

Mobile asynchronous communication: Use and talk of use among a group of young adults in Finland 1999

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1. Introduction

1.1 New technology unroll

During the 1990's, the world has seen a huge triumphal march of information and communications technology. Technical tools, devices, and systems of information management and communication were previously used by very limited user groups, or even by certain limited professions, have started to unroll to work places, schools, and to homes of all kinds of peoples in the entire Western world. Not that many had a home-PC during late 80's (not to mention home-ISDN or Internet access), few could use mobile telephones. There was no such thing as email for majority of people even few years ago. At 1993, there were less than 10 subscriptions to mobile telephone networks per 100 inhabitants in Finland, in December 1998 number of cell-phone subscriptions per 100 people was almost 58; this is, more than half of the population of Finland have a cellular telephone in use today (Ministry of Transport and Communications 1999a and 1999b). Meanwhile, the number of computers connected to internet per 1000 inhabitants has increased from 7,0 in 1993 to 88,1 in 1997 (Ministry of Transport and Communications 1999c).

1.2 Towards convergence

However, looking only at the penetration of mobile phones or amount of subscribers to networks provides only a narrow view to the change that is happening in mobile communication. While more and more cell-phones have been taken into use, the phones themselves have changed enormously. Of the changes, two major technological trends seem to take place: On one hand, the devices are being miniaturized, and on the other, the functionality and number of features and applications is increasing. With these new features, it is remarkable that not only the communication applications have developed and increased in their number. In addition, features like phonebook, calendar, games, and text messaging applications have appeared in communications devices. Most of such applications are currently closely tied to the communication features: Numbers in phonebook make possible calling by name instead of having to memorize the phone numbers, etc.

Of the newest purely communication applications, especially text messaging (or short message service, SMS), has been a great success at least in Finland and Scandinavian countries. Virtually any GSM phone sold today provides a possibility to send and receive short textual messages to and from another GSM phone. And Finns, at least the younger generation, seems to find this kind of communication medium quite convenient.

Personal computers, then, have by no means stopped developing neither. The processor power and memory size have increased heavily. Efficient processors can be implemented to ever smaller laptop computers (or even what they call "palm-tops"). At the same time, the role of personal computers seems to have shifted first from computing or calculating to word-processing and such 'office programs', and further towards communication (email, WWW) and entertainment (games, CD players). Also, applications for personal information management (*PIM*), have appeared to personal computers.

It is interesting that the goal in the development of both mobile phones and personal computers *seem* to be the same: While PC's are going further towards communication tools and mobility, mobile phones are coming closer to computers as more and more PIM applications and applications of asynchronous messaging get implemented. There's no doubt that devices, both computers and mobile phones as well as other electronic tools of communication and information management, will develop further on to this direction: Ever more functions, features and applications will be implemented to very small products. Planned and launched new technologies - such as *GPRS*, *HSCSD*, and *WAP* - will enable new applications of transferring data to and from the device to be implemented to mobile communication systems — applications such as faster Internet browsing and better access to email services. And progress in the field of computer technology will go on into more effective processors, cheaper memory and so on, which will enable all

kinds of software applications to be implemented to ever smaller products.

From the technical point of view, or from that of applications, the direction is clear. Devices are getting more similar to each other; same tasks can be done with both PC's and mobile communication devices. Convergence is the keyword: Applications and devices are *converging*, getting into one.

2. Two trends — three questions

Now these two trends in technology — the increase in number of devices and subscriptions to services and the emerging convergence — cannot be without effect to the way people communicate with each other and manage their personal information; nor can they be without effect to the culture we are living in (Rasmussen, 1996).

Increasing number of the devices or service subscriptions combined with the fact that the prices of devices and services are decreasing means that the devices are 'coming down' from the early adopters and higher segments of users to 'common people's' every day life. Increase in the number of features as well as other aspects of convergence mean that in-office procedures can be taken with one when leaving the office, and carried around in one single object. With these trends in hand, one could assume that the whole world of communicating and managing information must change. And this assumption, then, lead to at least three interesting questions about communication tools and services and their use. These questions — which I will address in the final paper — are presented more thoroughly in the following.

2.1 What is the actual use of the new communication technologies like?

As mentioned in the Introduction chapter, number of subscribers into cellular telephony networks on one hand and amount of users of personal computers on the other are increasing heavily. This means, the users of these devices are no longer only of certain specific professions needing these in their professional work. Nor are the devices anymore toys for the rich only. Instead, such concepts as email and WWW are already today common terms for even school pupils and youngsters in Finland. Similarly, it is no longer extraordinary that teenagers, children, or housewives have a cell-phone in use. Thus, one could predict that the use of the systems has changed quite a bit from what it was e.g. ten years ago, and maybe even from what they were developed and designed for. So how and what for are the systems, tools, devices, and services actually used?

Another issue of interest within the theme 'actual use' is the combination of increasing mobility of 'office' tools like computers — why not phones as well — on the other hand and the increase of features and applications in mobile phones on the other. How does it affect peoples' ways of managing their communication and information when the tasks for which one used to need a fixed or stable tool can now be done on the road? How do working (or studying or free time) procedures change when calling someone can be done out and about? How do people do their tasks after 'cutting the wires'? What might be the implications of expected and allowed constant availability or reachability, that *anybody* can call *anybody anytime* and *anywhere*?

2.2 What kinds of habits, attitudes, values and norms are related to these devices?

Perception of everyday life, as well as some sociological studies, show that the culture at least in major urban areas in Finland has changed to reflect the appearance of cellular phones in public places. New rules or norms have appeared for the use of phones, et cetera. To take an example, according to a research made by Nokia Mobile Phones and Telecom Finland, it is no longer unacceptable to talk on the phone in a corner of a street, but it still is to do so in a buss or metro or any other places that are "too silent" yet public and "require too long immobility" (Kopomaa & Mäenpää, 1997).

On the other hand, there seems to be a generation of teenager mobile phone and internet users who claim that they couldn't imagine living without these. Urban legends tell about dating couples who have never seen each other, but just discussed through chat or SMS. When taking these legends closer to my perception of everyday life, I'd doubt at least the prevalence of this kind of behavior. Still, one could expect that there are new habits or ways to create and uphold social relationships using these new systems. But can we see such in just anybody's life? Do these new technologies affect to the 'sub-cultures' we are living in; do they create new ones? So how does the culture in macro level change to reflect the uses, what kinds of micro-cultures are constructed around the services, how do the new communication technologies affect to ordinary peoples lives?

2.3 How do people see and perceive these devices?

Not only the way technology changes way of life, or the 'culture', are questions of interest. In addition, it is essential to understand how do people see the devices, what are the meaning systems people tend to apply when talking about the devices and about using them. Thus, the question is, what are these new and appearing communication systems (physical objects) as *culturally constructed artifacts*. It is about perception of these systems and their users: How are the systems as objects on one hand and the user-identities on the other produced and reproduced in the social action? How do people create identities for themselves and others as users or non-users of the new technology?

Secondly, from the users' viewpoint, these directions of technology lead to questions about the usability of the devices and the services, as well as to questions like "Who really needs these?" How can ever more applications be implemented to ever smaller devices without losing usability of the devices? Who really needs games, email or WWW etc. in their phones? Do users expect such applications to appear to the gadgets in their pockets, or would they rather consider mobile devices and their purposes conceptually different to 'stable' office tools like PC's? Do or should the 'miniaturized' versions of applications find their own paths?

An example: What is convergence?

The convergence of technical systems seems to have two paths in its progress. *First*, the convergence may take place *metaphorically*. For example, WAP (or WML) will enable 'Internet-browser-like' applications in small screen mobile terminals, although it is not quite the same as HTML browsers or WWW familiar from the world of computers. Similarly, SMS provides possibility to send and receive textual messages in real-time, but still it is not actually the same as email. *On the other hand*, applications of mobile phones and computers are coming closer to each other *actually*. This means that, while technology develops, applications that used to be typical only for network-connected PC's can now (or in future) be implemented to relatively small and light wireless mobile terminals. For example, *GSM data-call* enables online use of email in mobile terminals, and *GPRS* or *HSCSD* will make it more efficient and usable.

Now, hypothetically, one could assume that the way users see mobile terminals and their messaging and PIM capabilities (as opposed to PC applications) is metaphorical rather than actual. There seems to be quite a clear separation between what are considered as "PC's" on the other hand and "mobile phones" on the other. Not yet do people perceive mobile phones as personal computers or "complete" devices for personal information management. Calendar in a 6110 phone is perceived more as an additional feature ("reminder") than as a competitive agenda planner for for example MSOutlook PC/Network calendar. SMS is used quite differently from email.

But is there such separation in the meaning systems users apply when using and talking about these technologies? Are the devices and their features "metaphorically" alike (i.e. do users think that SMS is like a reduced email) or are the applications considered as significantly different to each other; completely different in their nature? How do users perceive and use the applications of mobile terminals as opposed to applications in their office tools? Or is this kind of conceptual differentiation even relevant or adequate at all?

3. Purpose of and Objectives for the study

This study is aimed to learn about and understand the meanings and the actual use of electronic tools and devices of asynchronous communication and information management of a selected user group. This means understanding how the tools or systems are perceived by the users, what is the use like, and, actually, what are these devices for their users or non-users — how do people constitute these technology and these devices as artifacts in their social reality.

The final paper will discuss the following topics:

- The current *actual* use of asynchronous messaging with mobile systems. The 'actual use' here refers to the ways and purposes people use the devices and services for. This includes also inquiring the special features that make people use SMS, email, or such for their communication instead of something else.
- The different media to communicate as tools of creating and upholding social relationships. This is, inquiring e.g. whether some of the systems are more private than others, and whether some may function as 'entries' for social relationships.
- The cultural factors, like norms, values, attitudes, etc related to the devices and services and their use. This is

to imply to understanding the meaning systems people apply when creating coherent conception of these systems as objects or artifacts in the lifeworld (Agre and Horswill, 1997 ref. Shutz and Luckmann, 1973). How do people rationalize the use or non-use etc?

- The culture or folklore around the systems and their use. What kinds of sub-cultures are created around using the systems, how does the macro-culture react to the use, how are the systems or their meanings produced and reproduced in the use, non-use and in talking of using.

The key to the issue in this study is Short Message Service and its applications. I am aiming to find out what is SMS today used for, for what it is *not* used, and — last but not least — why. *However, it is not only SMS that is studied.* Rather, SMS is taken to the focus of this research as an application related to yet different from PIM applications and other applications communication, such as email. Identifying and understanding the current ways of using SMS is the key to understand the attributes that make any application similar (or close or related) to SMS be used or not. It also is the key to understand how people construct meanings for such applications: Use of email, IRC, and other means of messaging are studied by letting the subjects explain and oppose the use of SMS against these. As opposed to email (and other means of far-distance communication), inquiring the use and talk of SMS will shed light to what is considered to be important in far-distance communication — whether it appears as a pro or a con of SMS as compared to other means or media.

To limit the subject, use among only young adults (20-25 years) is inquired.

The results of this study should give input for user interface and application design for future mobile communication devices and systems to be designed by Nokia.

4. Research material and methods

As stated above, the devices, systems, and tools are studied through their meanings, which are produced and reproduced in social action. As it is argued that the meanings are mediated in and through the use as well as through "talking of using" (ref. to Alasuutari 1995; Rasmussen 1996), methodologically this proposes a qualitative study of *talk*. Both the actual use and people's justifications, reasons, and rationalizations should be inquired.

Principles of ethnographic research are applied (Alasuutari, 1995). The empirical material is produced by individual and group interviews and by participatory and non-participatory observation. The study is iterative as its nature; new hypotheses are formed during the process, and verified with interviews and focus groups.

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