the mobile is strategically important as a point of departure.

There is little systematic knowledge about the inclusion strategies that have been employed to recruit and retain men and women as owners and users of mobile phones. Clearly, a variety of marketing measures have been utilised by the producers of such phones as well as the telecoms that provide net access. One strategy has been to make more attractive designs and add features like games, modems, WAP, etc. In addition, the price of phones has been quite heavily subsidised by the telecoms to get more customers and increase the income from subscriptions. It is less obvious whether there have been strategies explicitly oriented towards women. The infamous example of the Samsung SGH A-400, coloured red and with added functions like a calorie calculator, a body mass index calculator and a menstrual cycle overview, shows that there has been an interest to design a 'women's mobile' but also that the matter has not been given too much thought.

The SIGIS case study where they interviewed the research team that is managing the transition to the next generation of mobiles inside the Telecom Italia Lab (Fortunati and Manganelli 2003), indicates that there has not been too much concern about including women as owners and users of mobiles. The perspective of this research group was to incorporate the point of view, desires and fantasies of users right from the first moments of production of technological devices. The new proposals for services for the new mobile telephony system, the UMTS, seem to be placing also women at the centre of the technological project even if only partially and with some ambiguity. The invention of the a new platform and local portals, together with recognition of the growing spending power and power of determination of women, were according to Fortunati and Manganelli all elements that may lead to the creation of specific terminals and services dedicated to women themselves. Thus, this report concludes that the strategy of inclusion used towards women in the transition to UMTS seems clearer and more direct than the one which took place with the GSM, although there is still a lot of ambiguity in relation to the gender issue because there is still too little knowledge about women's needs and concerns.

Tables 1 and 2, together with similar quantitative material (see Berg et al. 2002), invites an interpretation where gender differences are seen as produced by different diffusion dynamics among men and women. From this point of view, the gender gap will eventually disappear as women are catching up with men as owners and users of mobiles. However, such a diffusionist interpretation sidesteps the issue of what needs and interests that are fuelling the diffusion process. To focus on patterns of use and the related processes of gendering may give a different insight in the sociotechnical dynamics of mobile telephony while providing a kind of antidote to the widespread perception that mobile ownership is mainly about design, status, belonging and other dimensions related to consumption of the telephone as an artefact in itself.

2. Methodology

The case study is based on interviews with Norwegian men and women in two age groups. Group 1 may be called young adults. They are between 25 and 45 years of age and may generally be considered as accomplished users of mobile. Group 2 are the middle-aged, between 50 and 60. They were assumed to be more hesitant mobile users.

We wanted to interview men as well as women in order to make comparisons. In addition, it was important to have variation in term of use. Our informants include heavy users as well as moderate and hesitant ones. Some in the latter group could perhaps be labelled 'non-users'.

In group 1, we have 11 in-dept interviews with couples and singles. Six interviews were with single persons, three with married couples with or without children, one with a group of two friends and one with two sisters. In total we interviewed 17 people in this group; 10 women, 1 girl and 6 men. We chose to do some interviews with couples because we wanted to learn more about the dynamics related to communication and telephone use within a family. How were the mobile phone used within a family, and how did the man and the woman look at their own and their partner's use of the phone? Would they share one phone? The reason for doing the two interviews with two friends and two sisters, respectively, were more out of efficiency. We wanted to interview both but it was hard setting up a time for the interview. On both occasions, the interviewees themselves suggested we could interview them together. We interviewed more men than women because we were more concerned with the females' relationship to the mobile. The interviews were all taped and later transcribed.

The interviews in group 1 may be described in the following way:

Interview 1: Nils and Ninni, married with three children. One teenage daughter, Maria, participated in the interview. The other two children were much younger.

Interview 2: Marit, who is a single mother, about 30.

Interview 3: Mona and Mons, married, both 30+, with one small child.

Interview 4: Manfred and Merete, married, both 30+, two small children.

Interview 5: Randi and Reidun, two single mothers. Randi is about 30 years of age, Reidun is 50 and has a grown-up son and grandchildren.

Interview 6: Anne is single, aged 26.

Interview 7: Andrea and Anita are sisters aged, both in their mid twenties. Andrea is single, while Anita is married and has a child who is living with foster parents.

Interview 8: Peter, in his early thirties, is married.

Interview 9: Anders, divorced, in his early forties, has a daughter aged 14 who lives half time with him.

Interview 10: Anniken is in her early forties, divorced with three children who are living most of the time with their father. She is presently living with a boyfriend.

Interview 11: Reidar is in his early forties, divorced but without children. Presently, he lives together with his pregnant girlfriend.

The second group consisted of the following interviews:

Interview 12: Per is nearly 60; he is married with grown-up children.

Interview 13: Runa is nearly 60; she is married with grown-up children.

Interview 14: Rita is in her mid fifties; she is divorced, lives alone and has grown-up children.

Interview 15: Rannveig is in her early fifties; she is a widow with grown-up children.

During all interviews, the mobile phone in itself took part. We asked the interviewees to leave it on and answer it in a natural way as possible. We also asked them to show us what kind of features they had on their phones and to discuss advantages and disadvantages with the specific model they were using. We were also on many occasions allowed to see messages they had saved, which could be romantic messages from their beloved or sweet notes from their children or friends. Part of this was also to see if the informant knew how to use the different features the phone offered and to learn more about their use of for instance logos or sounds.

The interviews were done in Trondheim and Oslo, often in public places like cafés. They were taped and later transcribed.

We have not analysed the impact of respondents' social class or status in this report. Our material is diverse in terms of social class; however, the relation between class and use of mobiles seems quite complex and not easily managed. For example, Skog (2002) claims that mobile ownership is more widespread among teenagers with working class background than among those from the middle class, but the differences are small. Given the widespread diffusion of mobiles, neither ownership nor use can be considered a privilege nor as clearly related to cultural or social capital.

3. Recruitment – becoming a mobile phone owner

It is a common finding in studies of diffusion of technology, that there is a temporal pattern of adoption, which is called the S-curve (Rogers 1995). From this pattern, one may develop taxonomies of users, differentiating between for example pioneers, early adopters, later adopters and laggards. Our informants include persons belonging to the whole spectrum of such adopter categories. However, it is also important to recognise that there has been considerable technological development in relation to mobile phones, and that there are continuously new designs available. Thus, clearly, a mobile phone is something that may be bought again and again. Many people could own

several phones, and there is obviously a surplus, which means that – in principle – used mobiles may be a commodity or at least a potential gift. The latter is probably most important, since there is no well-established market for second-hand mobiles in Norway.

It is probably typical that the two mobile pioneers in our study are men. Peter told us he bought a mobile the first day it was possible in Norway. The mobile phone was a technology he claimed that he had been missing for years already. He and his friends had instead used bleeps and developed a language of codes in order to send messages to each other. However, sometimes he had to call someone to get more extensive information. It was a hassle all the time to have to find a phone box. Getting a mobile made a great improvement to his life. He was then able to navigate and co-ordinate his activities in a better and more efficient way. Since then, he had owned approximately 15 to 20 mobiles. Today, Peter spends about 10 000 NOK (1338 Euro) every quarter. His mobile is always on, and he never goes anywhere it. He turns it off only when he has to, like when he is flying or in a hospital. On other occasions, when he feels that it is socially unacceptable for his phone to ring, Peter uses the soundless mode. This could be in a funeral, at a wedding, in a nice restaurant or if he is in a meeting with just one person and phones would be very disturbing. Thus, Peter is definitely a heavy user and the most extreme among our informants.

The other pioneer, Per, got his first mobile in 1976-77, at the time when such phones were quite heavy and not really mobile. He has experienced, he said, great changes in the usability of mobiles, but Per employs his mobile in a more moderate way than Peter. He is accessible at most times, but he does not make many calls nor does he send many messages.

In general, as expected, our informants had acquired their first mobile at different times and for different reasons. Most of the early adopters got their mobiles through work. They had a type of job that took them away from the office ever so often, and their employer wanted them to be reachable. Thus, there was a practical reason for having the phone. Like Anders told us:

> I got my first mobile in 1995. I needed it at work, and my employer paid for it. At that time, I drove my car every day from Sandefjord to Oslo. Then I could do a lot of work in the car. There were a great number of people I needed to call, and I could spend the time doing this while I was in the car anyway.

Some of the people who were not that early, but who could still be categorised as early adopters, got their mobiles as a present from other early adopters. Like Anita, who told us that:

> My first mobile was a Motorola. I got it six years ago from my boyfriend. It was a yellow Motorola. Since then, I've always owned a mobile.

However, while people like Per and Andreas got their mobiles and the subscription paid by work, the situation for Anita and others like her is that they had to pay for subscription themselves. All of the early adopters were

positive towards having a mobile and told us that they quickly developed into being active and advanced users.

The late adopters got their mobile recently, one to three years ago. Several of the informants belonging to this group resisted the mobile before they got one. Some of them had even decided that they never wanted a mobile. They gave mainly two reasons for their resistance. First, they claimed that they really did not need one. People could reach them at home or in the office. Second, they were not interested to be reachable at all times. They were opposed to the idea that it should be possible to connect to other people and to be connected no matter where you were and at all times. Like Reidun, who said:

> I resist it. I feel that I want to protect myself and not be so accessible. This is something I believe is related to my situation at work; all the time somebody wants something from me. Also, socially and family-wise I am at a stage where everyone sells and buys homes in need of refurbishing and wants some assistance.

However, some of the resistant users nevertheless had become active users, while others remained more moderate and remained to some extent true to their initial resistance. Thus, to be a late adopter does not mean that one has to be a moderate or cautious user. But it may be a sluggish process, like Reidun told us that she felt her attitude towards her mobile was changing, but very slowly.

The most striking finding from our interviews is a gendered pattern of acquisition of the mobile phone. While the male informants either got the mobile through their employer or bought one themselves, all the women received their first mobile as a kind of present. It was given to them by their husbands, boyfriends, sisters, brothers, fathers or other family members. Often, they got a used mobile that was available because the giver had acquired a new one. To some extent, we could say that there is something called a "wife mobile" similar to the phenomenon of the "wife car", characterised by being second-hand and less advanced than the mobile owned by the partner. The woman's model was without exception a less expensive model than that of the man. Some of the women also expressed that they would have rather had the fancy model that their partner had. However, the act of giving away a mobile happens in other types of relationships as well. Marit was given one by her sister, while Reidun received hers from her son, Andrea from her mother, and Anne from her brother.

Some of the women told that they had expressed a wish for a mobile, but in most cases, it was a surprise to be given one. The giver was always someone that had a mobile himself or herself. Usually, they had wanted to be able to reach more easily the person they gave the mobile to. One of the women, Reidun, even felt it as a pressure. She strongly claimed that she did not want a mobile, but her children and her parents had 'forced' her to have one, so they could reach her, when she spent time alone at their cabin in the mountains.

As noted above, the men often received their mobile through work. Only one of the women we interviewed, Anniken, belonged to this category. However, even though her employer was the one wanting her to have one because they needed to stay in touch with her, she had to pay for the subscription herself. None of the men had to do that. Also, some of the other women needed their mobiles at work, but they had not been offered to get one from the employer. In the cases where we interviewed both man and wife (or boyfriend and girlfriend), infrequently the man was the first to become a mobile owner. In all cases, it was because of work.

These findings suggest that the pattern of inclusion into mobile telephony is markedly gendered for adults between 25 and 60. Many men are included through work, but some also buy their own phones. Few women are included through work. The main way for them to become recruited as users of mobiles has been by being given a phone, either a new one as a present or by taking over a used phone from a partner or parent who has bought a newer model. Thus, women tend to have older phones with fewer functions than men. The logic beneath this gift giving is partly an economical one. Men seem to have economic advantages, often through their employment, which allow them easy access to new mobile phones. While men often have a job where the employer buys him a phone, women do not. However, some women have a privately paid and acquired phone that they use at work. However, there is also a kind of communication logic at work, which fuels the motive to give away mobiles. To quite a lot of men, their experience as users of mobiles suggests that it is very practical not just to own such a phone but that the people they relate to, also owns one. As a communication device, mobile phones seem to carry the seed of their own diffusion. As an increasing part of the population owns one, it becomes more a more tempting artefact or a more pressing concern to have one.

The hand-me-down pattern for women may be a transition phenomenon, but that is not clear from our material. Some women, who have received their first mobile as a gift, buy themselves a new one at a later stage. But others seem to find second-hand, older mobiles quite ok. They do not need anything fancier.

The overall picture is clearly more complicated than suggested by diffusion theory with its idea about different types of users according to when they acquire the artefact. Whether or not an individual owns a mobile phone or not does not just depend on the person's perception of his or her own needs. Quite often, the need is defined by others who feel that they need to be able to get in touch with her or him. The category of others includes employers who include mobile phones as work tools, but also lovers, spouses and other family. In this way, we may observe a pattern of inclusion that is driven by a system's logic where the collective utility increases when more individuals are recruited. This suggests that women are included as mobile phone owners and users, not through cunning strategies of design by Nokia or Eriksson, but

through the wish from other women or men to be able to get more easily in touch with them.

4. Socialisation – becoming a user

We mentioned earlier three potentially interesting concepts that could be used to analyse the use of mobiles – absent presence, synchronisation and hyper-coordination. In particular, Ling and Yttri's (2002) idea that mobile phones facilitate 'hyper-coordination' in terms of the instrumental possibility of exchanging information about time and space coordinates as well as the expressive use of mobiles and the establishment of norms about its utilisation. However, none of these concepts have been developed with a concern for processes of gendering related to mobiles. In fact, at least to some extent, they may be used to state what is rather obvious, namely that mobile phones represent a new set of possibilities for intensive communication relatively independent of time and space. Ling and Yttri (2002) notes that Norwegian teenagers utilise these affordances of staying in touch quiet extensively, even if there is some discrepancy between the quantitative information about average use – which is not so overwhelming – and some qualitative narratives of heavy use. What we should expect to find in our interviews, is above all considerable variation in terms of frequency of use as well as the content.

In line with Skog's (2002) observation, we would expect some differences between men and women, partly with respect to the relative emphasis put on design versus technical functions, partly to anticipate a pattern where women use more SMS, while men prefer to talk. It would also be a commonplace to assume that men on the average would be more technical competent than women.

The conjecture that there is considerable variation between our informants in terms of their pattern of use is definitely confirmed. Some of them, like Peter, Anne, Anders and Anniken, are quite heavy users. This means that they spend a lot of time, energy and money on communication through their mobile. They tend to keep their mobiles connected at all times, and they send a lot of messages. Some of them also talk a lot with people through their mobiles, but that tend to be related to work. Anne typically admits that:

> I have made myself a bit dependent, really. You get accustomed to be accessible when you want to. Sometimes, it is very convenient to be accessible. You decide yourself. You can ignore people, you can turn it off or choose not to respond. (...) I mainly use the mobile to send messages. Usually about nothing, such small everyday life things. In a way, this is a toy that you buy for yourself. I really don't phone very much.

Anniken got her first mobile through her employer to make her more accessible. Presently, she is a housewife and she mainly refers to her social life and her interest in chatting, when she explains why she needs a mobile:

> Everyone else had one. I missed out on so much when I didn't have a mobile. There were a lot of at-the-moment appointments. Then it was impossible to get hold of me. I had a telephone at home, but it wasn't used in that way.

Peter and Anders use their mobiles much more frequently to make and receive calls than Anne and Anniken. However, this is mainly related to work. They also send and receive a lot of messages, like the two women, out of playfulness and to coordinate their social life.

Among our other informants, we find a pattern where the rational behind the use of the mobile resembles the one we observe among the heavy users; just more modest. After acquiring their mobiles, most of the informants tell stories of how they suddenly found themselves to be much more eager users than they had planned to be. This is in particular true for some of the resistant users, who got more enthusiastic after they have had the phone for a while. Suddenly they find themselves bringing the mobile with them wherever they are. When Runa was asked if it was important for her to have a mobile, she told us that:

> Now, I find it very convenient. That is what it is. Once I had very good use of the mobile because I was stuck with my car. It broke down, and it was late in the afternoon. Then it was very nice to be able to phone (a car assistance company) to get the help I needed. (...) No, I don't carry the mobile with me all the time, but I try to use in normal everyday life. So that it is with me. But it may not always be connected.

Another change in their pattern of use is that they more rarely turn off the mobile. Instead, they start to apply the silent mode. Their reason for leaving the phone on also at times when they are not able to or want to answer it, is that they may still be in control of who has called and if a message has come in. If they are together with friends at a cafe they can check it every now and then to see if there is something going on. Some also use the silent mode combined with a vibrator function so that they can feel if the phone rings, but other people does not feel they need to be disturbed in this manner.

The restlessness or the urge to have the phone turned on seems to be due to a feeling of belonging or being part of a group. When they received a text-message, they knew someone was thinking of them. To some degree, there was also the fear to be left out. Many of the informants had noticed that there had been a change in the way people made plans. While they earlier used to make plans in advance, some of the planning was now more left to the last minute. Usually, they would agree to meet one day, but where they would meet and at what time would be agreed upon in the last minute. In addition, plans were also made more spontaneous. If someone were downtown, they would send around a message asking if anyone else were nearby and wanted to go for a coffee. To have the mobile turned on is therefore a must if you want to be kept informed and socially included.

On the other hand, the mobile may make it even more evident that you are not socially included any longer. Marit told us how important the mobile

had been in her last relationship. Within the first couple of weeks, she sent 258 messages to him, and he answered all of them. As the love affair cooled off, the messages came increasingly rare. After he ended their relationship, he would answer some of her messages and she felt he at least was there to support her a bit in her sorrow. But then she heard no more from him. She said she felt that silent phone was now a very strong evidence of the lost love.

Anniken told a similar story, but on a more positive note. She and her present partner had exchanged 600 messages the first two days after they had met. She had written them all down on paper and kept it like a treasure. Every now and then she would read them to be remained of their first days of getting to know each other.

However, text-messages are even more used to keep in touch with friends and also family. Partly, the informants use messages for practical reasons, like sending their partner the shopping list, reminding someone of something they should not forget, make arrangements for when and where to meet. Partly, they send messages just to tell the other person a funny thing that just happened. The informants often call these types of messages 'time-killers'. They send them as they wait for the bus, are on the train or in other situations where they do not really have anything to do and instead fiddle with their mobiles. However, the messages have a function in order to share your experiences with someone else. Often these messages can have a humorist touch. Partly, the messages contain things they find hard to say face to face or on the phone. Messages are used to start a conversation that has been long overdue. The informants says that by sending messages about things that are difficult to talk about the other person gets time to think about what to answer before replaying. In a more direct way of talking we tend to get defensive and say things we do not really want to say. By using messages as a start, they can make sure the conversation get a good start. It is then easier to continue in a face to face dialogue later.

Most of them felt they were able to keep in touch with more people when having a mobile than without. This was due to more than one thing. First of all, they felt that it was easier to send a text-message to someone they did not know that well than to give them a call. Secondly, it was a more efficient way of keeping in touch. Sending a message did not take a lot of time and they could sometimes send the same message to more than one person. However, they emphasised that they rarely did this since they talked differently with differently people. Third, a message was less binding than a call would have been. They could send a message before Christmas and New Year, but the rest of the year they did not feel obliged to keep in touch.

Overall, it seems clear that mobile phones have qualities that are appreciated by many men and women and which represent a kind of seduction to become a stable user. A stable user is not necessarily one that phones a lot or sends many messages; rather it is someone who has become accustomed to own a mobile and to be connected at most times. Judging from our material,

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both men and women get easily socialised in this sense. Here, we can see no differences.

However, it is striking that our female informants generally are more cost-conscious than the males. They use cost arguments to prefer SMS over phone calls, and they are more concerned to find cheap ways of managing their mobile ownership and use. To some extent, this reflects the fact that more men have employers who pay for their mobile use. But men may also be more willing to pay for technology than women are.

Apart from this, we find it difficult to see clearly gendered pattern of mobile phone use. There is nothing in the way our informants talk about mobiles that suggests that neither the artefact nor its different modes of use is symbolically or practically constructed as either male or female. Men make more phone calls, but that seems to be a consequence of their jobs rather than any preference for voice over text. Both men and women enjoy SMS, and as far as we can see for very similar reasons. Text-messaging has most of all been seen as something teenagers do, but in our material it was evident that also older users used text messages extensively. There were many reasons for this. First of all, there were times where they did not feel like talking on the phones while sending a message felt okay. Many of them did not like to talk on the phones in public places, so they would instead send a message. Secondly, sending a message gave the respondent more freedom as to when to reply. It was not seen as so intrusive to the other persons' time and space as it would have been to call. You do not disturb the other person. Sometimes they would send a message to hear if it was okay if they called. Third, the threshold for sending someone a message was lower than calling. If they did not know people that well it was easier to send off a message. Forth, it was more efficient. Talking with people on the phone took a lot of time. Sending a message would be faster. However, some of them said often they ended up spending more time texting because they ended up having a longer conversation with messages going back and forth for quite some time. Many of our informants used their mobile more to send messages than to actually call people. They compare it to how they used to send small notes to each other in school. All this goes for men as well as women.

This does not mean that there is no gendering of the content of SMS or phone calls. However, among our informants, we note that both men and women find SMS very useful to develop, maintain and manage their social networks and social life. There is no evidence to support that men are more instrumental and women more expressive in their use of SMS.

New models of mobile phones offer many functions besides those related to communication. The use of these functions is related to skills, not the least skills in exploring new artefacts. The widespread popular belief is that men in this respect tend to be better skilled than women.

Our findings do not support this contention. To begin with, a major finding is that, generally, our informants' knowledge of their mobile phones

varies a lot. While some of them do not know all the functions and only knows how to use it as a phone and to send messages others use it for a variety of tasks. The more advanced user uses functions like the alarm clock and the calculator; he or she may play games and have defined different ringing sounds to different people. One woman told us she had a special sound for when her mother calls. Then she knows there is no rush to answer the phone. Anniken has one sound for her parents-in-law in order not to answer this, and another for her father in order to answer that at once. On a mobile you can of course see who is calling, but at times when the mobile cannot be reached easily, like when it is in your bag, the different sounds becomes handy. Some of our informants have a wap phone and have tried to use this function to surf on the Internet, but this has not been considered a success by any of them. The mobile is not perceived as suitable for this kind of use. According to them, the mobile is too slow and also too small to read from. The possibility to download logos and sounds is something the active mobile users are familiar with. However, they do not download regularly. Most of them have downloaded a sound and a logo once or twice and keep this for maybe half a year. Andrea has a sound she claims says something about who she is. The melody is 'walking away', and she says that is what people always tells her that she does.

All of our informants talk about something many calls mobile common sense or proper behaviour. Here, we observe the emergence of a moral regime related to mobile telephony. Most of all, this is about not disturbing other people. However, the perceptions about where it is acceptable to talk vary according to how active the user is. The most active users say moral sense is about not having telephone conversations at weddings, funerals or very nice restaurants. To some degree, they concur that talking on the phone when you are with just one other person should be avoided. However, conversing on the phone during public transport, at cafes, and other places where talking is permitted, they find okay. They have more than once been told off by strangers because they have been on the phone. Their reaction to this has sometimes been to answer back. Anita told us she would stop travelling by train if phoning was not allowed. She also meant that if other people were offended by her talk on the bus, they could just leave. The more moderate users said they would try to keep their voices down and make the conversation short if other people were around. As a rule they though people should avoid talking on the phone in public places where people were close. However, they often admitted not to always follow the rules they set for other people's use.

Another aspect of the mobile moral regime is that it contains some rules for the ideal mobile user. One of the ideals was that one should try not always to be available on the phone. Thus, there is a common norm that supports some moderation. Many informants said they should be better at turning off the mobile or even leaving the mobile at home. However, in practice, this norm was not followed. All of them acted in the opposite way. They left the mobile at home or turned it off more and more rarely. In a way, one could perhaps say that they became habituated to having the mobile in an accessible mode. For

example, they would say that other people were so used to being able to reach them at all times that they got worried if they did not answer. Also, they admitted to feeling restless when they did not know whether or not someone had sent them a message or tried to call them.

Also, many people seem to prefer to call other people on their mobile rather than their home phone. When using a mobile they feel they disturb and reach only the person they are calling for. They perceive the mobile phone as more private than an ordinary telephone. In addition, they also reach this person no matter where he or she is. Among our informants, some of the more active users had drawn the conclusion that they more or less stopped using the home phone. They only used it when they wanted to make long conversations. It was more comfortable to make hour-long conversations on the home phone, they said.

The perception of the mobile as more private is also evident from the problems perceived by families where they had tried to have a "family mobile". Since people did not know who they would reach, they sometimes felt uncomfortable using it. And, even more, no one wanted to send messages to them, because there was always the risk of not reaching the one you wanted. These informants therefore soon had separate phones. Also, it is clear that the owners perceive their mobile as very private. To some degree, the mobile may be compared with a diary. Some of them have saved very private and intimate messages there, and they did not like the idea of anyone else using their phone. One of the women said that her children knew that they were by no means allowed to answer her phone. They also said they got very surprised and did not like it if someone else answered other peoples' mobiles. On the other hand quite a few of them also differed between the home phone and the mobile in that the home phone to some degree was more intimate than the mobile. For instance, work related calls were not allowed to the home phone. Because then, people knew that they disturbed the private arena. They would also feel uneasy about giving away their home number to strangers.

That our informants talk at length about moral aspects of mobile telephony is not evidence that there is a well-defined moral regime related to mobiles. On the contrary, their suggested moral rules vary a lot, and many suggest rules while admitting that they break them. Thus, clearly, the situation regarding norms for the use of mobiles is ambiguous. Thus, in the interviews, our informants seem to feel that they contribute to an ongoing discussion where most of them have opinions. Moreover, they obviously feel that technologies like mobile phones should somehow be regulated in a normative way because the use of them raises important moral issues about appropriate behaviour and consideration for other people.

The concerns are shared by men and women, and there is no clear-cut distinction between the moral narratives offered by our male and female informants. Probably, this emphasises our previous suggestion that mobile phones are not constructed as belonging to one gender. Rather, it could be

characterised as trans-gender 'due to the observations of flexible co-constructions of gender and mobile phone use. It is not gender neutral. The mobile phone seems to facilitate a broad set of symbolisms and practices, without anyone of them being allowed to or able to dominate.

5. Gendered practices?

Obviously, mobile phones allow the absent presence argued by Gergen (2002). However, this feature and the related time-space compression observed by Giddens (1991) is no particularity of the mobile. Rather, it is a common feature of communication technologies. Absent presence is nevertheless an important property of mobiles, but not as an alternative to "real" presence. Rather, it is an additional feature. Probably, the mobile phone means that the sum of present and absent presence is growing, thus facilitating the growth and management of individuals' social networks. This is true for both men and women, to an extent that suggests that many men have appropriated feminine strategies of network building by frequent and quite intimate contact.

Also, we observe phenomena among our informants that parallel the practice that Ling and Yttri (2002) calls hyper-coordination. Both men and women use the mobile phone to exchange information and emotional messages, to allow for tighter socio-spatial navigation. However, in most cases, coordination is not that hyper. It is just improved, compared to previous communication technologies.

In terms of gender and gendering, our findings are mixed. We have found that there is a gendered practice when looking at recruitment into the constituency of mobile phone users. Men tend more often to have been earlier adopters and also to be the ones that have the better model and a mobile paid by their employer. To a surprising degree, our female informants have received their mobile phones as a gift or as a second-hand transfer. Women are definitely included as users of mobiles, but the process of inclusion is particular. It is not primarily due to attractive advertising, but rather to a kind of network knowledge where it is rational to give away mobiles in order to facilitate the possibility of getting in touch with them. Of course, in terms of gender politics, this process is not innocent since it reinforces the kind of dominant position men tend to have in modern industrialised societies.

However, this does not mean that the mobile phone is perceived as a masculine artefact. There is nothing gender-inauthentic for women to own or use mobiles, and women seem to become just as easily socialised into the community of mobile users as men do. The mobile may be part of gendered practices, but it is not gendered in general as an artefact or as a sociotechnical practice.

Our findings suggest that men make and receive calls more frequently than women, mainly due to the gender-based division of labour that on the average gives men rather than women the kind of jobs where a mobile phone will be considered as a work tool. In Norwegian mass media, the extensive use

of text-messages among girls and women has been a frequent issue in the last 3-4 years. However, statistics show a high degree of use of SMS among men, especially the young ones. The men in our material also used text-messages to a large extent, and with similar purposes, although they tended to emphasise the advantage of sending messages and that they mostly did it to send practical information. It was not just to chit chat. However, the men also said they used messages to keep in touch with girlfriends and wives, sending them sweet notes and flirting. They also sent messages to their children to say good night.

Thus, this may mainly be an issue of gender differences in the way one accounts for ones own use of a mobile. We see a similar pattern in the difference in how the men and the women see their own use of the mobile. Our male informants tend to relate the mobile to work to a larger degree than the women. This could of course also have to do with the fact that more of the men get their mobile paid by work and have a job were the mobile is more important. However, in many cases we see that how they actually use the phone is not that much different. It is, to some degree, less a matter of practice than of the way practice is accounted for.

Similarly, there were gender differences in the way our male and female informants talked about their skills in using the mobiles. As expected, several women were quite modest in their assessment of their own skills and tended to see their husbands or boyfriends as more skilled. However, judging from our assessment during the interviews, these differences were overrated. In two of the families we interviewed the man were, both by the woman and by the man, said to be the one with most knowledge of the mobile. However, both these men were not very knowledgeable at all about how to use his mobile. Judging from the whole material, women seem to be as advanced users as men.

Finally, women seem more worried about the cost of using the mobile than the men. More of the women use a cash-card in order to have control over their spending. None of the men do. However, this could very well be a result of the fact that many of the men have their bills paid by their employer and therefore are less affected by such bills.

6. References

Agar, Jon (2003): *Constant Touch. A global history of the mobile phone*, Cambridge, UK: Icon Books

Berg, Vivian A. Lagesen et al. (2002): "Gender and ICT in Norway. An overview of Norwegian research and some relevant statistical information", In Knut H. Sørensen and James Stewart, eds. *Digital divides and inclusion measures. A review of literature and statistical trends on gender and ICT*, STS report no 59, Trondheim: NTNU, Centre for Technology and Society

Fortunati, Leopoldina and Anna Maria Manganelli (2003): From the GSM to the UMTS: is it a path towards women? Interviewing Telecom Italia Lab, SIGIS report

Gergen, Kenneth J. (2002): "The challenge of absent presence", in Katz and Aakhus, eds., p. 227-241

Giddens, A (1991): *Consequences of modernity*, Cambridge: Polity Press

Johnsen, Truls Erik (2000): *Ring meg! En studie av ungdom og mobiltelefoni.* Hovedfagsoppgave i Etnologi, Institutt for kulturstudier, Universitetet i Oslo.

Katz, James E. and Mark A. Aakhus, eds. (2002): *Perpetual Contact. Mobile communication, Private Talk and Public Performance.* Cambridge, UK: Cambridge University Press.

Larsson, Cathrine (2000): *En mobiltelefon är inte bare en mobil telefon. En studie av tenåringars användande av mobiltelefoner.* Magisteruppsats ved Gøteborgs Universitet, Institutionen för Informatik.

Ling, Richard og Odd Frank Vaage (2000): *Internett og mobiltelefon – ikke lenger bare for de få.* I: *Samfunnsspeilet* nr.6, Statistisk Sentralbyrå. http://www.ssb.no/samfunnsspeilet/utg/200006/6.shtml.

Ling, Richard and Birgitte Yttri (2002): "Hyper-coordination via mobile phones in Norway", in Katz and Aakhus, eds., p. 139-169

Licoppe, Christian and Jean-Phillipe Heurtin (2002): "France: preserving the image", in Katz and Aakhus, eds., p. 94-109

Rogers, Everett M (1995): *Diffusion of innovation*, 4 ed., New York: The Free Press

Skog, Berit (2002): "Mobiles and the Norwegian teen: identity, gender and class", in Katz and Aakhus, eds., p. 255-273

Selwyn, Neil (2003): "Apart from technology: understanding people's non-use of information and communication technologies in everyday life", *Technology in Society*, 25, 99-116

Sørensen, K H. (2002): "Love, duty and the S-curve. An overview of some current literature on gender and ICT", in Knut H. Sørensen and James Stewart (eds.): *Digital divides and inclusion measures. A review of literature and statistical trends on gender and ICT*, STS report no. 59, Trondheim: NTNU, Centre for Technology and Society

Wyatt, S. G. Thomas and T. Terranova. (2001). "They Came, They Surfed, They Went Back to the Beach. Conceptualizing Use and Non-Use of the Internet". *Virtual Society? Technology, Cyberbole, Reality.* Steve Woolgar. Oxford, Oxford University Press: 23-40

Wyatt, S. (2003). "Non-Users Also Matter: The Construction of Users and Non-users of the Internet". *How Users Matter. The Co-Construction of Users and Technologies.* N. Oudshoorn & T. Pinch. Cambridge, MA: The MIT press (forthcoming).