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Mobile Media and Communication Reconfiguring Human Experience and Social Practices?



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The Other Side of Technology

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Editorial Preface

Mobile media have already become an essential aspect of everyday life. They alter existing communication patterns, enable new kinds of contacts between people, and yet remain embedded in prevailing social relations and practices. Mobile communication has been said to have created “timeless time” and freedom from place. Although this new social and communicative development has been characterized as revolutionary, the uses of mobile technologies are solidly anchored in local circumstances and prevailing forms of life. Neither have all mobile technologies proved successful. The adoption of mobile media has been much slower than anticipated in many respects. Is there a contradiction between the revolutionary technological potential of mobile media and embodied, habitual human experiences? This special issue addresses the potentially tense relationship between the development of mobile technologies and mundane experience.

The issue opens with the neglected theme of the limits of mobile technologies. A positive bias reigns in technology studies just as in medical research, distorting our view of history. Much of the public discussion concerns only new, “revolutionary” aspects of mobile media, and the failures of technologies are neglected. Much of the potential of technologies is still actively resisted. In his ethnomethodological study “Is it Fun to Go to Sydney? Common-Sense Knowledge of Social Structures and WAP”, Ilpo Koskinen addresses the elementary properties of technologies in use, and their reliance on common-sense knowledge of social structures. In the Wireless Application Protocol (WAP) this turned out a source of unresolvable problems. The article allows readers to understand the

properties of technology that lead people to the navigation problems that Lucy Suchman has called garden paths and false alarms. The article both links previous research on navigation in technical environments (in Psychology, and elsewhere) and offers an opportunity for a new line of research. The focus on the interface between common sense and technical media identifies challenges that any appropriate technical solution has to face.

Ruth Rettie’s “Texters not Talkers: Phone Call Aversion among Mobile Phone Users” associates evolving patterns of usage of media with the socio-psychological characteristics of users. The study shows the ways in which the adoption of technology is directly related to local personal characteristics, thereby pointing out the close connection between technology and psychological realities. In line with earlier research, two different groups have been separated: Talkers, who prefer verbal communication on the phone and use text messages as a complementary medium, and Texters, who prefer text messages and avoid talking on the phone as much as possible. The article relates phone aversion to difficulty in the presentation of self. SMS is shown to be a ground-breaking technology, in particular for people suffering phone aversion. The article demonstrates how local contexts other than technical may play a critical role in a media choice and appropriation.

“Discourses on Mobility and Technological Mediation: The Texture of Ubiquitous Interaction” by Giuseppina Pellegrino concerns mobility-centred theories of globalization (academic discourse), the relationship between the media and mobility (mass-media discourse), and

the designers' discourse focusing on the notion of ubiquitous interaction. Pellegrino argues that discursive frames and technological artefacts centred on mobility configure a new type of mediated interaction. Apart from amounting to actual changes in communication patterns, it is proposed that the concept of ubiquitous interaction forms a new theoretical framework. The article discusses the ways in which discourses circulating in different public arenas shape core meanings attributed to technologies, beliefs about them, and their research and development.

Kathleen Cumiskey's "Mobile fantasies on film: Gathering metaphoric evidence of mobile symbiosis and the mobile imaginary" addresses the imaginary concerning mobile media. Taken the fact that the mobile technology has

become increasingly prevalent in popular media, the topic is most natural but still rarely addressed. Scenes from two mainstream American films were analyzed to illustrate dimensions of imagined patterns of usage and their cultural meanings. This kind of imaginary is a relevant aspect of the ongoing reinvention of mobile media. New and creative usages of mobile technologies are a key aspect of the relationship between people and technology, which do not follow simply from the real, prevailing patterns of usage but also from imaginary and ideological visions. The article moves beyond what is physical and measurable into the imaginary, virtual space created between two people talking on the phone to capture new emerging, dimensions of mobile communication.

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Is It Fun to Go to Sydney? Common-Sense Knowledge of Social Structures and WAP

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ABSTRACT

This paper investigated how people navigate through early Wireless Application Protocol (WAP) sites using their common-sense knowledge of social structures. The study is based on a close analysis of 9 videotaped test sessions of WAP use situations taped in Helsinki, Finland between 2000-2004. The data was transcribed using standard conventions of conversation analysis, and analyzed in an inductive fashion to identify and describe the ways in which subjects used their common-sense knowledge in navigating through WAP. The analysis reveals how the structure of WAP makes it necessary for people to rely on their common-sense knowledge in trying to decide what to do next when on a particular WAP page, but also how common-sense knowledge leads them astray. The analysis is qualitative. The conclusions point out the ambiguous role of common-sense knowledge and relates WAP to previous technologies like the pre-visual Internet of the early 1990s.

Keywords: *Wireless Application Protocol (WAP), conversation analysis, ethnomethodology, common-sense knowledge of social structures, user experience.*

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1. Introduction

Do you know whether it is fun or work to go to Sydney? The question may sound curious. Most of us would probably answer that it depends--many contextual factors would define the experience. For example, if the person is a banker who has work in Australia, she would probably think about it as a work trip. However, if the banker is planning her holiday, and is talking about going to Sydney with her husband as an alternative to Toronto, the answer is probably different. Or, imagine a teenager who wants to learn English. How does a trip to Sydney fare in his imagination? Clearly,

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there is no way to answer this question correctly if thought about in the abstract. Indeed, the whole question may feel absurd: how can you know the answer without knowing the particulars of the situation?

Still, it is just these kinds of questions that information technology sometimes throws at us. As this paper will demonstrate, sometimes we are forced to decide whether it is fun *or* work to go to Sydney and, due to the way in which technology functions, our answer to this question is *either* right *or* wrong. This paper analyzes what happens when users are forced to choose between a limited set of options when trying to navigate within Wireless Application Protocol (WAP), and these options come in conflict with their common-sense knowledge of society. Introduced to the marketplace about eight years ago, WAP still exists today as a technical platform, though it quickly proved to be a major failure in human terms, a failure which ruined the social perception of mobile technology for years.

Like other digital technologies, mobile technology has been characterized as a revolutionary technology (Mosco, 2004), with good reason. A few years earlier, Internet mobile phones had changed the ways people communicated, worked, maintained relationships, and thought about themselves (Katz & Aakhus, 2002). Combining these two technologies seemed a recipe for success. However, WAP soon became the best example of a failure of mobile technology. Although WAP has survived as a background technology, as a consumer technology WAP has been a massive failure, especially given what the telecom industries and investors believed (Teo & Pok, 2003; Barnes, 2003). With Japan and South Korea as possible exceptions (Ishii, 2004), only a small percentage of people who own a mobile phone use it to connect to the Internet. The most typical reasons for not connecting are cost, slow access speed, and hard-to-read screens (Anil, Ting, Moe, & Jonathan, 2003; Okada 2005). Also, although people who have tried out WAP-based services generally have a more positive attitude towards the service, and are willing to put up with inconveniences of use, they still see privacy and lack of content as unacceptable obstacles for using the technology widely (Anil et al., 2003; Ramsay & Nielsen, 2000).

Few theoretical attempts to explain the failure of WAP have focused on the cognitive dissonance between high expectations and the reality of user experience. Teo and Pok (2003) have explained the failure of WAP with what they called the “decomposed theory of planned behavior,” which claims that behavior results from behavioral intention, which in turn is explained by attitude, subjective user norms, and perceived behavioral control. Attitudes are explained by factors such as perceived usefulness of

the technology, ease of use, and compatibility with the user's existing values. Subjective norms are explained by reference to group influence, while perceived behavioral control is composed of beliefs about having the necessary resources and opportunities to adopt a WAP phone. Structural equations showed that an intention to adopt a WAP-enabled phone was associated with attitudinal and normative factors, but not by perceived behavioral control (see also Cheong & Park, 2005; Pagani, 2004; Kim, Lee, Lee, & Choi, 2003).

This paper builds on a small body of ethnomethodological work on mobile communications (Koskinen, 2000; Arminen 2001; Arminen & Raudaskoski, 2003) and advances another explanation, which takes a different approach to how people came to experience WAP. Ethnomethodology is a sociological tradition with its origins in the writing of Harold Garfinkel (Garfinkel, 1967). It is interested in the methods that people use to organize their ordinary, practical activities, ranging from questions to gender identities. It is this focus on methods of ordinary action that gives the tradition its name. When mobile technology is studied from this perspective, the focus is on how people navigate their way through technology in concrete terms; a well-known attempt to study technology from this perspective is Suchman (Suchman, 1987; as cited in Hutchby, 2001). Like other technologies, the use of WAP is always rooted in the local circumstances of ordinary life. More specifically, such use is rooted in local methods of reasoning, "local" here referring to the fact that people act in situ, using whatever resources they happen to have around when they face problems. This reasoning is based on what people know about their society, and individuals use this knowledge in navigating their way through it. For WAP, the key issue is that people use their ordinary, age-old methods in navigating their way through WAP interfaces, but these ordinary practices do not help much given the semantics used in building them.

2. Common-Sense Knowledge of Social Structures

From the standpoint of an ordinary user, the most curious feature of WAP is its user interface. The WAP interface is necessarily fitted to the small screen of the mobile phone (Picture 1). Due to its small size, only a few items can be made visible simultaneously. As no reliable search engines (such as Google or Yahoo on the WWW) exist for WAP, any WAP service tends to have a deep interface. Most content

exists deep inside the system. In order to access content, people have to go through a series of higher-level pages. By implication, concepts in the higher level are out of necessity abstract and difficult to understand. One has to go through these higher-level menus to get access to more concrete terms like company names. When one enters these pages, they face the same problem again. Thus, when a WAP page appears on the phone screen, the user has to read it, locate candidate selections from its menu, construct a relevance order between these candidates, and select the best candidate or return to a previous menu. Suchman (1987, p. 132) calls, with good reason, such actions "situated inquiries": when users see a page, they have to think about what to do next with very little information to help them.

A typical WAP user interface utilizes ordinary language terms, but gives little specification about their meaning. In consequence, in conducting situated inquiries, people have to rely on what Garfinkel has called "common-sense knowledge of social structures" (Garfinkel, 1967). Sometimes situated inquiries are relatively straightforward. For example, after seeing the term "weather," one expects weather forecasts and maps. Sometimes, however, they are far more complex, as in the case of "entertainment." In seeing this term, one can fairly easily conclude that it contains items like movies, live bands, live comedy, and perhaps also theater and ballet performances. However, such a conclusion is already contextual. If service providers make a distinction between cheap thrills and "art," they may not situate "ballet" and "opera" under "entertainment." But, if there is no category for art, they may have to conclude that opera belongs to entertainment (see also Arminen 2005, p. 205-206).

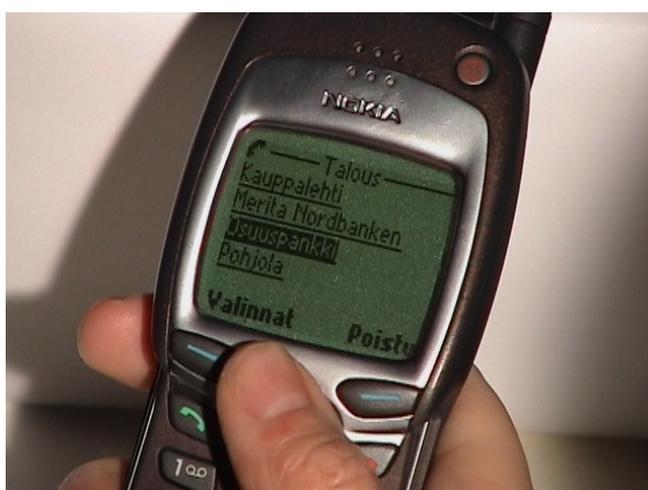


Figure 1. An Early WAP-enabled Mobile Phone (Nokia 7110)

Common-sense knowledge of social structures constitutes an important resource for using WAP, but has several unintended consequences. In particular, any technology that builds on common-sense knowledge of social structures is not free from moral judgments, and users will attempt to find meaning in the interface, no matter how divorced from their common-sense knowledge it turns out to be. As a comparison, we can think of one of Garfinkel's "breaching experiments" (Garfinkel, 1967), where he made a group of students believe that they were talking to a counselor while in fact they were talking to a programmed, random agent. The students thought they were getting advice on their personal problems, and treated the answers as reasonable, searching for and finding meaning in them. Students sought a pattern in these random answers; they assembled a body of knowledge of social structures in the course of the conversation (Garfinkel, 1967). Something similar takes place with WAP. One has to assume that "airlines" are under "travel industry" rather than under, say, "children." You have to assume that common-sense knowledge of social structures will help you work through the system. If this proves not to be the case, the results are similar to those described by Garfinkel in the "breaching experiments": frustration, bewilderment, and even anger based on loss of trust in one's ability to act. If others do not construe their lines of action on ordinary, common-sense knowledge, one does not know how to act with them. What is at stake is something far more important than mere convenience.

This is the case with technology, too. If the logic of the system does not correspond to ordinary experience rooted in ordinary circumstances, ordinary society, and common-sense knowledge of social structures, it is difficult to use: methods people use to understand the system misguide them and do not help in problem situations. This is what happened when people use WAP. If they see links on some page, they have to infer what happens if you open these links by relying on their common-sense knowledge. That is, they generalize from constituent parts, and take action depending on these generalized patterns (Garfinkel, 1967, p. 72-73). As they go deeper in the system, they may see things that tell them that the pattern they inferred was indeed the right one. However, if what they see tells them that the system's version of common-sense knowledge does not correspond to theirs, they may start to doubt their ability to use it, and come to judge it negatively. While people may initially have thought that the system was good, and were willing to grant a certain clumsiness to it, they may change their minds, come to expect problems, and see their rare successes as exceptions that prove the rule. The philosopher Aron Gurwitsch talks about changes in Gestalt contexture in this situation (Gurwitsch, 1964, p. 134-135).

3. Data and Methods

Our data consists of 9 videotaped test sessions, each lasting approximately 30 minutes, taped in 2000 and 2004-2005. In the tests, pairs of university students were given several tasks in the portal supplied by the Helsinki-based mobile operator Radiolinja. The setup followed Suchman's procedure (Suchman, 1987). One subject was using the mobile phone while the other assisted him/her by giving advice and suggestions as they navigated through the menus.

The videotaped sessions were transcribed for analysis using the standard international conventions of conversation analysis (Table 1).

All pairs were given five tasks and had seven minutes to perform each task. In this article, we focus on two sequences, how the participants reasoned their way through the service to find the Helsinki Stock Exchange general index (HEX), and an attempt to order an airline ticket to Sydney, Australia. These cases provide an acid test for WAP technology. The index of the stock exchange ought to be semantically simple in the sense that most people associate money with useful, practical things.

The ticket to Sydney, on the other hand, is semantically ambiguous. As noted previously, "traveling" is fun for one, business for another, work for a third, and an investment opportunity for a fourth. Still, it is simple when compared to, say, music, which for practical purposes offers an almost infinite variety of subcategories and evolves constantly.

There ought to be few difficulties finding a key institution in a semantically simple domain. If it proves to be a problem for users, these problems escalate in more semantically complex domains, like "technology" or "art."

Transcript Symbols (adapted from Jefferson 1984)	
(.)	Micropause, or interval of 0.1 second in talk.
(0.4)	An interval of 0.4 seconds.
'n [she sa]id [But th—]	Overlap begins and ends.
=[[I'm saying [[But no::	Utterances start simultaneously.
Wha:t	A colon indicates an extension of the sound it follows. Each colon is about 0.1 seconds.
.	A period indicates a stopping fall in tone.
,	A comma indicates a slight fall in tone.
?	A question mark indicates a rising inflection.
?,	A combined question mark/comma indicates a slight rising intonation.
;	Continuous intonation.
/ \	Rise and fall in intonation
Wha:t	Underlining indicates emphasis.
WHAT	Loudly.
what	Quietly, or in whisper.
hhh .hhh .nhh	Outbreath, inbreath, and inbreath through nose respectively. Each "h" is about 0.1 seconds.
(what)() say	Single parentheses indicate transcriber's doubt or best guess.
((door slams))	Double parentheses indicate various features of the setting or transcriber's comments.
.mt .pt	Click or a smack of tongue, and the same in English.
.nff	Snuffling.
#that's true#	Creaky voice.
@what@	Markedly different tone than elsewhere.
\$wh't's th't\$	Laughing voice.
W(h)hat	Within words, (h) is a laughter token.
He HEHE ha	Laughter tokens.
wh—	Cutoff of a word.
And th()<	The speaker halts some unit in progress.
>she said<	Quickly.
System activities:	
<SELECTS OPENING PAGE>	The user performs an activity with the device.
{SYDNEY 2000	Menu opens.
@Connecting to@	System messages to the user.

Table 1. Transcript Symbols

For this paper, I have studied 3 men and 7 women, who were university students with no expertise in information technology or user interface design. None of the subjects had had a mobile phone supporting WAP and only two of them had ever tried one. Everyone either owned a mobile phone or was familiar with them. The screen of the Nokia 7100 mobile phone that was used in the test showed only five lines of text (Figure 1). The first line on the top is a static heading line and the content of the WAP-

page can be scrolled down and viewed so that four lines are visible at a time. In addition to the roller wheel used to browse the text and click hyperlinks, there are two function keys below the screen whose functions are shown at the bottom of the screen. Usually, the left button is used to access the mobile phone's internal menus, such as bookmarks and preferences, while the right button is used to return to the previous menu or to select or cancel an operation. Given that the design of basic WAP browsing is still similar today, and WAP is still very much a novelty for ordinary users, the data we collected in 2000 is still relevant.

The context in which the data was produced was an unnatural laboratory-like situation with characteristics that do not apply to real use. Nevertheless, we trust that this setup nevertheless makes available layers of naturally-occurring reasoning and methods. This analysis describes ordinary methods people use to solve problems they face in action. Analysis proceeds inductively (ten Have, 1999). In analyzing data, we quickly realized that the most crucial difficulties take place in the first two minutes after the service is opened. Consequently, we focus on these two minutes.

These data are small for the purposes of the social sciences, but follow the conventions used in industrial usability studies (Nielsen, 1993, p. 173-174). For our purposes, these data are large enough. Although small, they nevertheless provide enough depth to study what people do when faced with WAP for the first time in their lives, and how they make judgments about this technology based on their experience. Also, it shows that combining conversation analytic accuracy with usability practices is possible for usability studies. The validity of this analysis does not depend on statistical generalization but, as generally in "thick description" (Geertz, 1973), on how richly the description captures what users do when faced with certain situations, and what features of the situation drive their action. In addition, detailed transcripts make it possible for readers to independently form a judgment about the analysis. If it is found plausible, its contribution lies in the fresh perspective it provides on navigating in WAP.

4. How Common-Sense Knowledge Works

Anyone with some experience of life knows many details of society, and knows how to use that knowledge in navigating its structures, whether real or virtual. When browsing Radiolinja's WAP system, this was the case with many tasks. People knew

perfectly well how to work their way through issues like finding movie tickets. For most of us, going to movies is fun, not work. Also, we know that most people go to movies to be entertained. This inference is easy enough from the standpoint of common-sense knowledge of social structures.

To illustrate, in WAP in 2000, one was forced to begin navigation from the main menu, which gave two main options to choose from, "utility" and "entertainment" (Figure 2). As we have already seen, this selection may be a problem for users. If they have to choose whether "going to Sydney" is "entertainment" or "utility," how should they respond? Whatever one's own viewpoint, it is also easy to imagine someone who might interpret the situation differently.

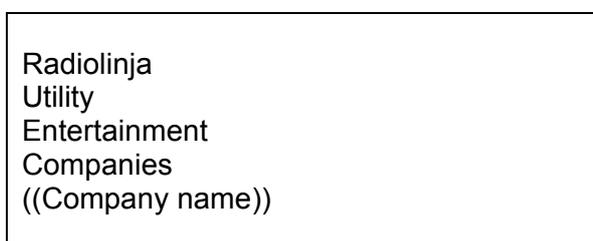


Figure 2. The main page of the Radiolinja WAP service

In many cases, this choice does not pose problems of any kind. For example, Example 1 gives us a clue of how people work their way through the menu to selection. After a short detour, K and T finally decide that if they want to book tickets to Sydney with their phone, they have to get to the utility menu rather than try to find it from other items on the main page. In this excerpt, they find their way to a menu that makes it possible for them to order the ticket. The interesting thing is that they stay in the menu and do not question it. Apparently, nothing in the utility menu suggests to them that the previous choice was wrong. As Koskinen, Repo and Hyvönen (2006) argue, when WAP is understood as an interactive device, it has to be looked at as a three-part sequence. People make a guess, based on what they see in front of their eyes. When the next page appears, items on that page either validate or refute that guess (Arminen 2001; 2005, p. 202-204). In Example 1, there is nothing dramatic in sight; instead, K and T see the item travel, which makes them confident that they are on a right path. When they find Finnair, the main local airline in Helsinki, and see the item "destinations," they conclude that they are close to the end.

Example 1.

01 K No:(0.4) uti- it's got to be in utility

02 <CHOOSE>
03 {UTILITY}
04 T =yea it could be (.) I didn't come to check (0.2)
05 travel, let's see what's in it
06 T (scrolls)
07 <CHOOSE>
08 {@CONNECTING TO THE SERVICE@}
09 (5.0)
10 {TRAVEL}
11 T Finnair
12 K =[Finnair
13 [<CHOOSE>
: ((4 lines removed))
17 {@CONNECTING TO THE SERVICE@}
18 T Does Finnair have a service from whi-
19 (scrolls)
20 T flight schedules
21 ((scrolls))
22 K o-offers
23 (0.4)
24 T but I'm not su- are you sure it's the-
25 ((scrolls))
26 K eh services perhaps (.) let's see it is it
27 in it (.) or in destinations
28 <CHOOSE>
29 {SERVICES}
30 T destinations (0.2) Sydney (0.4) do you find
31 Sydney (2.0) Oh but ordering the ticket is there
32 <CHOOSE>
33 {@CONNECTING TO THE SERVICE@}

This example illustrates first that people have common-sense knowledge of (real) social structures and second that they are able to use this knowledge to navigate through virtual structures. Some of this knowledge is generic in the sense that anyone with a minimum of life experience knows how to unpack “entertainment” and apply this

knowledge. This category breaks down naturally into movies, rock concerts, opera, and so forth. If one knows that this is the case in Finland, one may infer that Switzerland and Malaysia cannot be too different: in this sense, parts of common-sense knowledge are transferable. However, some of this work is local: without knowing the particulars of Finnish society, one cannot know that to get to the “Stock Exchange,” one has to make a detour through *Kauppalehti*, a leading economic newspaper. It is of course possible to understand that one can get to information concerning the stock exchange through the economics pages of the main newspapers and economic press, but it is impossible to know the best route unless one knows that *Kauppalehti* is the main economic newspaper in the country. In Switzerland and Malaysia, the path through economic journals is different in terms of what is available at the level of the user interface.

Common-sense knowledge of social structures varies with circumstances and different people have different versions of it. If you are talking to someone, you have to make sense not just of society, but also of whether the interlocutor's understanding of society is similar to your own. This is also the case with WAP: you cannot know how the system works without using it. Somehow this knowledge is assembled on the fly while using the device. It is this work that is crucial if we want to understand WAP: it is not a disembodied system that people just learn to use. Rather, they have to work their way through it. Without this work, the system could not function.

5. Problems with Common-Sense Knowledge: Siren's Songs and Ambiguators

When a WAP page appears on the phone screen, the user has to read it, locate candidate selections from its menu, construct a relevance order between these candidates, and select the best candidate or return to the previous menu. If the user concludes that her initial choice was correct, she continues to the next screen. She may also return to the previous screen to select another path if she concludes that the selection was wrong. Two types of errors take place in this process (Suchman 1987, p. 163-169). There is a “false alarm” when the selection is correct, but the user thinks it is incorrect. Another error is when the user proceeds on a “garden path,” where she continues to a third page even though the previous selection was incorrect (Arminen, 2005, p. 206-208). It is the user's task to realize these errors from information that

appears on the screen. In WAP, common-sense knowledge of social structures sometimes leads to successful outcomes, but also to garden paths and false alarms.

Garden paths. There are several reasons for garden paths. First, abstract, ambiguous terms suggest the wrong ideas. What does “fun” mean in the abstract? Second, common-sense knowledge leads people to see several links on any page as good ways forward, even though all but one of these links leads to a garden path. This is what happens in the following case. Here T and K are trying to order a ticket to Sydney. In the Radiolinja service at the time, the opening page include "Sydney 2000," a page which provided users with updates about what was going on in the Sydney Olympics.

Example 2. 1.56.30-1.58.30

01 T: yea (.) OK (.) Sydney two'ousand
02 K: ordering tickets to Sydney two'ousand
03 {RADIOLINJA MAIN PAGE}
04 T: Is it Finnair or Sydney two thousand
05 (scrolls)
06 K: It could be Sydney two thousand. Perhaps they've
07 gathered things there
: ((nine lines omitted))
17 T: Go to Sydney two thousand
18 K: Let's check this Sydney two thousand
19 <CHOOSE>
20 {@CONNECTING TO THE SERVICE@}
21 T: Are there services by Finnair
22 K: ()
23 (scrolls)
24 T: sports.com What's that
25 K: I think it's sports news
26 T: Perhaps I'm in the wrong place

Unlike in Example 2, in which K and T realized that they are on a garden path, people often stayed on a garden path for a long time because their common-sense knowledge of social structures led them astray. Typically, there were items on the new page that could be taken as evidence that the user was on the right track. For instance, when

people were searching for the stock exchange, they typically found several pages that were related to money and financial management. When one is browsing the page of a bank, and sees several links to “indexes,” it is practically impossible to know what this term refers to without first visiting it. Similarly, if one is trying to find the opera, and gets to a page with theatres, ballet companies, and performance artists, it is easy to maintain the idea that opera is in this set even if it is not actually there.

The problem is that common-sense knowledge also takes people deeper into the system. I will call items that capture people’s attention and lead them further astray “Siren’s songs.” Next is an excerpt that shows how such items can, against a certain browsing history, lead people on long excursions down the wrong paths. Here, A and B have gone from the “economy” page to “banks,” and finally to “Osuuspankki,” one of the larger national bank chains, and concentrate their efforts on finding the stock exchange on the bank’s page. While browsing that page, they find the word “indicator,” which functions as a Siren’s Song, for it suggests that they are about to find the stock exchange – after all, the stock index is an indicator. When they open that link, however, they get a list of countries. Instead of taking this as evidence that they are going in the wrong direction, they believe they will find the Helsinki index through Finland, where Helsinki is located. At least two things make such inference logical: the history of browsing has so far backed up such an inference. Secondly, it is not unnatural to think that from a country you can get to its capital, and in the context of the financial world, finally find a major economic institution, the stock exchange.

Example 3. Garden path

01 A wo- wo- wabits, wabits. (0.5) @what's that@
 02 B scroll down ([if (it'd be there)
 03 A [yea
 04 -> [INDICATORS]]
 05 [NEWS HEADLINES]
 06 ((s1 scrolls the menu))
 07 ->B try (cou[ntries)
 08 A [no
 09 {COUNTRIES}
 10 (3.0)
 11 A no but,h is that hex- h. (.)

12 ->B hex is [(.) Helsinki Stock Exchange
 13 A [It is sort of like in [Helsinki
 14 [<COUNTRIES>
 15 {@CONNECTING TO THE SERVICE@}
 16 (3.0)
 17 [kr-hmmhh. ((clears throat))
 18 [{WA[PIBS}
 19 [{CHOO[SE TOPIC}
 20 [{AUSTRIA} ((s1 continues browsing))
 21 (3.0)
 22 {ESTO[NIA}
 23 B [mmm[-mm
 24 A [{FINLAND}
 25 <FINLAND>
 26 {@CONNECTING TO THE SERVICE@}
 27 (1.0)

Things get even more complicated if a person begins to question a society's basic, common-sense geography, and indeed, developments in society may also make common-sense knowledge practically worthless. In one case, one of the students did not trust his ability to classify the stock exchange as "utility" because "following the index of the stock exchange is entertainment (0.8) *nowadays*". This remark relates a social institution to a change in society in a perfectly respectable manner – financial matters no doubt have become news items and a subject of entertaining reporting – but simultaneously leads to confusion about where to place financial management in the dichotomy of utility/entertainment on the Radiolinja Main Page. It is not just items on the menu that prove confusing: it is also the nature of common-sense knowledge of social structures that may confuse the matter.

False alarms. There is a "false alarm" when the selection is correct, but the user thinks it is incorrect. Here, common-sense knowledge of social structures makes the same items that function as Siren's Songs on garden paths ambiguous. I will call these items "ambiguators." When people face items that appear ambiguous, they start to suspect whether what they are doing is right in the first place. In Excerpt 4, O and K are working on the stock exchange task. They are in *KauppaLehti*, which has a link to the main index of the stock exchange, then called "HEX." However, *KauppaLehti* offers

several items that, from the standpoint of common-sense knowledge of social structures, might provide a way forward. They choose “currencies” instead of “HEX,” but then after trying it they go back to *Kauppalehti* apparently because they took not finding HEX in currencies as an indication of being on a false path. The notion of “currencies” functioned here as an ambiguator.

Example 4. False alarm

01 O Now you are back in [Kaup<palehti>
 02 K [Yes:,
 03 O *Right*
 04 (2.0) ((scrolls the menu))
 05 K *There you've [got now [that] tie-*
 06 N [*() [It is] it is not in hares*
 07 [<SELECT>
 08 [{COMPANY SHARES}
 09 K .No, [no
 10 [<GO BACK>
 11 [{SHARES}
 12 N *(It is, it is in) in[dexh,*
 13 K [It is not [here, [it's got to be
 14 N [[no
 15 [<GO BACK>
 16 [{KAUPPALEHTI
 17 (0.2) ((scrolls))
 18 N How about currencies, curren*cies*
 19 <SELECT>
 20 {@CONNECTING TO THE SERVICE@}
 21 N Now it is mak[ing a [connection.
 22 K [.jyeah[
 23 [{CURRENCIES}
 24 (3.0)
 25 N Va[lu-, it is currencies bu:t, is is not [any (.) index
 26 K [Eh- [*mm,*
 27 N No, we- [(.) usch,
 28 [<GO BACK>

29 {{KAUPPALEHTI}}
30 (1.4) ((scrolls))
31 K Hmh.
32 ->N No, it [is not in Kauppa]lehti
33 O [What next.]
34 (0.2) ((scrolls))

Here we see how the same procedures that people use to make sense of what they see may keep them in garden paths for prolonged periods of time. Working from common-sense knowledge early on leads users down a garden path, but while on that path, they see evidence indicating they are on the right path. The problem lies in that common-sense knowledge of social structures often takes people to wrong choices – either to completely wrong paths, or away from the right ones. Of course, if garden paths and false alarms are but momentary nuisances, they are not a problem for people or technology. As difficulties mount, however, people become less confident about their choices and about whether they can trust their knowledge of society in surfing the virtual world. Sooner or later, they start to doubt their previous guesses. Transcripts are full of moments where people wonder what they are doing, and try to make sense of whether they are on the right track with little clue of where they are.

6. Common-Sense Knowledge of Social Structures as a Double Bind

Above, we have seen how people repeatedly face problems in navigating WAP, often ending up in garden paths and false alarms with no clear sense of where they are and where they are heading. These problems often have their origin in common-sense knowledge of social structures, more specifically in knowledge of society's institutional structure and its ways of classifying these institutions. When people realize that in order to navigate WAP, they have to rely on their common-sense knowledge of social structures, but that they cannot trust this knowledge, they are in a double-bind: they have to trust their common-sense knowledge, but they know they cannot trust it (Bateson, 1979). In the tapes studied here, these feelings are expressed in many ways that formulate experience, and also have consequences for it. For instance, in Example 3, line 14, we met a laughter token that shows insecurity about the system. In other

data, there were several instances of laughter and joking about the logic of the service. More commonly, we find instances where participants talk about their insecurity openly (Example 1, line 24).

These expressions also come in the form of negative judgments. In Example 5, K and A are browsing the “economy” page, reading its objects out loud (lines 1-18). Following a suggestion by A in line 18, K tries out one alternative, “news” in line 19, but gets an error message. In line 22, K makes her judgment about the response available with an expletive that leaves little doubt about what she is feeling.

Example 5. On a garden path: scrolling a sub page of the Economy page

01 K It's [not here
 02 ((scrolls))
 03 A myeah (.) it's not there
 04 (0.7)
 05 ((scrolls))
 06 K I don't really ()
 07 A =[() () ([)]
 08 K [her]e is [n'th'ng]
 09 A [stocks
 10 A Return, return (.) com-
 11 K =[selects RETURN]
 12 [{the KAUPPALEHTI page appears}]
 13 K ((scrolls down the page))
 14 A Investment funds
 15 A Currencies
 16 A News
 17 K ((scrolls))
 18 A Take News
 19 K {g[oes to CHOOSE] }
 20 [{selects CHOOSE}]
 21 [{system message: NO REPLY RECEIVED}]
 22 ->K *Oh shit* ((finger on the scrollbar))
 23 =[presses RETU[RN]]
 24 [{the KAUPPALEHTI page appears}]
 25 (0.7)

26 ((scrolls))

Another way to express the double-bind situation is through descriptions of emotional states and moods. In Example 6, K and N are trying to find their way to the Stock Exchange, but have not found it. After more than 5 minutes of trying in vain, they get to *Kauppalehti*, which does offer one possible route to the destination. However, they didn't find the HEX index through *Kauppalehti*, and tried the bank page instead, with no success. After N's frustrated "Nn no:::, HMH" in line 6, the research assistant intervenes, asking what the problem is. N ventures to explain how she is convinced that *Kauppalehti* would have been the right route (lines 8-9), and is joined by K in this judgment (line 10). However, N also continues to give a reason for why they did not find their way to HEX through *Kauppalehti*: they got tired of searching and banging their head against the system (lines 9 and 13). Again, K immediately aligns with N's explanation (line 14).

Example 6.

01 K? We'd-, We'd have gone further [if we had, we had let it]
 02 N? [Yah if we had immed=]
 03 N? let is *call*
 04 (4.0)
 05 {WAPIBS (Choose topic)}
 06 N No no:::, no, HMH.
 07 R What's the *prob(lem)*
 08 ->N We'd have got there, absolutely we'd have got there
 09 ->N fr[om Kauppalehti but we, just got tired (.)
 10 ->K [Yeah we would, yeah, .yea, yea
 11 <GO BACK>
 12 {WAPIBS (Choose main topic)}
 13 ->N in waiting that it makes the [ca[ll
 14 ->K [[*nyea*
 15 [<GO BACK>
 16 [{ECONOMY}

WAP pages are complex, and often provide ambiguous responses to guesses people make when browsing previous pages. And indeed, once users get a response, there is

still much to do. They have to find out whether it is relevant, and how it helps them search for information. Often the only way to proceed is to go to the next page, which is teeming with Siren's songs, and items that are ambiguous in terms of common-sense knowledge of social structures. As the user interface of a service becomes a Kafkaesque labyrinth, frustration amounts and is reflected in the fleeting judgment regarding the technology – even when one is using it for the first time and initially considers it beneficial. These judgments may result in cognitive dissonance (Teo & Pok, 2003), which may partly explain why WAP was a failure. However, as even this cursory look at actual, embodied and social use of WAP shows, such judgments have a practical background. The reasons for these judgments again lie in the confusions described in the previous section. Something similar takes place when people come to realize that they have gone through several false alarms for no reason.

It is this labyrinthine feeling that is formulated in what appear to be fleeting comments in talk. However, these fleeting comments are in fact rather significant. As these judgments become formulated in talk, they may also come to be shared, as in Example 6, in which K and N commit themselves to the idea that they got too tired to try *Kauppaletti* long enough. As such, these judgments are only formulations of ongoing activities, but if people get committed to them, and build their lines of activity on them, they establish changes in Gestalt contextures (Gurwitsch, 1964). It is important to note that these changes of Gestalt contexture from “good” technology to “bad” technology take place quickly. In our study, it took participants only a few seconds to become confused, insecure, and embarrassed, and only a few minutes to define WAP as a useless technology. Saying such items out loud makes doubt public, and makes it possible for other people to align with the new Gestalt contexture.

7. Discussion

Like so many other digital technologies between 1995-2001, WAP was initially hailed as an inevitable success that was supposed to bring the Internet to everyone's pocket. The reality proved to be different. In effect, WAP became one of the major failures of information technology, and also the biggest failure of mobile technology.

Several explanations have been proposed to account for the failure of WAP. Most typically, these have been non-theoretical in nature. For example, it has been pointed

out that WAP is inconvenient to use, people do not trust that it is safe, WAP is slow, and it is technologically unstable (Anil et al., 2003). Perhaps the only theoretical attempt to explain the failure of WAP has been proposed by Teo and Pok who, using Web questionnaire data from Singapore, proposed that cognitive dissonance between the promises of the industry and the reality explains the failure of WAP. However, they also argued that an intention to start using WAP largely stemmed from attitudinal and normative pressures rather than behavioral ones.

In contrast to these explanations, this paper has followed the ethnomethodological tradition (Koskinen, 2000; Arminen, 2001; Arminen & Raudaskoski 2003; Arminen 2005; Koskinen et al., 2006) and studied WAP as firmly rooted in local circumstances of use and, more specifically, in common-sense knowledge of social structures (Garfinkel, 1967). This paper has argued that users have to rely on their common-sense knowledge to be able to use WAP but that, simultaneously, this common-sense knowledge is a source of many of WAP's problems. The failure of WAP is endogenous: rather than being rooted in the external circumstances referred to in mobile telephony literature as being typical hindrances for using mobile phones – like regulations and impoliteness (Ling, 2004) – I believe the problems of WAP are rooted in what people know about society and more particularly, its institutions. To get to their destination in WAP, people have to use their knowledge of society in conducting the "situated inquiries" (Suchman, 1987) necessary to get through the hierarchies of the system.

One of the main problems of WAP is the small-and-deep interface that necessitates using classifications that are so abstract that they are simultaneously dependent on, and out-of-touch with, common-sense knowledge of social structures. On one hand, people have to use common-sense knowledge of social structures in navigating WAP sites. On the other hand, in navigating WAP, people constantly face items that are confusing and lead them to what Suchman (1987) called garden paths and false alarms. As a result, user experience deteriorates, and indeed our transcripts show many instances of less-than-happy feelings and emotions within situated inquiries. As these negative instances mount, people may come to define WAP as something that is not designed for them. Since they cannot trust their ability to get what they want from WAP, they stop using it. Technological solutions in WAP have been so out-of-touch with ordinary methods of reasoning that people simply cannot "tame" this technology.

The data for this paper is old, stemming from the first generation of WAP. However, although other technologies have come to market, the problem is still there. Many WAP sites are still structured almost exactly as in this paper, consisting of links that are

typically only one word long. In more modern phones, navigation is increasingly based on visual icons, making navigation easier and less dependent on one's ability to use one's common-sense knowledge of social structures.

As Ramsay and Nielsen (2000) note in their interview study of WAP users, WAP at the turn of the century was in many ways like the Internet before the latter became visual and multimodal with the introduction of the World Wide Web around 1994-1995. The pre-WWW Internet was mainly used by research scientists located in universities. In contrast, WAP was built for the masses. Thus, it came to be used in completely different practical, social, and institutional circumstances than the Internet. For example, although finding someone's e-mail address before Altavista, Yahoo, or Google required lots of guesswork that was largely based on common-sense knowledge, knowledge of the real world and its virtual version was usually available in the use environment, the university. WAP users walking around somewhere do not have access to knowledgeable colleagues who could help them tackle technological problems. The other important precursor, *i-mode*, popular in Japan, also shows a different way of how devices with small-screens are embedded in ordinary society. For instance, *i-mode* was built on existing common-sense categories familiar to people from classified ads (Matsunaga, 2000; Natsuno, 2003). People knew how to navigate *i-mode* because its classification had been tested in the marketplace for years before they were coded into the phone. In brief, the social organization around the Internet made it easier to use, but there was no such buffer for WAP.

These precedents suggest a cautious generalization regarding other technologies. If the design of a system only builds on ordinary knowledge, but not on a tradition of knowledge created by institutions like the classified advertising industry or universities, common-sense knowledge of social structures easily becomes ambiguous, turning user experience into a maze. Unless the nature of common-sense knowledge and the social organization of use are taken into account in design, technology is likely to fail, or be successful only under certain specific conditions. For example, as Ramsay and Nielsen (2000) noted years ago, WAP was in many ways similar to the pre-WWW, pre-visual Internet which survived, if not flourished, in academia, where people did have quick and cheap access to technical help. When we turn to consumer technologies, this precondition, "social soil," is missing. WAP suggests how a blatant disregard of this fact and the assumption that people are able to make sense of items on screen using common-sense knowledge of social structures is untenable in many circumstances. More than anyone, designers ought to be aware of the perils of believing that they

since they understand the system, others will too. In their work, designers develop a culture that helps them understand how items and classifications in menus work. They are a special case of a far more general problem.

This paper was based on classic ethnomethodology that found its basic formulation in Harold Garfinkel's *Studies in Ethnomethodology* (Garfinkel, 1967). The framework has proved to be useful in studies of work and computer-supported collaborative work, or CSCW (Heath & Luff, 2000) and increasingly also in design (Arminen, 2005; Kurvinen, 2007). In methodological terms, the aim of this framework is explicating action in detail in situations in which it happens rather than explaining it by such social structures like gender or class. However, since the basic thrust of the analysis focuses on explicating how ordinary action is organized *in situ*, the analysis almost necessarily leads to results that are to some extent self-evident and common-sensical. However, this does not mean that analysis is uninformative. On the contrary: a thick description (Crabtree, 2003, p. 27-28) of ordinary action lays bare just those ordinary skills that people usually take for granted and find uninteresting. As this paper has shown, however, it is just these skills that make technology work – or not work. They make up the seen but unnoticed “social soil” that technologies cannot do without – even when people are not aware of the many features of their action. For designers of technology, explicating them is crucial: a technology like WAP, designed for ordinary circumstances, comes to be judged by how well it works in them.

In sum, although WAP may have been the first step in making the Internet mobile, it forced people to make simplified choices in complex, context-dependent matters like deciding whether going to Sydney is fun or work. One consequence of this property is that people had to spend time and energy deciphering items they encountered on WAP pages. In this work, they had to rely on their common-sense knowledge of social structures. However, this knowledge was a mixed bag. Sometimes, it helped people navigate through the system; just as often, however, it led them astray. Unintentionally, WAP became what Garfinkel (1967) called “breaching experiments,” explorations into how ordinary activities were constructed. Just as in Garfinkel's study, where students desperately tried to find meaning in arbitrary answers to their question by a supposed advisor, WAP users face a system in which their quests for meaning were, for all practical purposes, met with inexplicable answers by the system. The difference between breaching experiments and WAP is ultimately a matter of scale which, in the case of WAP, was industrial. The fate of WAP shows how neglecting orderly properties

of ordinary actions may lead to technological failures on a massive scale even though there clearly exists a need for the technology.

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Texters not Talkers: Phone Call Aversion among Mobile Phone Users

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ABSTRACT

This paper argues that there are two types of mobile phone user. The study focused on the interactional experience of mobile phone calls and text messages. The research involved 32 UK mobile phone users and included extended interviews, 24-hour communication diaries, mobile phone bills and an analysis of text messages. The sample was evenly divided between men and women, and between two age bands, 21 - 34 years and over 35 years. In line with earlier work by Reid and Reid (2005a), two different groups emerged from the research: Talkers, who prefer talking on the phone, but use text messages as a convenient complementary medium, and Texters, who are uncomfortable on the phone and prefer to send text messages. The paper explains the distinction between the two groups in terms of phone aversion, and relates this to difficulties in the presentation of self. For those who are phone averse, SMS is a ground-breaking technology, providing the remote social connection that they cannot enjoy in phone calls.

Keywords: *mobile phone, cell phone, text messages, SMS, phone aversion.*

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1. Introduction

This paper examines and develops the distinction drawn by Reid and Reid (2005a) between two types of mobile phone user: Talkers, who prefer to make calls, and Texters, who prefer to send text messages. Reid and Reid found that a preference for either calls or texts split their sample roughly in half. The research described here: refines their distinction, distinguishing between preference based on intrinsic and extrinsic factors; replicates their findings in small-scale qualitative research with UK adult respondents; and explains this polarisation in terms of phone aversion and problems with presentation of self. For Talkers, phone calls are the primary function of

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their mobile phones, with text messages as an important complementary affordance, but for Texters, who actively dislike phone calls, text messages are the *raison d'être* of their mobile phones. The research suggests that there are individual differences in the phenomenological experience of phone calls, and that a specific group of mobile phone users are unable to enjoy this form of social interaction. Whereas Talkers used both mobile phone calls and SMS, Texters primarily used their phones for texting. They found SMS particularly valuable, because it enabled the remote social contact that they do not enjoy with land or mobile phone calls.

The first text message was sent in the UK in 1992, but the technology was originally developed to enable operators to communicate with users, and was limited to intra-network communication until 1999 (BBC, 2002). The rapid growth of SMS (Short Message Service) was not anticipated by the industry, which in 1999 was predicting convergence and the disappearance of the medium within three years. However, SMS growth has continued, with an average annual growth rate of nearly 30% over the last five years. In 2006, 42 billion text messages were sent in the UK; this is approximately 4 texts sent or received, per person, per day (Text.it, 2007). Although SMS usage in the UK is skewed towards younger users, 70% of all mobile phone users text at least once a week (Ofcom, 2006). The sustained growth of SMS reflects its interactional advantages; this paper suggests that these are particularly important for those who find phone calls difficult.

The paper is organised as follows. I briefly review previous relevant research on mobile phone interaction before describing the research method. This is followed by the research findings and a discussion of their implications.

2. Previous Research on Mobile Phone Interaction

Several authors suggest that mobile phone calls and text messages can nurture social bonds (Ling & Yttri, 2002; Grinter & Eldridge, 2001; Pertierra, 2005). The increased contact facilitated by mobile phone calls increases intimacy in relationships (Fortunati, 2000), reinforcing social bonds between close friends (Geser, 2005). Mobile phones are frequently used to make “phatic calls” (Haddon, 2000) or “social grooming calls” (Ling & Haddon, 2001), where making the call is more important than what is said (Licoppe & Smoreda, 2006). Previous research suggests that the key characteristics of SMS are its asynchrony and lack of intrusiveness (Ling, 2004; Geser,

2005). Like mobile phone calls, text messages are used for maintaining contact and intimacy (Thurlow, 2003; Rheingold, 2003; Prøitz, 2005; Ling & Yttri, 2002). As Ito and Okabe (2005c, p. 265) observe, text messages can be a “means of experiencing a sense of private contact and co-presence with a loved one”. In close relationships, the connectedness enabled by a combination of media, including text messages, email, and mobile phone calls, can develop into a continuous or “connected presence” (Licoppe, 2004). Several studies indicate that SMS is mainly used with close ties (Matsuda, 2005; Harper, 2003; Smoreda & Thomas, 2001). Reid and Reid (2005b) suggest that texting primarily occurs within small “text circles”. In their online survey they found that, on average, their respondents had twelve contacts whom they texted regularly.

Reid and Reid (2005a) introduce the terms “Texters” and “Talkers”, classifying their respondents on the basis of their expressed preference for text messages or phone calls. This measure split their (mainly student) sample roughly in half, and was correlated with significant differences in usage, attitudes and personality. Texters scored significantly higher on the Russell Loneliness (Russell, Peplau, & Cutrona, 1980) and the Leary Interaction Anxiousness (1983) scales, and were significantly more likely to think that SMS had improved their social relationships. These findings are especially interesting given that earlier uses and gratifications research (Wei & Lo, 2006) found that those who were less socially connected on the Russell Loneliness scale (1980), were significantly *less* likely to use *mobile phone calls* for affective gratifications. This suggests that SMS may be particularly important for those who are less socially connected, affording remote affective connection. The distinction between Texters and Talkers is taken further and developed in this paper.

In mobile phone calls an individual is simultaneously involved in two interactions (Licoppe & Heurtin, 2002; Puro, 2002); this can create role conflict (Geser, 2005) as different roles become salient at the same time. Several authors suggest that Goffman’s concept of presentation of self is useful for conceptualising role conflict in mobile phone interaction. In “The Presentation of Self in Everyday Life” (1959), Goffman introduced a dramaturgical metaphor: interaction is a performance in which the self is presented to others. Individuals present different roles, adapting their manner and appearance to differentiate their roles. Physical settings are relevant, with different roles performed in the “front” and “back” regions of the “stage”. Ling follows Meyrowitz (1985), and uses Goffman’s stage metaphor to explain the juggling of concurrent interactions in mobile phone calls (Ling, 1997; 2005a). Fortunati (2005)

reports research on the presentation of self in mobile communication, and claims that mobile phone calls expose the different roles that people play. Whereas mobile phone calls can complicate the presentation of self, Oksman and Turtainen (2006) claim that SMS helps teenagers to control “face-work”, facilitating their presentation of self. I develop this, arguing that problems with presentation of self in phone calls help to explain why some people prefer to send text messages.

This study differs from much of the existing research on SMS in three ways. Firstly, whereas many empirical studies have focused on teenagers (e.g. Selian & Srivastava, 2004; Ito & Okabe, 2005b; Oksman & Turtainen, 2006), the respondents in this research were adults. Secondly, research on mobile phones has tended to focus on *either* mobile phone calls *or* text messages; in contrast, this research compared the two media. Finally, empirical work on SMS has concentrated on text message language (Kasesniemi & Rautianen, 2002; Thurlow, 2003; Hård af Segerstad, 2005; Ling, 2005b) and on SMS reciprocation norms (Kasesniemi & Rautianen, 2002; Ito & Okabe, 2005a; Laursen, 2005; Licoppe & Smoreda, 2006). In contrast, this research focused on the *experience* of SMS interaction, comparing it with the experience of mobile phone call interaction. This changes the research focus from mobile phone usage behaviour, and from the content and form of text messages, to user perceptions of these two media as social activities in their own right, rather than merely as means of communication.

3. Research Approach and Method

Mobile phones combine two different communication channels in one device and therefore, theoretically, on any occasion users have a choice between the two media. This should increase users’ awareness of the differences between the two forms of interaction. Exploiting this heightened awareness, the research focused on users’ perceptions of the differences between the experience of mobile phone calls and SMS. The research question was: “*To what extent do people perceive differences in the interactional characteristics of different channels of communication? Is this relevant to choice and usage?*” The original objective of the research was to compare perceptions of mobile phone call and text message interaction, rather than to explore Reid and Reid’s distinction between two types of mobile phone user. However, during the research it became apparent that there were individual differences in the way that the

two mobile phone channels are perceived, and that Reid and Reid's distinction was pertinent.

Open-ended (Silverman, 1997) qualitative interviews were selected as the main research method, because the research concerned respondents' perceptions of interaction and their rationalisation of choices. The research primarily consisted of 2 - 2½ hour long interviews with 32 UK mobile phone users. The interviews were supplemented by an analysis of 24-hour communication diaries completed by respondents on the day before their interviews, 278 text messages¹ collected from the interviewees, and respondents' mobile phone bills where available². King, Keohane, and Verba (1994) claim that random selection is not generally appropriate in small sample research, and advocate purposeful selection to maximize variation in the range of explanatory variables. To control the variance between respondents, the research sample was based on a quota, which divided respondents by gender, and into two age groups, 21 - 34 and over 35. It is advisable to choose a homogenous sample (Kuzel, 1999) to facilitate analysis and reduce extraneous variation in the data. To increase homogeneity, all respondents were over 21 years, lived in the UK and spent at least £15 per month on their mobile phones (industry sources at O2 and BT indicate that about 75% of UK users spend £15 or more per month). The need for homogeneity has to be balanced with the need to include a range of people with different demographics and lifestyles, to increase the insights provided by the research (Rubin & Rubin, 1995). Consequently, the sample was deliberately selected to include a wide variation in terms of class, income, education level and presence of children.

Most of the research interviews took place between April and September 2005. Respondents were asked to complete diaries on the day before the interview, recording all their non face-to-face communication. These were a useful resource, but may have primed participants, encouraging them to reflect on, rationalize, and construct their communication use. Interviewees were asked to save all the text messages sent or received on the day before the interview. During the interviews the researcher collected text messages that had been saved on respondents' phones, both from the previous day and from earlier exchanges. These were either transcribed or forwarded to her mobile phone. Materials used during the interviews included

¹ The number of text messages collected from respondents varied. Some had many messages saved on their phones, whereas others had phones that could store only a few messages. Consequently the sample is indicative rather than representative of respondents' messages.

² The seven respondents who had "pay as you go" phones did not receive mobile phone bills. A further three respondents had bills paid directly by their employers and six were unable, or reluctant, to provide copies.

communication media cards, based on repertory grid analysis (Kelly, 1955); social circle drawings (Pahl & Spencer, 2004); and Blob Tree diagrams (Wilson, 1991). The interview transcripts and the text messages were both coded using Atlas-ti. All names have been anonymised.

4. Individual Differences: Texters versus Talkers

Although all respondents made mobile phone calls and sent text messages, there was a considerable variation both between their relative usage of these channels, and in their perceptions of the advantages of the two channels. Cognizant of Reid and Reid's (2005a) distinction between Talkers and Texters, the research compared respondents' attitudes to texting and calling. However, whereas Reid and Reid used a question about *preference* to define their two categories, this research distinguished between preference based on the intrinsic interactional characteristics of the medium, and preference based on extrinsic factors, such as price or contract allowances. Respondents were also asked how comfortable they felt, relatively, face-to-face, on the phone, or when texting. This was a relatively sensitive issue, because some respondents were embarrassed about their inadequacy on the phone. On occasion, an informant's discomfort with calls only emerged towards the end of an interview, in response to direct probing, contradicting his earlier comments. In addition to respondents' attitudes, the research probed relative usage of the two media (both claimed and as evidenced by their communication diaries and mobile phone bills).

Respondents fell into two groups: the majority were most comfortable when interacting face-to-face, then during calls and then when texting (two had no preference). Five of those who were most comfortable with calls, nevertheless texted, usually because of cost. However, a substantial minority of twelve were most comfortable when texting, usually *followed* by face-to-face interaction, with phone calls as the channel in which they were least comfortable. Note the asymmetry in that Texters generally prefer texting even to face-to-face communication, whereas Talkers are most comfortable communicating face-to-face; this pattern was also found by Reid and Reid (2005a).

Mobile phone bills, where available, and diaries supported claimed relative usage, although there was a degree of exaggeration. Mobile phone contracts in the UK are generally designed for Talkers, with a basic allowance of calls. Texters who had

contracts were not using their call allocation each month, and some had accumulated a large number of “free” minutes. In addition, whereas Talkers’ bills often showed long calls, Texters’ calls were typically less than 30 seconds in duration. For example, Kevin had an allowance of 500 minutes; in fact his bill showed that he had not used any minutes in the previous month. In contrast Dee had used 497 minutes of her 500 minute allowance. The communication diaries confirmed these patterns of usage. For instance, Dee’s diary showed that on the day before the interview she had made five mobile phone calls, but had sent no text messages, although she had received two text messages. In contrast, Kevin’s diary showed that he had had two extended text message exchanges, and had sent two further text messages (one in reply to a mobile phone call that he had missed), but he had not made any phone calls.

The term “Texter”, which was introduced by Reid and Reid (2005a), is somewhat misleading because all respondents texted and nearly all were enthusiastic about text messages. Text messages had many advantages: they were quick and easy to send and did not disrupt the ongoing activities of the sender; they did not intrude on the recipient or others in their vicinity; they were inexpensive; they were private; and they afforded a slower, more open ended form of communication. However, Texters were particularly enthusiastic about texting and frequently compared text message interaction favourably with phone calls, whereas Talkers explained their use of text messages mainly in terms of speed, lack of intrusion, cost and the specific communication task. For instance, Ella, whom I categorised as a Texter, explained that she found it “easier to get across” what she wanted to say with text messages, because, “With text you don’t have any strained kind of silences, you can just be to the point and don’t have to worry about anything else.” Quinton also preferred text messages, and explained:

Quinton: There's that **cloak of slight anonymity**? I don't know if that's correct, but, but certainly, um. It's you send it, you get a response back, you send and response back. It's, it's much, **you're in control more** perhaps though.

(bold emphasis added)

Texters appeared to be uncomfortable when on the phone, whether mobile or landline. The degree of discomfort varied, but three respondents were extremely phone averse. Zoe greeted the researcher with the words “I’m a phone-o-phobic”. Throughout the interview she explained her strategies for avoiding calls. She unplugged the answer phone on her landline, to avoid having to call people back, and

made excuses to get off the phone, even when talking to her mother or sister. Zoe had a particular problem with strangers:

Zoe: Even if I want a Chinese, I have to either go and ask my next door neighbour "Can you ring this up for me?" Or if there's someone in the house they can do it. I can't do it. I can not ring up and order food, over the phone.

Yves shared her attitude to phone calls. If the job agency rang him to arrange an interview, he would not take the call, but would use the call as a cue to go there physically, to avoid having to speak on the phone. The only local phone numbers on his phone bill were a taxi company, a pizza delivery company, and his home number. In addition he had made two 35 second calls to a relative in Blackpool, and had made three foreign calls, because he was concerned that he wasn't getting a reply to his text messages. Although Yves said that he had no local friends, through a dating site on the Internet he has built up a network of friends throughout the world, with whom he exchanges text messages, emails, and MSN chat. Kevin also hated talking on the phone. If his mother called he would visit her, rather than return her call. He met his long term girlfriend in an Internet chat room. They meet rarely and do not speak on the phone, despite using each other's phone number to send several text messages every day.

Kevin: The only time I've spoken to her on the phone was "I'm at the airport waiting for you. Where are you?"
Ruth: So, not at all as emotionally close, as you are with texts, on the phone?
Kevin: No.
Ruth: But yet face-to-face?
Kevin: Face-to-face emotionally close, text messages –
Ruth: Why?
Kevin: I don't know. Neither of us has ever phoned each other.

Zoe, Kevin and Yves are at the extreme end of the Texters spectrum. Their attitudes to phone calls are somewhat surprising, given that the research respondents all spent over £15 per month on their mobile phones, and had volunteered as subjects for research, which was clearly described as being about mobile phones. As Kevin said, "The only thing that surprises me, about me, is why I even bothered getting a mobile phone in the first place". Others shared their attitudes, but were less extreme, sometimes being relatively comfortable when talking to close contacts or strangers, but not with those in between.

Although Texters disliked phone calls, they were enthusiastic about their mobile phones and text messages clearly played a major role in their social lives. This is supported by an analysis of the text messages collected. These were classified into two groups, instrumental and phatic³, depending on their ostensible motive. Instrumental text messages are sent to accomplish a specific objective outside the communication, whereas in phatic communication the objective is the social interaction of the communication itself (see Figure 1 for examples of text messages classified as “phatic” and “instrumental”). Slightly over 70% of the text messages collected from Texters appeared to be phatic, indicating that their text messages have a social function. The percentage of phatic messages was slightly lower at 56% for Talkers, presumably because they also make phatic phone calls.

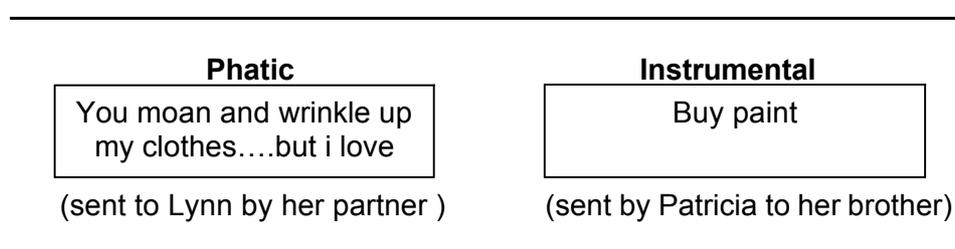


Figure 1. Phatic and Instrumental Text Messages

In contrast to the negative attitudes of Texters towards phone calls, Talkers positively enjoyed being on the phone, and could spend 30 minutes or more on a call. Mobile phone calls were generally shorter than landline calls, but this was price driven, where they had mobile phone contracts that allowed free off peak usage, calls were much longer. Talkers explicitly recognized a category of people whom they described as being “not good on the phone” or “not a phone person”, and often avoided phoning them, choosing to text instead. Some Talkers were less keen on SMS, because they found the typing difficult or, in one case, because the respondent was dyslexic and found it difficult to compose messages. However, most Talkers enjoyed *both* phone calls and text messages. Whereas Texters avoided making phone calls, texting (or emailing) unless this was impractical, Talkers explained how they sometimes selected a particular channel for its specific interactional affordances. For instance, they made phone calls when they needed to discuss something, because they found it easier to

³ The seven respondents who had “pay as you go” phones did not receive mobile phone bills. A further three respondents had bills paid directly by their employers and six were unable, or reluctant, to provide copies.

resolve issues in the inactive interaction of a phone call. They also said that they made calls when they were lonely and in need of company, or when they had to deliver “bad news”, because they wanted to be available to provide emotional support. Text messages were often a quick way of letting the other person know they were thinking of them without intruding, but were also used where they wished to avoid interactive communication, for instance, when apologising.

The next three sections of the paper discuss Texters in more detail, relating their phone aversion firstly, to call structure, and secondly, to presentation of self, before elucidating their attitudes by focusing on the phenomenological experience of mobile phone interaction.

4.1 Phone Aversion and Call Structure

Texters found call structure oppressive. There was a need for small talk, silences were unacceptable and finishing a call could be difficult. Both Texters and Talkers spoke about the need for small talk in phone calls: “you've got to get the whole chit-chat in there” (Tanya). This was more onerous for Texters. Fred explained: “it's very hard to make conversation ... you know talking about inconsequential stuff or, you know, insignificant kind of stuff”. Goffman (1981, p. 18) claims that in verbal conversation the interactants need to have “safe supplies” that is “a stock of inoffensive, ready-to-hand utterances which can be employed to fill gaps”; Texters found this difficult. Moreover, they were concerned that if they used up these comments, there would be nothing for them to talk about when they met face-to-face, as Fred commented, “if I say it all on the phone when we see each other we won't have much to talk about”. The problem of small talk is compounded on the phone, because silences are unacceptable. Whereas in face-to-face interaction Texters could interact socially without having to make conversation, for example watching TV together, on the phone silences were interpreted as meaningful.

Ruth: You said on the phone you can't be silent? Why not?
Ulysses: Or, if you are, it's a very big statement. **It's a very, very big statement, if you're silent on the phone.** You know, they're just all the pressures are to make a noise.
(bold emphasis added)

Texters also found it difficult to end calls. As Kevin commented: “I've found myself thinking on a call before, ‘OK we've got the information. Can we just finish the phone call now, please?’” Although many respondents said that some people talked for too long when on the phone, this was a particular complaint of Texters. Some Texters

seemed to be exceptionally aware of the structure of phone calls. Xavier described the structure of phone conversation, recognizing the different stages that have been identified using conversation analysis (e.g. Schegloff 1986; Schegloff & Sacks, 1973; Arminen & Leinonen 2006).

Xavier: A phone call comes in stages, you know. ... you have to obviously let them know who you are, um. Get that out the way then um you can either, uh, go along with small talk for a little bit, or you can go straight in with what you called to talk about, if it's that sort of phone call. Um, once that's out the way, bit more small talk and then tail it off, or you can say, "OK I'll see you later", if you want to make it a shorter phone call. But, um tailing tail- I don't really like the tailing off part, because of, um, it's pure jest who has to do it first and the way you do it and ahh who says goodbye first.

Xavier, much preferred texting, because he did not like small talk and he found it hard to end phone calls. Xavier is aware of call structure, but takes it for granted. He does not treat the norm for small talk as discretionary, although he has devised a strategy for reducing it during the negotiation of access at the beginning of the call (Licoppe, 2004; Arminen, 2005; Schegloff, 1986):

Xavier: I think you have to voice it to say, "Oh I'm off yeah, my phone bill's terrible this month" and uh just. I I sometimes say, "Just a quick one" right at the beginning of the conversation, "Just a quick one" and then I get on with the phone conversation and then I get on with it with the phone conversation, yeah. And I say, "Yeah quick yeah see you later".

The need for small talk and the difficulty experienced when ending calls does not fully explain Texters' negative attitudes. Most Texters particularly disliked voicemail and answer phones (although one preferred it to actually having to talk on the phone). In the research there were nine respondents who *never* left voice messages, eight of these were Texters. This suggests that Texters' problem with audio communication is not just small talk or getting off the phone, as none of these are relevant to voicemail. Rather, they may be particularly concerned by the need for interaction ritual during phone calls, *because* they find phone calls uncomfortable.

4.2 Presentation of Self in Mobile Phone Communication

Many respondents complained about the difficulty of interpreting cues in phone conversation, because there were no visual cues. Texters seemed to be particularly conscious of this. In phone calls the loss of visual cues, such as facial expressions,

makes interpretation more difficult than in face-to-face interaction. In the next extract, Lynn, a Texter, explains this in more detail:

Lynn: You can hear something in the tone, but you're not quite sure. You can't see the eyes, you can't see the body language. You're kind of, you're picking up on **half signals** and sometimes it can be **misinterpreted** and sometimes, um it **can give a little bit too much away**. So it's sort of, I'd rather do it face to face, I'd rather completely confront it, or kind of shy away from it than to do that middle ground if it was a difficult [situation].
(bold emphasis added)

Lynn suggests that it is not only the danger of misinterpretation that concerns her; she is also worried about her lack of *control* over the expressions given off in her tone of voice. The problem with phone call interaction is not simply that there are insufficient cues, but the nature of those cues. Speakers give off many cues inadvertently in their tone of voice, slight hesitations, and choice of words. As Lynn explains, a call “can give a little bit too much away”. Lynn’s use of the term “half-signals” is interesting. Face-to-face interaction includes audio cues, but these are supported by visual cues. A speaker can support her verbal performance with appropriate visual cues so that, for instance, intended humour is signalled not only by intonation, but also by a rye smile, raised eyebrow or challenging glance. More importantly, in face-to-face interaction, what is *being understood* is signalled visually as well as verbally. Respondents were concerned that what was given off in phone calls might be misinterpreted; this is of less concern in face-to-face communication, because there is a continuous back channel of visual feedback on how one is coming across.

The attitudes of Texters to phone calls were summed up by Kevin:

Kevin: Maybe it's hard work, maybe it's harder work than a face-to-face conversation. Um, there is an expectation of, of **fluffiness** in the call, which is an awful lot easier for me in person to person. And written communication doesn't have the same expectation of the sort of **bonding bit** that goes around the conversation, when you're just having an idle chat with someone. Maybe I know I'm not great, or think I'm not great at it, and want **the visual cues to back up the audio cues**.
(bold emphasis added)

Kevin’s references to “fluffiness” and the “bonding bit” seem to refer to a problem with presentation of self; he attributes this to his lack of competence and the need to rely on audio cues. Texters seem to find presentation of self in phone calls particularly difficult. This would explain why they feel uncomfortable on the phone, and why they dislike call structure norms that prolong the experience.

Presentation of self in SMS is rather different. There are less expressions, both given and given off, but these are more controllable than in phone calls. The interactants have more time to think about their responses and this increases their control over presentation of self (Oksman & Turtiainen, 2006). Text messages are written independently; both Texters and Talkers emphasised this aspect of SMS. It gives participants time to consider the impression they are trying to make, and is particularly useful at the beginning of romantic relationships. Carol explained how she might write a text very carefully: “you might read it about 10 times over, sort of thing, just to appear like as if you’re really cool, you’re just sending a casual message to a friend” whereas “the spoken word you could fumble and you could be under pressure and nervous and the wrong message might be conveyed as well”.

The non-verbal cues in text messages are easier to control, but there is far less scope for these than in phone calls. Very few respondents used emoticons (there were just six text messages with emoticons in the text messages collected). The lack of cues in text messages means that they are often ambiguous. Respondents spoke about frequent misunderstandings, and about the problem of conveying sarcasm and humour in text messages if one didn’t know the sender well. Interpretation is less problematic with messages from close friends, because they *infer* tone from their prior knowledge of the sender.

4.3 The Phenomenological Experience of Mobile Phone Interaction

Phenomenology “studies conscious experience as experienced from the subjective or first person point of view” (Smith, 2003). The research adopted a phenomenological approach in order to understand respondents’ experience of phone calls and text messages.

Respondents frequently said that the experience of phone calls was very similar to face-to-face interaction: “although you’re not actually looking at each other, I suppose in a sense it still, it’s face-to-face, without the faces” (Jackie). Zoe, a Texter, made the same point when explaining why she preferred text, “at least I don’t have to talk to them. I know it’s not. It’s daft ‘cos it’s not face-to-face on the phone, but it is face-to-face to me”. Several used the same metaphor, being on the phone was like being with the other person, but with one’s eyes shut. They emphasised the synchrony and shared focus of phone conversation:

Carol: Yes, I think the other person is there, then and there. And you’re both communicating **at exactly the same time**. And that person

has **stopped to speak to you and you've stopped to speak** to that person and you're both com[municating]. Like **your thoughts are together at the same time.**

(bold emphasis added)

Phone calls involved focused concurrent interaction: "you've very much more got somebody's undivided attention on the phone ... than almost anything else" (Harry). In phone calls the interactants were "there together". When on the phone: "you forget actually that you're in a crowded place, you're kind of in your own little world" (Anne). Whereas this was perceived as a benefit by Talkers, for Texters the focused attention and real time interactivity of phone calls can be stressful. Some felt that they could be more easily manipulated in verbal conversation: "I hate being manipulated in conversations, absolutely loathe it" (Kevin). Lynn explained this in more detail; I had asked her about the differences between texting and calling.

Lynn: It's harder to say what you're, what you're trying to say to somebody, because **they can interrupt or they can change** – they can say something well makes, which will **make you change what you were going to say**, whereas on a text message, because it's only. It's like writing a letter, you can, you can kind of **break down exactly what you want to say and it doesn't get manipulated** [in] any way, and then you send it, and it's gone.

(bold emphasis added)

Lynn prefers to send text messages rather make phone calls, because she feels less vulnerable to manipulation. Not only does she have more time to think about what she wants with SMS, but she can say it without interruptions that may change what she says.

Respondents tended to talk about *situations* when discussing phone calls and face-to-face interactions. In phone calls and face-to-face interaction they spoke about "leaving the situation"; and complained about the difficulty of ending phone calls. These comments indicate strong situational proprieties for both phone calls and face-to-face interactions. In contrast text message conversations were not treated as situations. They did not seem to impose situational obligations; one could just ignore or delete a text message. This was a major advantage of text messages, not only for Texters, but also for Talkers in awkward circumstances or when they were busy. For instance, Patricia, a Talker, explained that rejection was less distressing in text message conversation than phone or face-to-face conversation:

Patricia: [on the phone] you have to **leave the situation** and it's the awkwardness of, you know, **having to deal with the situation**. At the end of the day you can delete somebody's number, turn the phone off.

(bold emphasis added)

In contrast to the copresence of phone calls, when discussing text message interaction, respondents spoke of the other person as not being there, or of “distance”. This can be an advantage: Olivia explained that it was easier to use endearments in text messages, because if one was rejected “it wouldn't matter ‘cos you're not there”. The feeling that the other person isn't “there” in text messages is especially relevant in embarrassing interactions and in new relationships. Several female respondents said that men were more romantic in SMS than when face-to-face or on the phone. Irene said that her boyfriend first told her he loved her by text: it was “much easier for him to write it than say it, also much easier for me, because I didn't have to sort of worry about what my face was doing”.

For both Texters and Talkers, the arrival of a text message is usually experienced as pleasurable. The analogy with gifts (Taylor & Harper, 2003) was not supported by this research, but many interviewees described a momentary sense of elation when they heard their text message sound alert: “a little joy” (Cecil). Although text messages do not require an immediate response, most opened their messages immediately, with positive expectations. This may be because many messages are phatic. Messages from mobile phone service providers are regarded as irritating, and most had turned delivery reports off because they found it disappointing when they received confirmation of delivery rather than a reply.

The phenomenological experience of phoning and of texting was a difficult area to research, because respondents took these experiences for granted and found them hard to articulate. The interviews therefore included a projective exercise to elucidate the character of these experiences. At the end of the interviews, a Blob Tree diagram (Wilson, 1991) was introduced and respondents were asked to choose the figures that best illustrated what they felt when making phone calls, texting, emailing etc. Figure 2 shows Yves' Blob Tree diagram and the figures he selected for (tele)phone calls, text messages, email and instant messenger. Yves is a Texter who feels closest to the other participant when using instant messenger. He hates the phone; his feelings are reflected in the figures he chose for each communication channel.

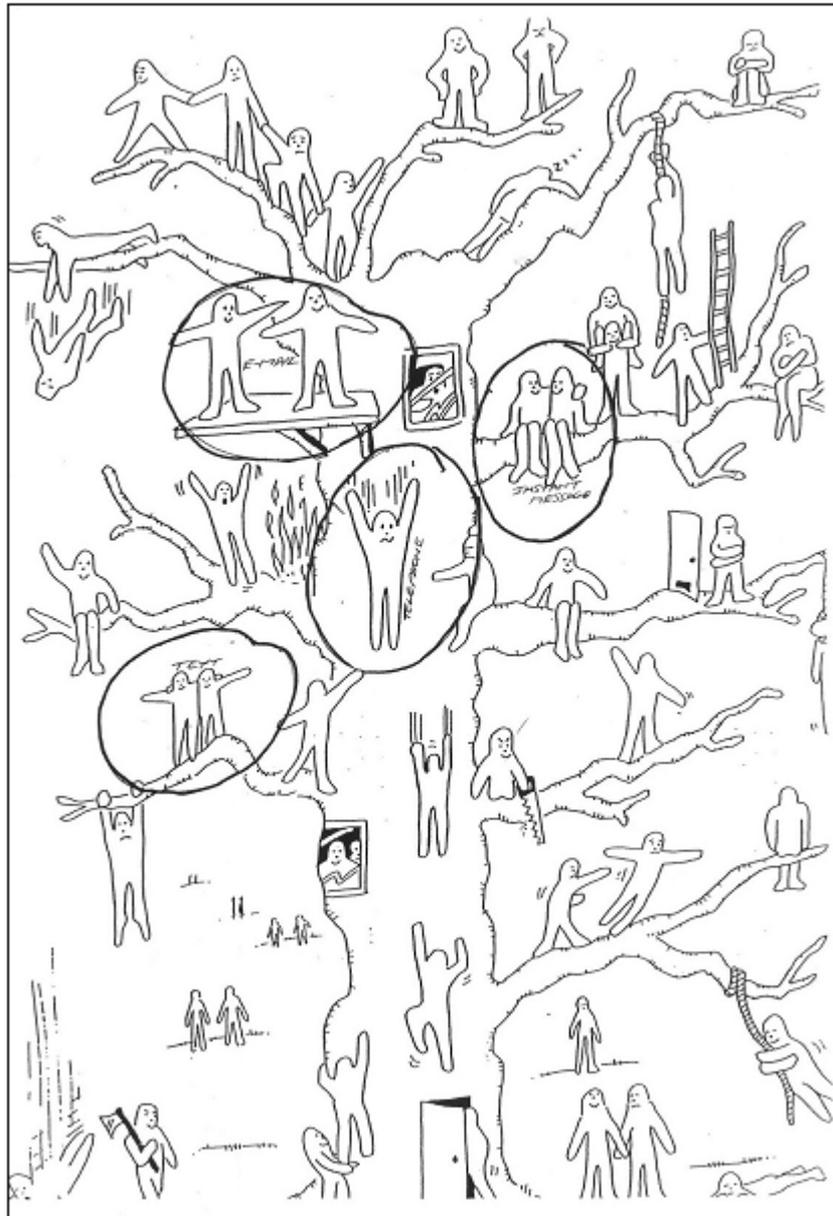


Figure 2. Yves' Blob Tree Diagram (*Illustration from Wilson, 1991*)

Respondents' choices did not show a consistent pattern for each channel as anticipated, although their choices were consistent with the views they expressed in the interviews. Instead their responses fell into two groups, with Talkers and Texters choosing different sorts of illustrations, see Figure 3. All except one of the Talkers chose intimate figures to represent the experience of being on the phone; the picture at the end of the first row was chosen most frequently. Texters, on the other hand, typically chose pictures for phone calls showing more distant figures falling, waving, or hanging, as shown in the second row, reserving the more intimate pictures for their experience of SMS. Talkers talked about how they felt close to the other person during

a phone call, whereas Texters felt more detached and sometimes anxious; the pictures they chose reflect their attitudes.

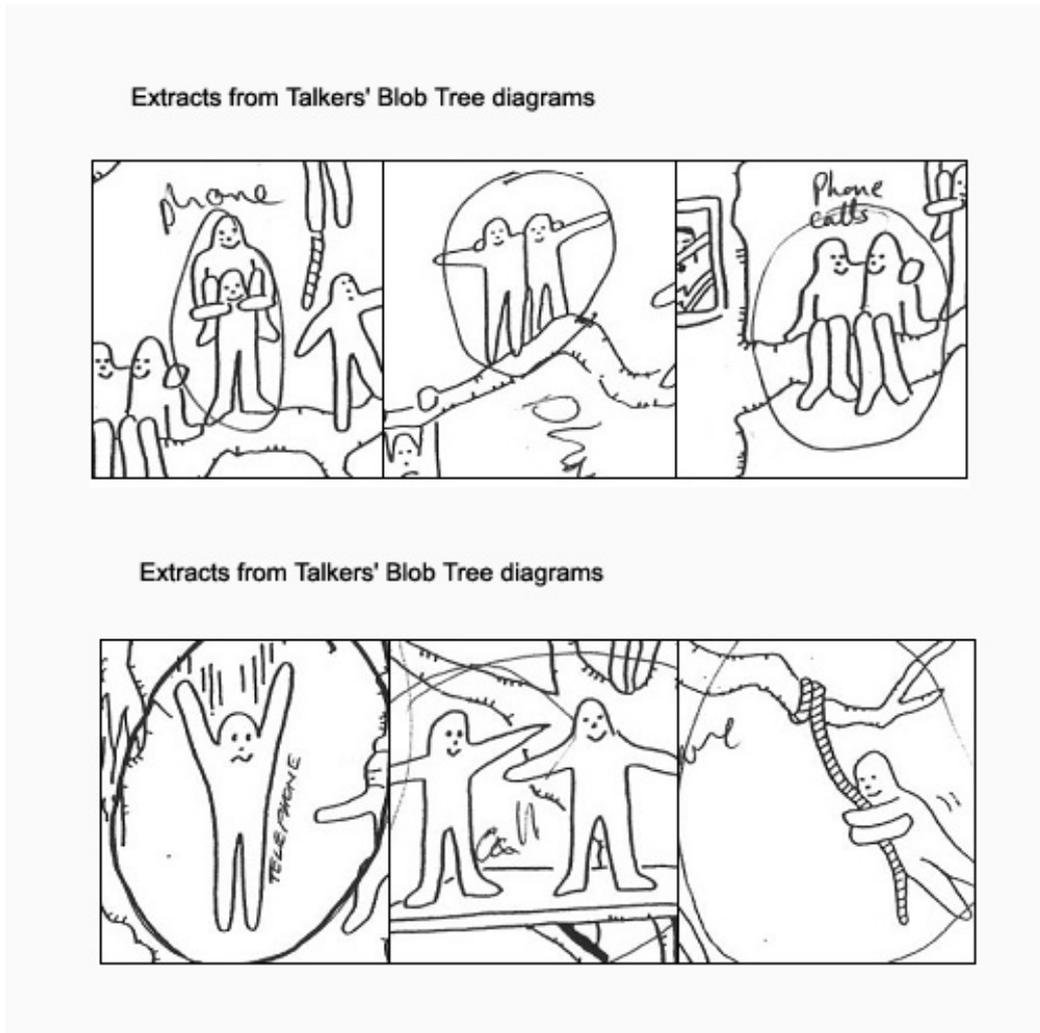


Figure 3. How Talkers and Texters Visualize Phone Calls (*Illustration from Wilson, 1991*)

5. Discussion and Conclusions

The research substantiates and explains the distinction between Texters and Talkers that was identified by Reid and Reid (2005a). Talkers preferred talking on the phone, but used text messages as a convenient complementary medium. Texters were much less comfortable on the phone, and preferred to send text messages. Both groups enjoyed sending and receiving text messages, but those classified as “Texters” exhibited varying degrees of phone aversion. Phone aversion is an important, but neglected, individual response to social interaction, which has been recognized for

nearly 50 years (LaRose, 1999), but there is relatively little research on the condition. Wurtzel and Turner (1977) suggest that 15% of the population are telephone averse; this corresponds with the 10% of the sample in this research who were extremely phone averse. Previous research on telephone aversion has focused on extreme cases. This research suggests that in a milder form it is relatively common, and has been overlooked in mobile phone communication. This is surprising, given the extensive volume of research on mobile phones in the last ten years. There is a need for further research to quantify the significance and distribution of phone aversion among mobile phone users. This research included only adult mobile phone users; it is possible that phone aversion is more widespread among teenagers. In the research several respondents commented that they had outgrown previous problems with phone calls. Problems with phone calls may be something that some people grow out of; this would explain the particular appeal of texting to younger people (Ling, 2004). This is consistent with research conducted among teenagers (Oksman & Turtiainen, 2006, p. 326) that claims that text messaging helps young people to control presentation of self, enabling presentation of their "more courageous selves".

Phone calls were perceived as ongoing social situations, which demanded a prolonged, continuous performance. This makes presentation of self more challenging, because the participants feel as if they are together, interacting in real-time. Silences and hesitations are interpreted as meaningful, so that there is little time for the interactants to deliberate. In addition, in phone calls - as in ordinary conversation - there is opportunity for interruption and interjection within each conversational turn; this enables one participant to manipulate the conversation. In verbal conversation what is understood is a result of interactive co-operation between the participants (Garfinkel, 1967); one participant can coercively interpret the other, understanding what is said so as to favour a preferred interpretation, or interrupt to forestall a particular interpretation (Silverman & Torode, 1980). In contrast, the asynchrony of SMS increases individual control and reduces scope for loss of face and embarrassment. The interactants are not interacting in a shared time. Consequently, as with traditional letters, participants can think about the messages they send, choosing their words carefully and not exposing themselves to embarrassment and loss of face. However, unlike traditional written media, SMS is *quasi-synchronous*, so interactive conversation is possible.

The experience of phone calls appears to be different for the two groups identified as Talkers and Texters. Talkers enjoy phone calls and, as indicated by the Blob Tree exercise, feel a sense of connectedness with the other interactant when on the phone.

Texters, however, did not feel close to the other person when on the phone, but felt disconnected and uncomfortable. This is exacerbated by social expectations that prolong phone calls. The research suggests that Texters find presentation of self in phone calls more difficult; this makes them anxious and changes the phenomenological experience of the call.

Phone calls present a particular challenge for the presentation of self, because silence is unacceptable, and visual cues are excluded. Presentation of self (Goffman, 1959) involves projection of the self, interpretation of the self projected by the other interactant, and also a recursive mutual monitoring in which each interactant checks on the impression he is making. Each of these aspects may be implicated in the discomfort experienced by Texters in phone calls. Texters may be less able to control the audio cues they give off. This is a supposition that goes beyond the research evidence, but it is consistent with Texters' dislike voicemail, which would expose this ineptitude. Similarly, one can surmise that Texters may be less competent in the interpretation of the audio cues they receive from the other interactant. These have two functions; they help to convey what the other person is saying *and* they show an interactant how his performance is being received. In face-to-face interaction subtle facial expressions and eye contact provide continuous concurrent feedback, but in phone calls feedback is limited to intermittent verbal and paraverbal cues. Presentation of self on the phone is also complicated because there may be a concurrent face-to-face interaction and consequent role conflict (Geser, 2005). Texters find it particularly embarrassing to conduct phone calls in front of copresent others and consequently switch their phones off when in public places. Finally, it may be that Texters feel less socially adequate and therefore more aware of these challenges. A combination of these factors may be relevant, and the relevant factors may vary between different individuals. Presentation of self is a skill, as Goffman (1959) points out. The relative incompetence of Texters and/or their lack of confidence makes them vulnerable to manipulation in the ongoing interactivity of phone conversation. Presentation of self is less demanding in SMS, because it is asynchronous. This gives the interactants time to deliberate on their performance, without concurrent influence from the other interactant. For Texters, who find phone conversation awkward, SMS affords remote, safe social interaction.

There is some indication in this research that phone aversion is a symptom of a more general problem with social interaction. Texters usually preferred SMS and other written communication to *face-to-face* interaction, suggesting a degree of social

ineptitude. This is consistent with Reid and Reid's (2005b) findings that Texters scored significantly higher in terms of "loneliness" (Russell et al., 1980) and "interaction anxiousness" (Leary, 1983). However, the evidence for this may have been constrained by the research design, because all respondents had voluntarily chosen the social interaction of the interviews, indicating a degree of social confidence.

It is interesting to note that the characteristics of phone calls that seem to create phone aversion are socially rather than technologically shaped. The extended real-time continuity of phone calls, the need for small talk, and the ritualised closing, are not technical features of phone technology. There is no *technical* reason why phone calls could not be used for minimal messages such as "Goodnight", but all respondents took it for granted that this was not acceptable. The constraint of normative practice in this area is so strong that Texters would rather forgo phone calls, than infringe call structure norms. This normative practice seems to have transferred from telephone to mobile calls, although the increased cost of mobile phone calls provides an excuse for shorter calls. In contrast, the normative practices associated with letters have not been extended to text messages. This may have been technically shaped by the small screens and character limit of early phones, which made such etiquette impractical. However, although phone screens have got larger, and multi-page text messages are possible, text messages have retained their lax norms, again reflecting the role of social shaping in communication practice. While respondents took phone structure for granted, they spoke positively about the lack of normative constraint in text messages; this creates flexibility and allows users to personalise their messages.

Recognition of the distinction between Texters and Talkers is socially important, because Texters are at a substantial disadvantage in phone communication. Text messages have many advantages for all users, but for those who are phone averse, SMS is a ground-breaking technology, affording the remote social conversation that they cannot enjoy in phone calls. The recent proliferation of near-synchronous written media may facilitate the social connectedness of this section of the community.

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Discourses on Mobility and Technological Mediation: The Texture of Ubiquitous Interaction

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ABSTRACT

Mobility is more and more mediated, supported and transformed by technological artefacts and infrastructures. Especially technologies labelled as mobile, pervasive, ubiquitous or nomadic, show an interesting shift in the shaping of sociotechnical environments and mediated interaction. Starting from some recent contributions on mobile and ubiquitous computing, the paper attempts to draw connections between discourses and practices related to the technological mediation of mobility. The assumption is that discourses circulating in different public arenas shape core meanings attributed to technologies, beliefs about them and also directions of development for technological artefacts.

The discursive practices examined concern mobility-centred theories of globalization (academic discourse), the relationship between the media and mobility (mass-media discourse), and the designers' discourse, drawn from three settings of design and development in mobile/ubiquitous computing.

As a result, the concept of ubiquitous interaction is presented as emergent pattern of mobile communication and theoretical framework to propose questions for future research, considering how mobility and its opposite (immobility) can bring the emergence of mobile techno-elites entitled to travel both physically and virtually.

Keywords: *Ubiquity, mobility, discursive frames, mobile communication, mediated interaction.*

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"I know not from what distant time thou art ever coming nearer to meet me.

Thy sun and stars can never keep thee hidden from me for aye."

(Tagore, 1913; 46)

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1. Introduction

The concept of what is far/near (in space and time) to us and the possibility itself of 'meeting' each other has fairly changed over time. As expressed in Tagore's beautiful verses, there is a mismatch in temporal and spatial distances as well as the desire to overcome them. Indeed, we could say history can be read through change, movement and displacement of people, objects and, increasingly, information, to the extent of considering modernity itself – and its globalizing face - as the product of flows, fluxes and changing landscapes.

Topics covered in this paper concern the way media and technologies shape the imagery of globalized societies through representations and devices qualified as *mobile*. These representations and devices make communication and interaction possible anywhere anytime, that means ubiquitous. The concept of ubiquity evokes a desire as ancient as humanness, that means overcoming spatial and temporal barriers so to reach the divine gift of omnipresence: 'being anywhere anytime' as opposed to the *hic et nunc* constraints of face-to-face interaction. Media history as history of social communication (Thompson, 1995) can be framed as a progressive extension of symbolic accessibility and interaction through time and space. In this sense, the current discourse about forms of computing labelled as mobile, pervasive, ubiquitous or nomadic (Lyytinen & Yoo, 2002a; 2002b; Greenfield, 2006), beside the nuances in definitions and classifications, shows a shift to a broader frontier in the shaping of sociotechnical environments and domestication of technologies (Williams & Edge, 1996; Silverstone, 1994).

Mobile computing and ubiquitous computing represent two sides of the same coin, what I define *mediatized mobility*. In fact, several media become more and more mobile through the convergence on the mobile phone as meta-device (Aguado & Martinez, 2006a); on other hand, mobility is increasingly mediated by portable/embodied technologies which are features of a widespread public discourse (Iacono & Kling, 2001). Mobility is not only mediated but also mediatized, being the topic of multiple discourses performed by different social groups.

The paper reviews literature in this field looking at how three groups (academics, the mass-media and designers) are engaged in envisioning a new type of mediated interaction ('ubiquitous interaction') where mobility and ubiquity are crucial key-words.

Their discourses represent people and information as increasingly 'on the move', and contribute to configure technologies so to support mobility in contexts and situations of

everyday life. These groups are considered as sources of public discourse, which is based on “the discursive practices – the written and spoken public communications – that develop around a new technology. Public discourse is necessary for particular understandings about new technologies to widely circulate” (Iacono & Kling, 2001, p. 110). The discursive practices examined in this paper concern mobility-centred theories of globalization (academic discourse), the relationship between the media and mobility (mass-media discourse), and the designers’ discourse, drawn from three settings of design and development in mobile/ubiquitous computing. The assumption is that discourses circulating in different public arenas shape core meanings attributed to technologies, beliefs about them and also directions of development for technological artefacts (Iacono & Kling, 2001).

These discourses concur to define the characteristics of current and future interaction, in terms of communication and coordination aspects, paying particular attention to spatio-temporal constraints and their restructuration through mobile and ubiquitous technologies (Green, 2002).

Eventually, the paper will try to use the concept of ubiquitous interaction as theoretical framework to propose questions for future research, considering how mobility and its opposite (immobility) can bring the emergence of mobile techno-elites entitled to travel both physically and virtually.

2. A World in Flux: Global Scapes, Networks and Mobilities in the Academic Discourse

Prominent theorizations of the globalized society are based on images and metaphors of flux, where emphasis on change, mobility and a set of affiliated concepts (e.g., networks, flows, scapes) play a crucial role. In particular, mobility can be understood as “an evocative keyword (...) and a powerful discourse” (Hannam, Sheller & Urry, 2006, p. 1) to re-order interpretations of globalization and its cultural dimensions. Mobility as emerging paradigm in social and human sciences (Sheller & Urry, 2006) accounts for patterns of contemporary social change, driving new patterns in turn. What emerges from these discursive frames put forward by anthropologists of globalization and the translocal (Hannerz, 1992; Appadurai, 1996) as well as by social theorists (Wellman, 2001b; Castells, 1996; Urry, 2000; 2002) is the image and representation of a world in flux. Being this flux composed of loosely-bounded

networks (Castells, 1996; Wellman, 1999), global scapes or flows (Appadurai, 1996; Hannerz, 1992) and patterns of different mobilities, immobilities and moorings (Hannam, Sheller, & Urry, 2006) the world is seen as resulting from differentiated landscapes. These approaches to the world as 'in flux' draw a broader picture of the background which fosters discourses and materialities of mobile technoscapes and mediascapes¹.

According to Appadurai (1996) the crucial innovativity of modernity comes from moving images meeting mobile audiences, or from mediascapes meeting ethnoscapes through fundamental disjunctures. The five dimensions (ethnoscapes, financescapes, mediascapes, technoscapes and ideoscapes) identified by Appadurai are intertwined across cultural boundaries. They suggest the idea of mobility as crucial to the production of subjectivity. However, emphasis on the individual characterizes all of the theories mentioned above, especially Wellman's (2001a) networked individualism and Castells's (1996) network society.

The shift from densely-knit, tightly-bounded communities to sparsely-knit, loosely-bounded, frequently-changing networks (Wellman, 1999) is associated with the rise of the Internet and ICTs. Such an association brings transformations of sociability, redefinition of concepts like community and interaction, along with new social patterns, namely networked individualism (Wellman, 2001b; Castells, 2001).

Castells's space of flows as "new spatial form characteristic of social practices that dominate and shape the network society" (Castells, 1996, p. 412) is disjunctive like Appadurai's global scapes: flows are meant to be "purposeful, repetitive, programmable sequences of exchange and interaction between physically disjointed positions held by social actors" (*ibidem*) and again mobility is crucial to its understanding and constitution.

The world so depicted is in flux as much as hybrid: it can be conceived of as a process, whose form is crucial to understand contemporary changes and globalizing trends.

¹ These two concepts, drawn from Appadurai (1996), are complementary: mobile technoscapes are characterized as the set of platforms, arrangements and settings which contribute to shape mobile technologies ranging from the mobile phone as a tool and a medium (Aguado & Martinez, 2006a) to the architectures and networks, policy regulations and services (Ramos, Feijòo, González, Rojo-Alonso, Gomez-Barroso, 2004). Mobile mediascapes, on other hand, are constituted by the set of discursive and experiential frames which both perform the discourse on mobility as a central feature of globalized society and make the information flows mobile across physical and virtual boundaries, using mobile technologies. Technoscapes and mediascapes, therefore, are part of a recursive system of relationships where artefacts and discourses can either reinforce or contradict each other.

*“(...) Flux, mobility, recombination and emergence have become favored themes ...)
Borderlands are often where the action is, and hybridity and collage are among our
preferred words for characterizing qualities in people and their products.”*

(Hannerz 2000, p. 2)

Hybridity can be also found in Actor Network Theory, when emphasising heterogeneity – and heterogeneous engineering - as cramming social practice made of networks of humans and non-humans (Law, 1997). But it is also central to theories where networks and space of flows are seen as constituting and transforming sociability (Castells, 1996; 2001; Wellman, 2001b). Communication itself has a hybrid constitution since computer networks are social networks and the dichotomy between physical space and cyberspace is false (Wellman, 2001b).

All these theoretical approaches to globalization and social change share the assumption that contemporary societies are increasingly built upon processes or fluxes. The form they take (networked individualism according to Wellman, space of flows for Castells, global scapes in Appadurai's view, cultural flows and hybrids for Hannerz, mobilities in Urry's paradigm) differentiates the theoretical frameworks, but at the same time provides us with a multifaceted analysis of these processes. Whereas the two anthropologists (Appadurai and Hannerz) emphasize the hybrid and disjunctive 'nature' of culture, the three sociologists give us the conceptualization of a world of networks centred on individuals, not ending with them but performed by them through circuits where not only people do travel, but also objects, information, materials, and symbols.

The *fil rouge* here is the reference to media or technical means as shaping the flux: according to Appadurai, mass communication is central in making public spheres diasporic and creating disjunctures typical of modernity. For Hannerz technologies of communication increase cultural complexity, making it more and more independent from face-to-face interaction; ICTs extend and change sociability according to Castells and Wellman, whereas Urry highlights how mobility is increasingly linked with objects and information. This centrality of mediated communication and interaction in shaping the global flows makes worth analysing the relationship between the media and mobility.

3. The Media Discourse: Mediatized Mobility and Mobile Mediascapes

If moving images meet mobile audiences (Appadurai, 1996) we could say mediascapes are mobile by definition: they are mobile as they were born from the constant interweaving of social representations, discursive frames, people on the move. However, the sense in which I define mediascapes as mobile goes beyond this preliminary consideration.

Mediascapes are mobile as mobility is more and more mediated by technologies. It is supported, enabled and constrained by technological artefacts aimed at increasing/fostering mobility of people, objects and information. As a consequence, patterns of mediated interaction are increasingly based on, and emerging from, mobile technologies. In this sense mediatized mobility refers to the way the media (and interaction they mediate) become mobile and allow information to be 'on the move'. In fact,

“Being mobile is not just a matter of people travelling but, far more importantly, related to the interaction they perform, the way in which they interact with each other in their social lives”

(Kakihara & Sorensen, 2001, p. 33).

Last but not least, mediascapes are mobile as mobility and mobile technologies represent hot topics in the media coverage and advertisement (Aguado & Martinez, 2006b). The mass media perform a crucial role in selecting and setting up discursive frames to help their audiences to make sense of technological innovations and artefacts. Mobile phones and mobile technologies are not an exception in this regard. The media constitute a gatekeeper system through which values, beliefs and representations of a new technology are filtered and proposed to the audience of its potential users. Furthermore, with reference to the mobile phone, a specific role is played by the advertising discourse, “which does not mainly deal with technologies, prices or services, but with emotions (...), social situations of interaction (related to security, availability, personal identity), individual and collective experiences (fun, romance, friendship) or technology related values (such as efficiency or design)” (Aguado & Martinez, 2006b, pp. 1-2).

Mobility comes to be constituted through both mediascapes and technoscapes, discursive practices and technological artefacts: it is their joint action that makes mobility so relevant in the context of contemporary society at both a discursive and a material level.

Such a joint action is performed, on the one hand, by the globalized media which help to frame ubiquity and mobility as crucial key-words in the public debate. In this sense the media play a crucial role in setting up links between emerging technologies (mobile phones, ubiquitous technologies) and a certain social order, comprising specific representations of the social and of social interaction. Being 'on the move' is so part of the contemporary imagination that to some extent mobility (in the form of travel) becomes a right defining the individual citizenship (Urry, 1999). The other side of the joint action of mediascapes and technoscapes is performed through sociotechnical action as arena where different players (designers, users, managers, institutions, corporations) negotiate technical specifications, associating them to representations of social assets (Horton, Davenport, & Wood-Harper, 2005). In this respect, technologies are both discursive and material arrays circulating through public discourse as privileged channel to envision the future of interaction and sociability.

Therefore, it is crucial to understand how and why new technological artefacts are focused on producing mobile, ubiquitous and pervasive environments. They both resemble and increase nomadicity of contemporary life. At the same time, this production of technologies is imbued with powerful metaphors, models and representations of social interaction and communication.

4. Mobile Technoscapes: The Designers' Discourse on Mobile and Ubiquitous Technologies

Mobile technologies and nomadic information environments represent an open laboratory into which individual and collective actors (e.g. organizations) experiment strategies to cope with very advanced technological artefacts. Some trends can be drawn here: the convergence of relatively older media and information services into new devices (e.g. e-mail accessed through mobile phones, document downloading, tv access from mobile phones, wi-fi services and so on); the virtually 'universal' portability, and consequent reconfiguring of space time and place of such devices, which makes them different from other types of computing. In such a way mobile technologies draw boundaries for new or restructured social action and interaction. Mobile computing also calls for a redefinition of Information Systems design, development and appropriation, through drifting (Ciborra, 2000) not only from the

planned development of the technological artefact but also from organizational arrangements centred on older sociotechnical infrastructures.

Literature examined in the mobile and ubiquitous computing field shows how current research is oriented towards three main sub-fields. The first one can be identified as *ubiquitous computing through augmented environments*, aimed to built up everyday environments conceived of as surfaces for communicative interaction.

Here “ubiquitous meant not merely in every place, but also in every thing. Ordinary objects (...) would be reconsidered as sites for the sensing and the processing of information (...)” (Greenfield, 2006, p. 11). Ubiquity, embedded into what Greenfield (2006) labels as “everyware”, is still linked with the idea of mobility, as it “appears not merely in more places than personal computing does, but in more different kinds of places, at a greater variety of scales” (Greenfield, 2006, p. 46).

Ubiquitous environments are characterised by unobtrusive realisation which aims to transforms patterns and opportunities of mediated interaction (cf. the following section).

The second setting that can be identified as constitutive of mobile technoscapes is circumscribed by evolutions and innovations concerning *smart phones*, the so called *mobile web*, *wireless and mobile services*. A major contribution to this process has been the transformation of mobile telephony towards access and forms of communication which go beyond the phone itself, allowing different services and functions to be performed through the device (Ling, 2004; Katz & Aakhus, 2002). In particular, smart phones are increasingly conceived of as “universal remote controls for people to interact with various devices from their surrounding environment; they will also replace all the different items we currently carry in our pockets” (Iftode, Borcea, Ravi, Kang, & Zhou, 2004, p. 1). Therefore, mobile phones are increasingly the result of multiple convergencies and saturations which make them the meta-devices *par excellence* and digital Swiss army knives in the Information Society (Aguado & Martinez, 2006a).

This idea of a portable, pocketable, unique device allowing interaction with a wide set of environments/computing networks unveils the way designers of wireless and mobile architectures conceive mobile mediated interaction. As Akrich (1992) notices, inscriptions in technological artefacts are never mere technical specifications: they communicate representations of the users (Akrich, 1995), as well as the vision innovators have of the artefact and of its future use.

Building a smart phone working at once as a personal server, a personal assistant and the privileged plug-in to the surrounding environment, entails the project of universal, ubiquitous and equalizing communication.

The third setting is constituted by the so called *mobile social software*. Functionalities of these applications include

“awareness of the locations of people who are socially connected to users, ad-hoc organization of people and groups, the creation of virtual meeting places (and) richer geographical environments supplemented by social network information (...)”

(Melinger, 2004, p. 3)

The field of mobile social software, with its emphasis on location, contributes to re-contextualize the interaction, re-embedding it into spatial constraints. However, location-aware software discourse often assumes that interaction and connection are driven by technology (Pellegrino, 2006). Location also concerns one of the most important aspects of context in mobile communication, constantly experienced and performed by mobile users in mobile practices. Location based services, therefore, are also made relevant by the communicative needs of mobile actors realized in mobile communication (Arminen, 2005).

The three settings represent different components of contemporary technoscapes, emerging from the interplay of rhetoric performed in public discursive frames (which rely on metaphors of flux, constant transformation and mobility as showed in section 2), technological frames set up by relevant social groups around more or less shared meanings of technology (Bijker, 1995; Orlikowski & Gash, 1994) and multiple contexts where discourses and materialities contribute to the artefact domestication (Silverstone, 1994).

5. Ubiquity as a Metaphor for Interaction: Some Hypotheses

Ubiquity as a ‘divine’ (non-human, or super-human) gift and privilege (that of omnipresence) seems to be more at hand of humanness than ever. As a root metaphor it drives an increasing amount of public discourses concerning technologies.

Ubiquity refers to some form of ‘infrastructural saturation’ (Bowker & Star, 2000) which can be recognized in the abundance of technical artefacts forming an ecology, an invisible infrastructure. The so called ubiquitous computing, as expression of an ‘everyware’ ideology, is exemplary of such a saturation (Greenfield, 2006).

When associated to interaction, however, ubiquity acquires new nuances of meaning. Therefore, it is not trivial to ask to what extent ubiquitous interaction constitutes a specific type of interaction and how it is different from the three categories analyzed by Thompson (1995), that means face-to-face interaction, mediated interaction and mediated quasi-interaction (typical of the mass media). Whereas face-to-face interaction is based on co-presence, shared contexts and a wide set of symbols (comprising non verbal communication, gestures and so on), mediated interaction narrows the range of symbolic cues, still adhering to a dialogic scheme, and makes contexts extensively accessible through time and space. Mediated quasi-interaction, on other hand, is mainly unidirectional. Where does ubiquitous interaction stay in this tripartite scheme?

We could say it is hybrid, as hybrids characterize the world in flux (cf. *supra*). The point in question here is how to define co-presence going beyond the corporeal dimension of face-to-face interaction. As Urry (2002, p. 1) puts it, “One should investigate not only physical and immediate presence, but also the socialities involved in occasional co-presence, imagined co-presence and virtual co-presence”.

Mobile devices which travel with us and follow us while being (im)mobile, allow the emergence of what Urry defines ‘virtual proximities’, “multiple networks, where people can switch from one to the other (...) through the shift to a personalised wireless world (...)” (Urry, 2002, p. 7).

Characteristics of ubiquitous interaction can be drawn from the literature examined insofar. The three discourses on mobility performed by academics, the media and designers, make possible to trace a path of what kind of interaction is envisaged by these social groups and how it is inscribed into technological artefacts aimed at mediating mobility.

Ubiquitous interaction is conceived of as a type of communication centred on individuals and their networks (rather than groups or traditional communities); it is extremely pervasive, to the extent of happening everywhere/every time, therefore simultaneous in space and instantaneous in time. Furthermore, it makes mediated communication more invisible, pocketable and easily taken for granted; it generates ambivalent micropractices of appropriation, especially with reference to patterns of microcoordination across time, space and contexts. Eventually, it fulfils the potential of virtuality, making the relationship between connectivity and interaction more direct.

All of these elements can be retrieved in the examples of new emerging artefacts illustrated in section 4. In particular, pervasivity and instantaneity/simultaneity can be

referred to augmented ubiquitous environments; individualisation, invisibility and constant connectivity characterize smart phones as well as wireless architectures, whereas ambivalences in coordination are typical of location-aware social software.

What follows is a set of theoretical statements concerning ubiquitous interaction, listed according to the actors performing it (par. 5.1.), the spatio-temporal patterns (par. 5.2), the integration in mediatized everyday life (par. 5.3.), ambivalences concerning coordination and appropriation (par. 5.4.) and the relationship between connectivity and connection (par. 5.5).

5.1. Ubiquitous Interaction and Its Actors: Individualisation and Personalisation

The performers of ubiquitous interaction act on the stage of networked individualism, which has not to be conceived of as a collection of isolated individuals, but a social pattern which “seems to be built on what could be called tertiary relationships, or what Wellman calls ‘personalized communities’, embodied in me-centered networks. It represents the privatization of sociability” (Castells, 2001, p. 128). This emphasis on the individual is sustained and fostered by small, embedded mobile media labelled as ‘personal’, more and more individualised/individualising. The mobile phone is the medium qualified as ‘personal’ *par excellence*, centred on the individual and constituting a gatekeeping device towards the environment (e.g., the universal smart phone proposed by Iftode et al., 2004). This does not mean the individual is more isolated: like networked individualism, ubiquitous interaction supported by mobile and ubiquitous technologies constitutes a new social pattern.

In face of this increasing individualism, “the importance of a communication site as a meaningful place will diminish even more. The person--not the place, household or workgroup--will become even more of an autonomous communication node” (Wellman, 2001a, p. 4).

However, even if portability and wearability of the new ICTs artefacts make them more and more available to the individual, social and spatial contexts are still crucial and are constantly reconstructed with the help of these artefacts. These contexts are shaped by micropractices of use, characterized by specific spatio-temporal coordination (Arminen, 2005).

5.2. Ubiquitous Space and Ubiquitous Time: Simultaneity, Instantaneity, Pervasivity

Socio-temporal structure is a fundamental dimension to analyze interaction (Thompson, 1995). Ubiquity seems to annihilate spatio-temporal differences, it questions categories of space and time, as well as the concept of place, more local and contingent than space (Brown & Perry, 2002).

Mobile phone communication especially affects the use of time and the role of place: it “modifies the presence and absence of individuals in social space, the social configuration of space and time, the implementation of the democratic process and the construction of the modal personality” (Fortunati, 2000, p. 9). Another important spatio-temporal effect is the distribution of presence in simultaneous interactions (Rettie, 2005).

The term “instantaneous time” is appropriate to ubiquitous interaction: the absence of delay increases the focus on what is immediate, so that “the future increasingly appears to dissolve into an extended present” (Urry, 2000, p. 128).

Simultaneity means competition but also co-occurrence between remote and co-present interaction, so that

“when people are on the phone, there is a sense in which they are in two places at one time. This is particularly apparent for mobile phone communication, where mobility means that calls are likely to interrupt concurrent copresent interaction.”

(Rettie, 2005, p. 19)

Of such an instantaneity/simultaneity, it is emblematic the slogan of a major player in the mobile phone industry. ‘Life is now’ is the synthesis of how an extended present becomes the measure of all things in the mobile, ever connected world of cell-based communication. In real-time, “neither time nor space seem to exist as distance between places and moments. Time as distance has become replaced by relationships, fundamental action, and the ‘trying out’ of all possibilities before actualisation” (Dennis, 2007).

In the case of augmented ubiquitous environments, the objective is to make mediated and communicative interaction possible anywhere anytime, or better everywhere every time, “everyware” in Greenfield’s words (Greenfield, 2006). This pervasivity, apparently so grounded into physical environments, is likely to have unforeseen and contradictory consequences, since interacting everywhere every time means blurred boundaries between what is considered appropriate to the public sphere and what is strictly felt as belonging to the private (Katz & Aakhus, 2002).

However, instantaneity simultaneity and pervasivity do not mean that time is squashed and perceived as equalized: since concurrent and different activities can be carried out at once on the move, instantaneity of time translates into “polychronicity of human activities” (Kakihara & Sorensen, 2001, p. 35). Indeed, the change mobile communication produces in place, space and time is more complex than making us independent from these dimensions:

“Mobile communication does not “free” us from places, spaces and practices, but makes them communicationally available to other mobile networked parties, leading to a new, enriched symbolic texture of everyday life”

(Arminen, forthc, p. 6).

5.3. Ubiquitous Interaction Makes Mediated Communication Invisible, Unobtrusive and Pocketable

Mobile and ubiquitous technologies are embedded in the texture of everyday life, in at least two senses. First and foremost, this embeddedness passes through a process of ‘naturalization’ of artefacts, which renders them invisible and transparent to the user’s attention and sight. This means domestication (Silverstone, 1994) of such artefacts is especially linked to their (unobtrusive) materiality. Secondly, literally technology ‘disappears’, o ‘hides itself’, in our pocket, hand, body and the environment: as in the case of wearable computers, or augmented environments, we are surrounded by hybrid networks where interaction becomes less and less noticeable (e.g. when everyday surfaces become interfaces for interaction). This is very interesting in terms of how mediated communication in general comes to be perceived and managed: as pocketable communication, it stays with us without any interruption. Domesticating mobile and ubiquitous artefacts means to cope with different degrees of obtrusivity, embeddedness and persistence of communicational routines inscribed into material devices.

Both the body and the multiple environments which surround it are increasingly saturated with miniaturized and portable technologies: their mediation makes communication less and less dependent, or derivable, from the body-to-body original matrix (Fortunati, 2005). Ubiquitous interaction, therefore, saturates the environment with a potential of connectivity (cf. par. 5.5.) which makes communication more and more mediated through some kind of technological artefact. This potential is not immune from ambivalences and contradictions.

5.4. Ambivalences of Ubiquitous Interaction: Micropractices of Use and Contradictory Patterns of Coordination

When interacting with and through mobile (smart) phones, ubiquitous environments or location-aware software we do not face only advantages in terms of coordination, planning and organization of everyday life (Ling, 2004). Coordination can become more problematic because of systems devoted to increase autonomy and discretion of individuals. A trade-off between individual and collective sociotemporal coordination occurs in this respect (Shove, 2002).

These contradictory relations between mobility and coordination are confirmed in ongoing research on blackberries and mobile e-mail services. Appropriation of such services shows how micropractices of technology-in-use (Orlikowski, 2000) deal with contradictory requirements of continuous connectivity and asynchronicity, on the one hand increasing autonomy and freeing time, on the other hand introducing a specific dependence from the portable device.

Similar contradictions can be observed between the de-localization and de-temporalization potentially available through mobile and ubiquitous devices, and the constant need of social actors to situate their communicational experience into specific contexts and spatio-temporal patterns (Green, 2002; Arminen, 2005; Scifo, 2005).

Ambivalences emerging from these considerations allow to frame ubiquitous interaction in a more critical perspective, opening the field to the problem of accessibility and availability of such an interaction to social actors. Availability does not mean necessarily enactment of the interaction. In this respect, the way co-presence is re-configured through ubiquity is also ambivalent.

5.5. Ubiquitous Interaction as Re-configuration of Co-presence: Potential of Connectivity vs Connection

Ubiquitous interaction enabled by new technologies such as smart phones, augmented environments and location-aware software suffers less and less from what Heath and Luff (1991) call "disembodied conduct". Nowadays, potential of connection and extension of symbolic cues supported by mobile and ubiquitous technologies allow different forms and nuances of distant co-presence, making mediated communicative conduct more and more embodied. Notwithstanding this, face-to-face interaction continues to play a special role in ensuring connection and shared meaning across contexts (Nardi, 2005; Urry, 2002).

In order to frame the potential of ubiquitous interaction, however, we need to distinguish connectivity (potential to get connected to a specific medium or technological device supporting communication), from connection and interaction.

Going beyond a simplistic correspondence between richness of interaction and technical bandwidth of a medium, Bonnie Nardi (2005) reminds us that “to communicate with ease, we must come to feel connected to each other, we must experience mutual commitment to joint undertakings, and we must gain each others ‘attention” (Nardi, 2005, p. 91).

If connectivity can be defined as potential to access information and distribute it (De Kerckhove & Viseu, 2004), connection is both a pre-requisite and a result for continued interactions over time. Therefore, “a feeling of connection is a subjective state in which a person experiences an openness to interacting with another person” (Nardi, 2005, p. 92). Connectivity can either enable or constrain connection: more connectivity does not correspond necessarily to more connected individuals.

However, it is worth being reminded that forms of intermittent embodiment make virtual experience neither more nor less ‘real’ than those carried out in face-to-face modality. What ubiquitous interaction – as envisaged in multiple discourses and sociotechnical settings - makes possible is, in principle, the fulfilment of a potential. This is disclosed into ‘virtuality’ as a dynamic warehouse of endless chances/opportunities (to communicate). Making connectivity pervasive, in fact (especially in the case of augmented ubiquitous environments), opportunities to establish connection and interact increase in number and modality. However, it has not to be taken for granted that this connectivity will always by definition enhance fields of connection (in Nardi’s terms) or increase information exchange. Connectivity, connection and interaction still must be distinguished for their joint action be effective.

To put it differently, transforming the potential of connectivity into interaction so to establish a field of connection (comprising attention, commitment and affinity) is not automatic. Ubiquitous interaction, even if (or, rather, because) more invisible and easily taken for granted, involves an invisible, crucial work of maintenance.

6. (Un)coerced Mobility: Enquiring Mobile Techno-elites

“One man’s imagined community is another man’s political prison”
(Appadurai, 1990)

Ubiquitous interaction provides a theoretical frame to enquire mobile and ubiquitous artefacts, focusing on research questions linked with the discourses examined. The assumption is that these discourses have both continuities and discontinuities with current practices and interaction performed in specific contexts.

The five statements concerning ubiquitous interaction, therefore, can be translated into specific questions related to actors, spatio-temporal restructuration, unobtrusivity and taken-for-grantedness, ambivalent patterns of use, connectivity and connection.

Actors: Who are the actors entitled to perform ubiquitous interaction? Is mobility a constitutive characteristics of them? How are different mobilities mediated by technological artefacts?

Time and space constraints: How are time and space experienced through ubiquitous interaction? What strategies are put in place to cope with instantaneity and simultaneity of interaction?

Unobtrusivity and taken-for-grantedness: How do individuals and their networks cope with multiple portable technologies? Are these technologies more easily taken for granted than others? How does this affect their appropriation?

Ambivalent patterns of use: What is the balance between the enabling/freeing dimension and the constraining side of being “always on” and engaging in a continuous interaction with environments saturated by sociotechnical assemblies?

Connectivity/connection: Do actors exploit the whole potential of connectivity? How is this potential managed in terms of boundaries between public and private in everyday life?

Politics of difference (Adey, 2006) which emphasize how mobility is not understandable without its opposite (immobility), help to face with these questions. Two complementary compulsive trends, one towards mobility and the other towards proximity, must be considered:

“(...) co-presence does not mean that resulting patterns of travel are uncoerced and equal in their volition by each of the parties involved. The power to determine the corporeal mobility of oneself or of others is an important form of power in mobile societies, indeed it may well have become the most significant form of power with the emergence of awesomely mobile elites.”

(Urry 2000, p. 4)

In other words, the way we travel (physically and virtually) can be more or less coercive, more or less adequate to fulfil ambitions of physical and social mobility, more or less imposed by unhappiness, unsatisfactory conditions, or forced by specific

contextual and cultural constraints. Here it is important to remember once more how mobile mediascapes are shaped through “dreams of ‘hyper-mobility’ and ‘instantaneous communication’ [which] drive contemporary business strategy, advertising and government policy while also eliciting strong political critiques from those who feel marginalised or harmed by these new developments” (Hannam, Sheller & Urry, 2006, p. 1).

This inequality in accessing mobility suggests that

“social-spatial exclusion is best viewed not as a state of affairs or an attribute of one or another social group but as an emergent property of the three-way interaction between social obligation, individual or collective resources, and physical infrastructure.”

(Shove, 2002, p. 5)

When posing the relevant question ‘is there a mobile/mobility divide as there is a digital one?’ we should bear in mind this idea of exclusion as emergent property to focus on whom is excluded from what.

In other words, mobility constitutes a cultural object (Griswold, 1994), even more crucial in a society whose culture emphasises the right and the beauty of travelling.

The idea that everything is in flux and not to be part of this flux is socially disadvantaging (Shove, 2002; Hannam, Sheller, & Urry, 2006) rises the question of whose actors access more widely the right to interact with ‘distant others’ as well as with ‘ubiquitous environments’. For some groups of social actors entitled to travel both physically and virtually, the experience of dis-embodied and re-embodied co-presence could be more constitutive, at hand and available than for others. These groups constitute ‘mobile techno elites’, and their everyday social interaction is particularly mediated by pervasive, saturating technologies. Strategies of domestication these actors engage towards ubiquitous technologies like smart phones and wireless portable devices, and the way in which ubiquity as a metaphor for interaction is experienced, constitute materials for further research.

7. Conclusion

Starting a conceptual journey into the world as ‘in flux’, this paper tried to unpack the social and cultural background nurturing mobile mediascapes and ubiquitous technoscapes as ‘building blocks’ of the globalized landscape of communication.

Multiple discursive frames oriented to depict a society 'on the move' show how mobile and ubiquitous artefacts emerge through negotiation and conflict, and play a central role in future technological trajectories. Three settings of shaping have been identified: augmented ubiquitous environments, smart phones and the mobile wireless web, location-aware mobile software. They concur to shape a new type of communication pattern, named as ubiquitous interaction. Comparing this type of interaction to mediated and mediated quasi-interaction, the following factors emerged as crucial: individualisation, instantaneity/simultaneity, invisibility and pervasivity, ambivalent micropractices of coordination, connectivity/connection. All of them circumscribe ubiquitous interaction as shaped not only by designers' representations, but especially through the media and the academic discourses about ubiquity, mobility and global transformations.

Ubiquity with its dream of omnipresence questions the concept of co-presence, highlighting how different patterns of mobilities and proximities come to be interwoven in contemporary society.

Ubiquitous interaction is proposed as a set of hypotheses about interaction with current and future mobile/ubiquitous technologies. Focusing on actors, time and space, invisibility, ambivalences and connectivity/connection, it helps to understand how the relation between mobilities and immobilities is experienced by specific groups of social actors constituting mobile techno-elites. The way they domesticate mobility through technological mediation, coping with invisible, pocketable artefacts, is crucial to analyze how communication and interaction get transformed in an increasingly mediatized everyday life.

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Mobile Fantasies on Film: Gathering Metaphoric Evidence of Mobile Symbiosis and the Mobile Imaginary

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ABSTRACT

Mobile communication studies are often limited in their ability to capture the entire domain of a mobile phone call. These limitations often require that researchers separately study what is going on between the caller, the recipient of the call and those with whom they are face-to-face. Two scenes from two different American films were used as a means to document the ways in which users imagine mobile phone use. The scenes were coded for evidence of contextual seams, interpersonal seams, mobile symbiosis and the mobile imaginary. Mobile communication provides new opportunities for sharing experiences and tasks that could not exist without the mobile aspects of the phone. Understanding how mobile phones serve as a medium onto which we project our deeper psychological needs provides a glimpse into the fantasies and fears around mobile phone use.

Keywords: *Mobile phones, mobile communication, social consequences of mobile communication, co-presence.*

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1. Introduction

To date, research on mobile phone use has been limited to the direct observation and reporting of the actual use of mobile communication devices. Researchers have also studied how the use of mobile phones in public has impacted observers of that use (Cumiskey, 2005a). They have focused on how users have integrated their phones into the coordination of daily activities as well as how people “wear” their phones (Arminen & Leinonen, 2006; Katz & Sugiyama, 2005; Ling & Pedersen, 2005). While there is the acknowledgement of a particular choreography that occurs as the presence and use of the mobile phone causes the users (callers) and observers to adjust to what is known

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and unknown about the social interactions taking place (Katz, 2006) as well as the sense of carrying remote others with you via the mobile phone, as in the Japanese *keitai* (Ito, Okabe, & Matsuda, 2005), these studies have not yet addressed sufficiently, imaginary, virtual dimension that exist during the course of mobile mediated communication. Only few researchers have scrutinized imaginary aspects, for an exception (Ito, & al., 2005). These limitations often require that researchers empirically study what is going on between the caller and the recipient of the call and between the mobile phone users and those with whom they are in close physical proximity, separately. What is lost in that is the ability to fully comprehend the connected and bounded mobile realm that is created between the two people on the phone, who are at the same time untethered by this form of communication and often freely move about, interact with others, and continue to accomplish tasks beyond the conversation being had on the phone. Analysis of storytelling, fiction writing, and film is an important means through which we can capture at once the mobile user, the caller, and the outside observer as well as the virtual and actual contexts of a single mobile communication.

1.1 Mining for Schemas of Mobile Phone Use in Popular Films

Since the dawn of the motion-picture age, there has been great debate over the extent to which motion pictures are representative of reality (Barry, 1945; Dale, 1932). Each film begins with a story and in order for the film to be a success, the story must resonate with the audience. While what is on the screen is ultimately a work of the writer's imagination and a product of a socially constructed 'reality', there are aspects of popular films that ring true for most audiences. The presence of mobile phones in popular films, whether it be a tool of product placement or not, could, at the very least, be an indicator of the saturation of mobile phone use (Katz & Sugiyama, 2005). The presence of mobile phones in popular films can also highlight the provocative space mentioned above that has not yet been truly captured by social science: 'the mobile imaginary'. This paper will incorporate what is known about how mobile phone use facilitates social interaction and attempt to provide a multidimensional analysis of the use of mobile phones through cultural representations of mobile communication via two scenes from two different American films. While the author acknowledges that one cannot readily expect that what is on the screen represents true reality, films are often studied as a means to document representations of cultural phenomena, to provide an understanding of the deeper psychological meanings that those images foster

(Forrester, 2002; Steinke, 2005). Depictions of mobile phone use in films may also indicate the ways in which users imagine the uses for the phone to extend beyond what is actually possible.

2. Method and Textual Analysis

This paper is an extension of the author's current research and was inspired by scenes from two movies released in the United States: *Elizabethtown* (2005) and *Broken Flowers* (2005). Scenes were chosen from these films because they illustrated significant aspects of mobile communication involved in a typical social interaction.

In *Elizabethtown* (2005), Claire befriends Drew and gives him her mobile phone number. This scene focuses on an extended mobile phone conversation between the two. The conversation lasts all night long. During the conversation, Claire and Drew share their views on life, and in the process get to know each other better. While talking, Claire and Drew continue to participate in activities in their separate physical realms. Some of these activities go on beyond the awareness of the other. Despite this separateness, Claire and Drew work to foster a sense of "co-presence" by creating simultaneous experiences over the phone (i.e. sharing music with each other, having a "beer" over the phone). (To view scene, click: <http://us.video.aol.com/snag/?pmmsid=1406784&autoplay=1> ; Clip length: 10 minutes and 7 seconds).

In *Broken Flowers* (2005), Winston, a home-bound father of five and an aspiring private investigator, tries to convince a reluctant Don, a retired 'over the hill' *Don Juan* , to pursue the writer of an anonymous letter. Winston instructs Don to list the potential writers of the letter he has received. This scene focuses on a phone conversation between the two, where Winston picks up the list from Don while they are talking to each other on the phone. As Don is talking to Winston on his mobile phone, he sees him cross his front lawn. Winston enters Don's house, never pausing in the conversation over the phone until he is face-to-face with Don. Once they are face-to-face, Winston pauses and excuses himself from the phone conversation with Don to commence with a face-to-face conversation with him. After examining the list, Winston turns away from Don and resumes his phone conversation with him (To view this clip click: <http://us.video.aol.com/snag/?pmmsid=1365781&autoplay=1>; Clip length: 1 minute and 9 seconds).

Scenes from both of these films were analyzed using qualitative research methods. Each scene was transcribed and time stamped. The transcription of the scenes included details surrounding the verbal and non-verbal communication occurring between the characters involved in the scene. Each scene was evaluated from the perspective of the actors. The audience perspective was not included since neither scene involved audience participation. The textual analysis was based on guidelines established by Miles and Huberman (1994). The transcriptions were coded for three major themes: contextual seams, mobile symbiosis, and interpersonal seams. These codes and themes were selected based on previous research done on the impact of mobile communication on social interaction (Rudström, Höök, & Svensson, 2005; Ling, 1997; Gergen, 2002; Ling, 2002; Döring, 2006; Humphreys, 2005; Rheingold, 2002; Colbert, 2005; Boden & Molotch, 1994; Koskinen, 2005; Ling & Julsrud, 2005; Cumiskey, 2005a; Zhao, 2005; Suler, 2004).

2.1 Contextual Seams

Contextual seams are the seams between actual and virtual space. These seams were indicated by instances when the characters engaged in behaviours beyond the awareness of the person they were on the phone with. These seams were also indicated by times when the characters made gestures intended for the caller but that could not be seen by the caller and the times when the mobile phone conversation was interrupted by co-present actor(s) in the users' physical context.

In *Elizabethtown* (2005), there were 44 instances during the 10 minute clip where the contextual seams were revealed. In *Broken Flowers* (2005), there were 5 instances during the 1 minute clip.

2.2 Mobile Symbiosis/the Mobile Imaginary

Symbiosis is the close association between two organisms. Metaphorically, symbiosis is a joining, a sharing of experiences and a sense of mutuality. This experience of joining is characteristic of the illusive notion of the mobile imaginary because much of this cannot truly exist in the real world, as will be explained in the following section. This theme was coded in both films through instances of conversational joining – when both sides of the conversation can be heard, when one caller narrated for the other what they were doing, and when they shared a mutual experience over the mobile phone.

In *Elizabethtown* (2005), there were 77 instances during the 10-minute clip when mobile symbiosis or the joining of the two people on the phone was depicted. In *Broken Flowers* (2005), there were 6 instances during the 1 minute clip.

2.3 Interpersonal Seams

Interpersonal seams are the seams between people. If mobile symbiosis is an indicator of the loss of separation between users, interpersonal seams are moments when the differentiation and separation between people is marked. These seams were indicated by instances when the characters appeared to be talking about two different things on the phone and/or only one side of the conversation was focused on. This seam was also indicated by user initiated silence or by simply ending the call. Another way that interpersonal seams are experienced is through the interruption of the mobile phone call by other people who are physically present in the caller's immediate surroundings. The demands of face-to-face interaction highlight the limitation of the mobile connection and cause the caller to feel separated from the person they are talking to on their mobile phone. The recurring themes identified for each code are discussed in the presentation of the results of the textual analysis in the next section.

In *Elizabethtown* (2005), there were 21 instances during the 10-minute clip when moments of differentiation and separation between the two people on the phone were depicted. In *Broken Flowers* (2005), there were 2 instances during the 1 minute clip.

Figures 1 & 2 depict the distribution of the instances of the three major coding categories across the two film clips. These figures serve as a guide to what is going on during the clips. It highlights the peaks and valleys of the seams explained in the previous section. The x-axis is the timestamps used for the coding and analysis. The y-axis indicates the number of instances for each major coding category. What follows is an in-depth discussion and analysis of the findings of the textual analysis.

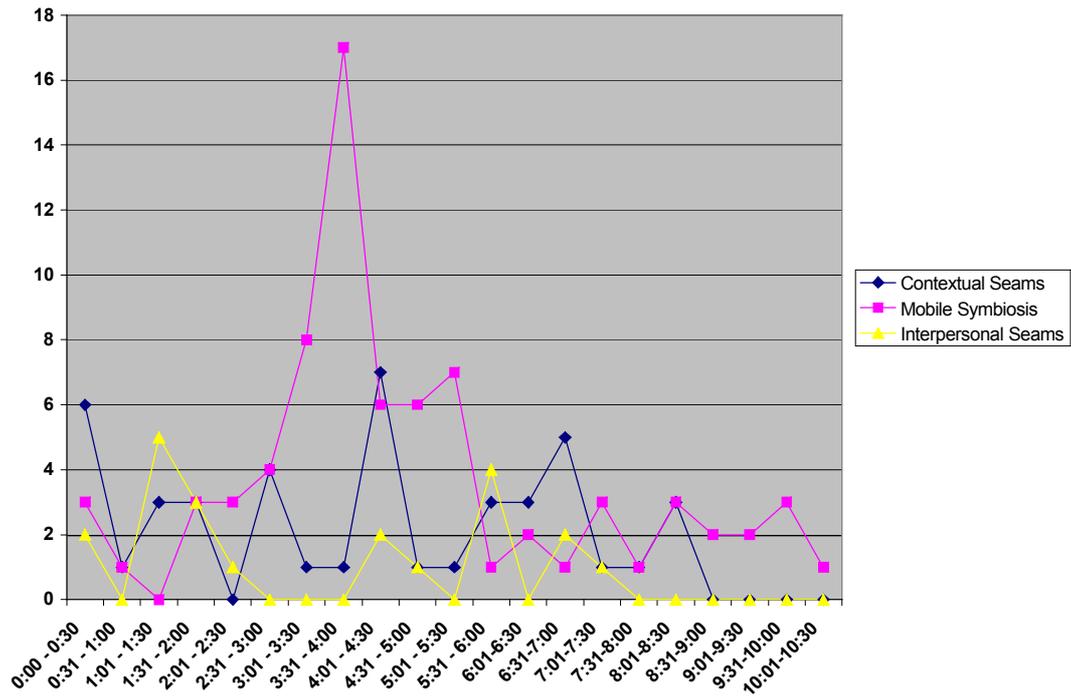


Figure 1. Distribution of Instances of Codes for Film Clip from *Elizabethtown* (2005)

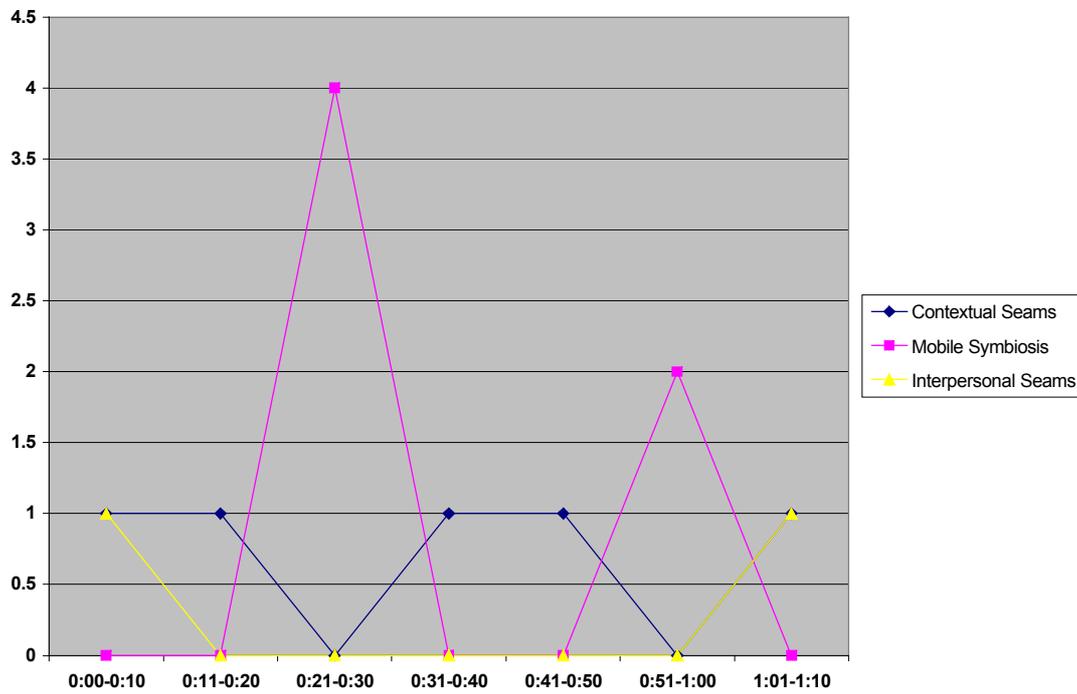


Figure 2. Distribution of Instances of Codes for Film Clip from *Broken Flowers* (2005)

3. Discussion

3.1 Playing with Contextual Seams -- Widening then Closing the Gap between Actual and Virtual Space

Through the use of mobile technology, users have the power to widen and also to close the gap between actual and virtual space, by adapting their behaviours to make integration of this technology into everyday activities possible (Rudström, Höök, & Svensson, 2005). Frequently, what is going on in the actual physical context of the mobile phone conversation is kept purposefully *secret* or just happens to be going on beyond the awareness of the caller. Users often engage in physical behaviours that they would not want or need the caller to witness. The user's ability to censor what the caller knows about what is actually occurring in the physical context of the call can be viewed as an example of how the seams between the actual realms and the virtual realms keep them separate.

In *Elizabethtown* (2005), there are 22 instances where either Claire or Drew has been scripted to be doing some activity beyond the awareness of the other. Claire opens her gate, drags her luggage up her front steps, gets her mail, makes dinner, cleans the kitty litter, paints her toenails, washes her undergarments in her sink and takes a bath. Drew takes off his pants, urinates in the toilet, holds the phone outside the door of the bathroom to shield the flush from Claire, washes his socks in his sink and plugs his phone charger in.

In *Broken Flowers*, when Winston asks Don about the list that he is creating, Don replies, 'What list?' even though the list is sitting on the table in front of him. This power to conceal or to deny (or to digitally *enhance* – see: [SunderCover](#)) what is actually going on in the physical context of the call is something that most users engage in with confidence. However, these seams that separate virtual space and actual space may not be as impermeable as most users might fantasize that they are.

The increasing ease and frequency with which users can now engage in phone conversations, along with the expectation that most of this communication is purposeful, places an enormous emphasis on verbal communication. As Ling (1997) points out:

“In face to face conversation quite nuanced body language has several functions. Through our use of nods, glances, small sounds and other gestures we indicate attention, the desire to speak, the desire to retain the floor and indicate pauses. We also use these devices to impart meaning and emphasis. All of these

gestures are changed in a normal telephone conversation. Visual gestures are replaced by intonation and linguistic structure in “grounding” the conversation.”
(p. 10)

It should be noted, however, that despite the aforementioned limitation of mediated communication, people still nod, glance, and engage in other physical behaviours while on their mobile phone. This tendency was also represented in the film clips (where it may also serve artistic and narrative purposes).

In the beginning of the scene from *Elizabethtown*, when Drew tells Claire that his father is dead, Claire stops walking, switches the phone from one ear to the other and closes her eyes. She appears to do this to emphasize the importance of what Drew has said to her even though Drew cannot see her.

Users often ‘get caught’ making gestures that emphasize points or sentiments in actual space while on the phone, even though the caller cannot see them. Observing this gesturing may be an indicator that the user has rendered the absent caller psychologically present (Gergen, 2002). A user may pause in their activity, literally stop in their tracks, in order to give the caller their full attention. This pause may be necessary in that the demands of the mobile communication may restrict the user’s ability to do anything else. However, as with the scene in the movie, *Elizabethtown*, a pause in activity may also be a gesture intended for the caller, despite the fact that the caller cannot see it, and often to the chagrin of others present. By pausing physical activity, the user may believe, or at least desire, that the caller’s *presence* dominates their awareness.

This could be taken as evidence of the virtual space leaking into the actual space. In the *Elizabethtown* clip there are 10 instances where either Claire or Drew are scripted to perform some gesture that was the result of the conversation being had on the phone.

3.2 “Do You Wanna Have a Beer over the Phone?” – Mobile Symbiosis and the Mobile Imaginary

Mobile communication provides new opportunities for sharing experiences and tasks that could not exist without the mobile aspects of the phone. Many mobile phone conversations occur as a means through which the callers share what is actually going on in their current context. The ability to share experiences virtually is enhanced through multimedia devices. The addition of cameras and video to most mobile phones boosts the user’s ability to convey affective and functional aspects of an

experience shared via the mobile phone (Koskinen, 2005; Ling & Julsrud, 2005). This use is represented in research through the analysis of static text messages or mobile phone photo/video artefacts. However, in real, simultaneous mobile phone use, action is the key. The mobile nature of the use of the mobile phone is emphasized when both parties are on their mobiles at the same time. Face-to-face interaction requires either both parties to be stationary or both parties to be moving in the same direction; either way less gets accomplished. It should be noted however, that often the receiver of this shared information is not a complacent recipient. Receivers often ‘talk-back’, get involved, exchange information about their own current context and influence the behaviour of the user.

A sense of camaraderie and mutuality develops between user and caller when they are engaged in a mobile phone conversation. It appears as though this sense of mobile symbiosis has the potential to lead one into taking more risks than one might do on one’s own. In Figure 1, the highest degree of behaviours that depict mobile symbiosis in *Elizabethtown*, occur during the part of the clip where Drew “steals Chuck and Cindy’s wedding beer” (3:30). Could it be that the more joined users feel, the more likely they are to engage in risk-taking behaviours?

In *Elizabethtown*, Claire asks Drew if he would like to have a beer over the phone. In order to do this, Drew ventures out of his room, into the hall of his hotel (in his robe) to *steal* 2 beers from his next door neighbour, Chuck. Chuck is getting married to Cindy and they are having a party in the hotel, with beers readily available in their tub filled with ice. Drew discovers ‘Chuck and Cindy’s beer’ and proceeds to put a beer bottle in each of his robe pockets. He does all this while narrating his entire experience to Claire over the phone. Drew is caught by Chuck, just as he is leaving Chuck’s room with the beers. Drew remains on the phone with Claire so that she may witness the interaction. The adventure of capturing and sharing a beer over the phone is experienced by Claire via Drew’s phone while she is home in bed.

This fictional representation of mobile symbiosis is enhanced by the fact that, in this scene, Claire’s presence is recognized by all parties in the interaction. Drew first lies to Chuck and tells him that he is a friend of the groom. Chuck then says that he is the groom, so Drew comes clean about the fact that he is not in the hotel for Chuck’s wedding. He explains that his dad has died and that he is there for his funeral. Chuck reacts to this news with emotion and takes the phone from Drew to tell Claire how sorry he is for her loss. With this gesture, he has recognized Claire as a participant in this interaction and has thereby rendered her present. This is a work of mobile fantasy in

that it is highly unlikely that a stranger would take the phone out of the user's hand. However, it has been shown, that acceptable mobile phone use in the presence of others is phone use that includes the user, the caller and those with whom the user and/or caller are face-to-face (Cumiskey, 2005a; Döring, 2006; Humphreys, 2004).

The psychological sense of always having someone with you (via the mobile phone in pocket) is very powerful. The fact that any user can immediately call someone, fire off an email or text message, means they have constant access to a witness who can share an experience. The sense of having a constant sidekick, or a partner in crime, may lead the user to do daring things that they might never have considered before or at least not alone in the presence of strangers.

In *Broken Flowers*, Winston is the only person that Don speaks with over the phone. Despite making his fortune in the technology industry, Don is behind the times. He does not have a mobile phone, Winston does. He does not have a computer or Internet access, Winston does. Winston's insistence on making Don pursue the writer of the anonymous letter appears to be a consequence of his faith in the seemingly limitless access to information that the Internet affords. Between Don and Winston there appears to be a mutual desire to live symbiotically through the life of the other. Winston utilizes online travel services and MapQuest to schedule and map the entire route of Don's pursuit. Despite Don's lack of a mobile phone, Winston uses his phone like a cattle prod to push Don along on his half-hearted quest. Don's lack of a mobile phone becomes more and more disconcerting as the movie progresses. Since Winston knows that his only contact with Don will be via hotel room phones, he makes his presence known in other ways that do not quite measure up to having mobile phone contact.

3.3 Better on the Phone – Enhanced Intimacy via the Mobile Phone

The presence of mobile technology provides a medium through which people can project meaning onto the use of these devices. There is no instructional booklet on how to conduct a mobile phone conversation. While it is true that the device itself shapes behaviour in terms of what features are available on each phone, those features then take on psychological significance through how the user uses them. For example, people who observe other people on their phones in public often interpret that use as rude (Cumiskey, 2005b). The scene from *Elizabethtown* is almost completely a work of mobile fiction: the never-ending battery charge (Drew plugs the phone in mid-conversation, but only for a short time), never losing a signal, never

getting lost, never losing that sense of connectedness to those with whom we feel close.

What happens during face-to-face communication can be completely different from what happens when one is engaged in mobile-mediated communication (Zhao, 2005). The flow and energy of mobile-enhanced communication may produce different results than face-to-face interaction. In *Elizabethtown*, a soundtrack accompanies a montage of scenes that switch between Drew and Claire to indicate the ways in which being physically apart from each other can actually work to make them feel closer to each other via the mobile phone. The peaks and valleys of the overall tone of the conversation work to indicate an intimacy that is shared between the couple; something that might not exist if they were face-to-face. Being face-to-face would inhibit their movement throughout the scene, which would then limit how much they share with each other. At the end of the scene, Claire and Drew decide to meet up during the course of their mobile phone conversation. They realize, once they are face-to-face, that they peaked on the phone.

Hearing a soft voice in one's head, whispers directly into one's ear, creates a sense of closeness, of unfettered intimacy, of sharing secrets to the exclusion of all others. This "focused attention" of long romantic conversations may create the same amount of intimacy whether they are happening over the phone or face-to-face (Goffman, 1961). Mobile-mediated communication presents venues, not unlike being online, that allow for the users to feel disinhibited and feel as though they have an ability to disassociate from social reality. The ability to share experiences virtually through enhanced multimedia devices creates something that may not be able to be experienced without the assistance of mobile technology. It generates a sense that what occurs between the two individuals on the phone is something that does not exist anywhere else. As Suler (2004) explains, in terms of personalities and relationships created online:

"Consciously or unconsciously people may feel that the imaginary characters they 'created' exist in a different space, that one's online persona along with the online others live in a make believe dimension, separate and apart from the demands and responsibilities of the real world."

(p. 323)

There is a significant difference between relationships that commence online and those that are created or maintained via the use of mobile technology. However, the use of mobile technology, especially with text messages, photos, and video, may

create an online feel to the communication which may then trigger some of the same dimensions around disinhibition and the disassociation from social reality (Em & Lo, 2006). The lack of a true separation between the actual and the virtual leads to the creation of hybrid personalities --- who we are on the mobile combined with who we are when engaged in face to face conversations, a creature of social reality and a creature of fiction (Haraway, 1991; Pertierra, 2005)! Perhaps there is a different self that is created over the phone that leads Claire to raise the point in *Elizabethtown*: 'I am just wondering if this whole thing is just better on the phone? We're so much better on the phone. Maybe we should never face each other again'.

Towards what seems to be the end of their conversation, Drew asks Claire, "doesn't your ear hurt?" Claire interprets this to mean that Drew may be done with the conversation. As a result, Claire says, with a tone of cynicism, "I'll let you go". When Drew responds with, 'Wait! When will you be back?' Claire grins and appears to be overjoyed that she has had her intended impact on Drew. This ability to pick up on the slightest of hints indicates that some of the same mechanisms of 'reading' the other are in place via mobile phone communication as in actual co-present communication.

Often the uninterrupted, intimate, symbiotic sphere created between the user and the caller cannot exist in the real world. When one's mind is brought back to reality, the user has reminded the caller that this is unreal. As a result, the caller may test the bounds of the intimacy of the relationship. Ostracism and rejection can be felt via this technology (Smith & Williams, 2004). As a result, a mixture of fantasy and reality underlie a significant amount of mobile phone use. It used to be that these intimate spaces remained within the private space of our homes. Being able to carry our phones with us now gives us the opportunity of infusing the mundane and real with the disassociative unreality of mobile-mediated communication (Em & Lo, 2006).

3.4 Interpersonal Seams, Ego-centric Communication, and the Demands of Face-to-face Interaction

As observers to mobile phone conversations in public, we are often only privy to one side of the conversation. The divulgence of personal details of one's life is quite ego-centric. In *Elizabethtown*, there was a segment of the scene where it is quite noticeable that, by being able to hear both sides of the conversation, Claire and Drew appear to be having two different conversations with each other simultaneously (i. e. Claire: "To have never taken a solitary road-trip"; Drew: "And I have never seen a dead body before.")). This scripted disconnect functions as metaphoric evidence to support

how ego-centric mobile communication may be. It may be difficult for us to disengage from our current practices and train of thought in order to join in conversation with our caller. With the personalization of most mobile devices (i.e. ring tones, wallpaper, “skins”), what we do with our phones is ego-driven. When we are contacted during the course of our day we may be inclined to share with our caller what is on our minds at that point in time. Highly personalized modes of communication make us distinctive from others and highlight the separation and difference between ourselves and others. It may be difficult for us to disengage from our current practices and train of thought in order to join in conversation with our caller. This could be especially true for people who are just getting to know each other.

The English idiom, ‘hold on’, means to wait for someone. People utilize this phrase to suspend the flow of the actions taking place. Telling someone to, ‘hold on’, whether they are the caller or someone observing the phone call, indicates a separation, either between the user and the caller or between the user and someone else present (Döring, 2006; Humphreys, 2005). Initiating a break in the presumably seamless flow of mobile communication then creates a liminal space, a disjuncture, and highlights the interpersonal seam between the two people on the phone.

At times, as depicted in *Broken Flowers*, this break often occurs out of courtesy toward those with whom the user is face-to-face. When one is face to face with another it is viewed as rude not to attend to the face of the person in front of you. In *Elizabethtown*, when Drew and Chuck are interacting, Drew removes the phone from his ear (while he does not hang up) so that he can give Chuck his full attention. In fact, after Chuck talks to Claire, and hands Drew back the phone, Chuck puts both hands on Drew’s shoulders, to have a “bro” moment. In this shot, the phone is not visible, and while Drew never “hangs up” on Claire, she is not rendered “visible” again until Drew walks away from Chuck, after two hugs, and then turns towards Chuck as he puts the phone back up to his ear. The demands of Chuck’s presence forces Drew to not attend to Claire for about thirty seconds of the clip. This part of the clip highlights how mobile phone users have to negotiate the social expectations of their immediate surroundings alongside the interpersonal expectations of the person they are talking to on their mobile phone. Suspending communication may be how users compensate for the many demands on their attention and their need to break away from the exhausting work of mobile-mediated communication.

Because one can move while on the mobile phone, and the technology itself is mobile, the realms of the virtual and the actual can meet and cross over. There is

evidence of the power of this in the literature on Smart Mobs and rendezvousing (Rheingold, 2002; Colbert, 2005). When the user and the caller meet, the current inclination is to cease mobile communication and to communicate directly. There is an assumption that face-to-face communication is preferred, that physical contact and the compulsion of proximity precludes the integration of the virtual and the actual (Boden & Molotch, 1994). In *Elizabethtown*, when Claire and Drew meet each other face-to-face while still on the phone, they decide to simultaneously hang up. There is a slight indication that to continue to use their mobiles while face-to-face would be ridiculous. In *Broken Flowers*, when Don and Winston come face-to-face while on the phone with each other, Winston's break with Don on the phone happens so that he can respectfully talk to Don face-to-face. It is not that actual co-presence, as suggested by Boden and Molotch (1994), is then substituted by more impersonal forms of communication. Even though the face-to-face communication ceases, the two parties remain *in each other's phones*, so that physical separation may no longer be represented as disconnecting or parting company, but instead, merely being out of face contact, which is then compensated for by the ways in which the multimedia enhanced mobile phone is used! The prevailing anxiety of being disconnected, of letting the interpersonal seams show, may become an artefact not so readily experienced anymore. Being in someone's phone may serve as protection from the negative psychological consequences of interpersonal seams and alleviate the fear of being forgotten, abandoned or left alone.

4. Conclusion: Peaking on the Phone

The goal of this paper was to illustrate the need to develop new ways of gathering evidence to elucidate aspects of mobile communication that appear to be beyond the reach of directly observing actual mobile communication. The kind of analyses performed for this paper would be very difficult to do in the real world. Trying to devise data collection schemes to approximate the amount of access that these film clips provide to the intimacy of mobile symbiosis would be near impossible. In addition, there is a benefit to studying mobile communication beyond the context of actual use and into the mobile imaginary. What mobile communication means to people and their ability to incorporate mobile devices into their daily interactions with others can provide researchers with a glimpse into the fantasies and fears of mobile phone use.

Claire and Drew realizing, once they are face-to-face, that they peaked on the phone and prior to that Claire's fear that perhaps they are better on the phone metaphorically represents both the angst and the ecstasy around building intimate relationships with others. As with Japanese youth, and their *keitai*, mobile phones serve as a medium onto which we project our deeper psychological needs. Does our desire for seamlessness, our penchant to be "perpetually connected", and our incessant chasing of peaks of mobile symbiosis mean that we have discovered a new nirvana – a means to escape the bounds of reality – the mobile imaginary?

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