Seeing with Mobile Images: Towards Perpetual Visual Contact

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Abstract

The last fifty years have witnessed a sustained semiotic, sociological and cultural attack on the notion that photographs picture reality. These criticisms have been based on traditional photography, whether stills or video. This paper continues this criticism. I focus on visual practices in a new environment, mobile multimedia messaging, where people are in a visual contact potentially perpetually. Based on an applied conversation analytic perspective, I analyze several examples of such messaging recorded in Helsinki and Southern Finland in 1999-2002. These practices consist of both ways in which senders make their messages interesting for recipients, and in which recipients' take action on their own. In discussion, I argue for a naturalistic analysis of mobile multimedia messaging in perpetual visual contact.

Key words: photography, mobile phones, mobile multimedia messaging, mobile images, applied conversation analysis.

During a 1979 conference on the interpretation of family photographs, William Stapp from the Smithsonian Institution made the following comment:

Snapshot photographs pose very complicated questions because snapshot photography is in reality a very sophisticated mode of seeing. It is sophisticated, but it is naïve at the same time.

The same may be said of all home mode imagery. But how does this sophisticated way of seeing work? (Chalfen 1987: 125)

1. Introduction: Reality and Representation

The last fifty years have witnessed a sustained attack on the idea that photography replicates reality (see Becker 1974). Ever since Barthes' (1964) influential analyses of images, photography has been situated to textual, cultural and social processes. A sustained sociological attack on the notion of naturalism in photography in everyday life was Bourdieu's study (1990) that situated pictures into the class structure. Upper-middle class photography, geared towards aesthetics and art, differs radically from technically oriented lower-middle class photography. According to Bourdieu, photographs have ritualistic functions: they make visible and celebrate good aspects of life. Halle (1993) studied images into the family context and learned that even artistic images are typically viewed in terms of ordinary understanding. For example, people choose objects to shoot based on their cultural schemata, and they see things using conventional notions.

How does mobile telephony change the way we treat photographs in our lives? For instance, Siemens estimates that up to 30% of phones sold in Europe in 2004 will have an in-built camera. Worldwide, 84 million cameraphones were sold in 2003; the

estimate for 2004 is 150 million (<u>www.infotrends-rgi.com</u>, accessed March 26, 2004). This is more than the sale of digital cameras during the same period; camera phones are fast becoming the dominant technology of digital imaging (<u>www.wireless.info</u>, accessed March 26, 2004). The biggest companies in the market in 2003 are NEC and Panasonic, with 15% of markets each, and Nokia, with 14%. The trend continues. In Cebit Fair in Hanover, Germany, 2004, the chief of the Wireless Communications unit of Siemens, Rudi Lamprecht told that all future Siemens models will have an imaging capability. The largest digital camera manufacturer in the world in 2003 was Nokia rather than Sony or Canon. We are moving towards a culture of mobile multimedia.

2. From Kodak Culture to Mobile Multimedia

One of the more sophisticated attempts to understand ordinary photography is the *Kodak culture* thesis by Richard Chalfen (1987). In line with the performative movement in folklore (Hymes 1964; Abrahams 1970), he studies "home mode of imagery" as Kodak culture, which he defines in following terms.

Kodak Culture will refer to whatever it is that one has to learn, know, or do in order to participate appropriately in what has been outlined as the home mode of communication... By studying Kodak culture, we want to learn how people have organized themselves socially to produce personalized versions of their own life experiences... We want to consider how ordinary people have organized their thinking about personal pictures in order to understand certain pictorial messages and make meaningful interpretations in appropriate ways. We also want to learn how Kodak culture provides a structured and patterned way of looking at the

world... we are examining how a 'real world' gets transformed into a symbolic world (Chalfen 1987: 10).

In everyday life, images interpret life to people by documenting it. The documentary mode is possible because of several assumptions we make. For example, we believe that events in images have taken place, and believe that we see these things just as they took place when the original picture was taken (ibid. 126-127). Functionally, however, images not just document our lives by creating visual histories, validating, preserving, and encapsulating them, but also act as *aide de memoire*, as memory banks, and as tools of cultural membership. In photos, people do things right and grow into various membership roles. For example, children learn the signs of success and appropriate modes of kinship. Photography thus understood reifies both previous and ongoing social bonds, document change in them, and thus order mundane world (Chalfen 1987: 133-141). Programmatically, Chalfen proposes to study the home mode of photography in terms of a matrix. As components of the matrix, he proposes participants, settings, topics, message form, and code. As events, he understands planning, shooting on-camera and behind-camera, editing, and exhibiting images.

It is questionable whether Chalfen's analysis applies to imaging with mobile multimedia. *First*, when cameras are built into mobile phones, imaging capacity becomes a potential part of perpetual *visual* contact (Katz and Aakhus 2002). People plan taking digital cameras with them, but mobile phones follow people everywhere. Camera phones open up new, mundane areas of life for photography, such as personally noteworthy, intimately share-worthy, and everyday news items (see Daisuke and Ito 2003). *Secondly*,

the mobile phone is a special environment for technical reasons. They provide a text, audio, and sometimes video tools for augmenting images. Also, because of the poor quality of images, they have quite specific "affordances": they primarily fit for photographing people, and the explicating text/audio elements are particularly important. These features make this technology useful for practical and less practical activities alike (from asking for instructions to jokes: Nyíri 2003; Grinter & Eldridge 2001; Kopomaa 2000; Ling and Yttri 2002; Mäkelä et al. 2000). *Third,* as I have argued with my colleagues in *Mobile Image* (Koskinen et al. 2002), mobile phones provide an interactive social context for photography: people may respond immediately to MMS messages.¹

3. Seeing with MMS

Mobile Image (Koskinen et al. 2002) proposed an "applied conversation analytic" perspective (see Arminen 2004) for studying mobile phones with an imaging capacity. Images as such are indexical, capable of supporting many interpretations, and get their meaning only in *the* context in which they are taken, processed, and viewed; there is no time out from indexicality. However, as we also argued, indexicality is not a problem for ordinary people who use whatever resources they have available to make sense of images and to reply to them, if they so decide. In *Mobile Image*, the most important resource was text that explicated the message, motivated it, and picked up elements for specific attention; images in turn provide evidence for the text. Thus, we analyzed mobile

imaging in terms of mutually explicative text-image pairs rather than prioritized one element over another. (See Garfinkel 1967).

Furthermore, we argued that mobile images are methodic in two ways. People who compile messages resort to a set of methods. For example, they construct their messages as postcards, greeting cards, travel stories, family photos, and stories. Typically, text guides the recipients' attention to instruct recipients about the "preferred" interpretation and proper next action. Typically, recipients provide "proper" responses. For example, when people send an image of their engagement, they get compliments in response. However, recipients' action may be unconventional. For example, teases challenge the ordinary course of action (Kurvinen 2003; Battarbee and Koskinen 2004).

In an important study of uses of home photography, Frohlich et al. (2002: 170-172) studied how people discuss ordinary photos. In so doing, they do several things. For example, people who initially shared the experience pictured in an image typically reminiscence together about the memory. Also, stories are told to people who were not present at originally. For example, in the following episode, Tracy identifies a person and explains the room arrangement for Simon following his questions. She also asks him to guess about what is in one part of the image before providing the right answer. Simon acknowledges the story line by participating in the evolving story line with minimal responses.

Example 1. (Frohlich et al. 2002: 171-172)

01 Simon	That mus[t be your beau]tiful
02 Tracy	[Annabelle]
03	(0.8 sec. pause)

04 Simon	beautiful face right there
05 Tracy	Annabelle and me anyway we ate at the painted
06	(0.8) lady erm (1.0) tea room
07 Simon	Uhum
08 Tracy	And we were sittin' out [en this]
09 Simon	[Is that one] of the rooms in the house?
10 Tracy	Uh no t[his wa]s th[is was uh] in still in=
11 Simon	[oh this] [okay]
12 Tracy	=Atlanta springs and urm (0.5) This was a real interesting
13	thing Can you tell what's in that tree right there?
14 Simon	They look like pumpkins
15 Tracy	Well those are actually lights (1.0) An um (0.7) but what's
16	hanging in the tree is a cup and she an- thuh there was little
17	tea cups hanging all over this tree and then underneath it in
18	the yard there were little like dishes to match the tea cups so
19 Simon	Why?

The senders and recipients of an MMS message face similar interpretive challenges. *Senders* face interactional problems in deciding what is significant enough for sending and in deciding how to motivate the message. Somehow, they have to arouse the interest of the recipient. *Recipients* also face interactional problems. Images in messages may introduce new people, objects, scenes, environments, and spaces to recipients, and thus open up possible questions. Some objects may be familiar but unidentifiable because of technical or "artistic" reasons. The intention behind an image may be unclear. Finally, they may have to respond to the sender's action, not just to the image. The image may be boring, but the text requires a response in such deliberate instances as in the "artsy" pictures, puzzles, and metaphoric visual plays typical to the pilot group in *Mobile Image*.

This paper analyzes some of the ordinary methods used by senders to arouse the recipients' interest, and recipients' methods to respond to images in messages on their own initiative. The central premise of the analysis is that MMS cannot be interpreted in

terms of a fixed set of needs or functions. It must be studied as a naturally occurring activity. Similar studies have been done on museum exhibits and art (vom Lehn et al. 2001; Heath et al. 2002), and on diagrams in physicists' classrooms (Ochs et al. 1994). However, unlike these studies, we did not focus on "deeply reasoned" objects (Livingston

1995). Rather, we must situate MMS it to interaction and study it as a set of methods with which people "do" their mutual relations. In MMS, seeing becomes an on-going social affair of pictures and responses to them, augmented either through verbal, textual, aural, or visual means. In a sense, seeing is programmed from a distance, and it is seamlessly bound with our ordinary methods of social action and reasoning.

4. Data

This paper studies first empirical evidence of how mobile multimedia is used. These studies have been conducted in Helsinki, Finland, in 1999-2003. They focus on (1) how mobile phones are used in sending and receiving digital images and on (2) MMS (multimedia messaging service). These studies were done with industrial designers Esko Kurvinen and Katja Battarbee, and several assistants.

In *Mobile Image* (*MI*), we gave a Nokia 9110 and a Casio digital camera, connected with an infrared link, to four groups of five people (pilot, male, female, and control groups, the pilot and the control being mixed-gender) for approximately 2-3 months each. The University offered access to a computer system for all participants.

Messages were collected as e-mail attachments. For ethical reasons, we did not automatize this procedure, but asked participants to send or forward all their messages to the researcher responsible for the project. Groups were selected to saturate technical expertise, access to technology, and gender. The Finnish mobile phone operator Radiolinja, based in Helsinki, provided a free phone service (based on GSM technology).

The Radiolinja MMS Study (Radiolinja). In this study, we selected three user groups from a Radiolinja technology and service pilot. The pilot took place in summer 2002, and lasted about 5 weeks. Each user was given a MMS phone (either Nokia 7650 with an integrated camera or SonyEricsson T68i with a plugin camera). Three mixed-gender groups with 7, 11, and 7 members were studied. Out of the Radiolinja pilot, we selected groups to take into account gender difference, terminal types, and the city-countryside axis. Exact numbers are confidential, but the following figures point the scale of messaging in the pilot. In all, users sent over 4000 messages during the pilot. Over 2000 were unique (the rest being duplicates in group messages, or recycled messages). These data were produced through the Radiolinja system automatically. As in *Mobile Image*, the service was free of charge.

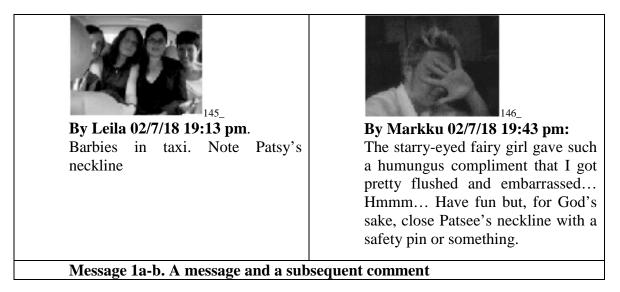
For this paper, I have treated these data in the following fashion. *Radiolinja* forms my main data, and *Mobile Image* secondary. From the vast mass of *Radiolinja* messages, I have chosen a subsample that consists of 198 messages, all sent by the 3rd group during the third week of the pilot study, July 11-20, 2002. Participants knew that they were studied, and were informed about the ethical procedures we used. In particular, we told them how our data was produced, promised not to publish pictures without their consent,

and promised to change details of images so that it would not be possible to identify them from our publications. In addition, we have followed standard academic and legal practice and have changed all names and details that could identify people or places. Notice that these data comes from design studies: they tell about first explorations with technology rather than about mature technology.

5. How Senders Arouse the Recipients' Interest and Guarantee Response

The simplest visual practice in MMS is when the text picks up a subset of possible objects from the image, thus instructing the recipients to see it in one particular way (compare to D. Smith 1974, 1984). Recipients typically ratify this selection as the key element in the image by focusing their next action according to this instruction. Recipients' message can range from a straightforward comment to a jest.

To illustrate, we may look at the following two MMS messages. In (1a), four young women are in a cab going to have a party. They call themselves as "barbies," with slight sexual overtone, and ask Markku to pay special attention to "Patsy's" (Mari's pet name) neckline. Leila's text selects one item from all possible items in the message, and directs gaze that way. In (1b), Markku shows "embarrassment" with a gesture typical to sudden exposure of nudity, and "demands" that someone should cover up the neckline. In the reply, he also does several other things; for example, he flirts with another young woman. He goes along with Leila's selection. In this episode five people focus their attention to a detail in the image, making "Patsy's" dress a commentable issue. The image further situates the detail into a context of a taxi in not so many words. Five people come to coordinate their understanding of what is going on, and to focus their reaction to a detail in that activity.



Often, the recipient's interest is attached to the whole picture rather than to its specific details, as in the case of travel pictures. A colleague based in San Francisco told me recently how he had a few weeks earlier taken photographs with his mobile phone in Tokyo, and sent them to his wife. She had responded with text messages, instructing him to take more photographs of certain places. Thus, mobile phone enabled these two people to coordinate their vision across the Pacific.² This is certainly one of the uses of MMS in *Radiolinja*. Still, people are held accountable for sending *interesting* travel photos. For example, Markku once sent pictures of his hometown Helsinki to recipients who also live in Helsinki. After several messages, a recipient characterized him as a "helluva tourist", which ended the flow of pictures. Another intrinsically interesting category is the actions,

moods, or sayings of people, whether as individuals or groups; again, if messaging is too banal, it may arouse requests to stop messaging (see also Battarbee and Koskinen 2004).

However, in most cases in ordinary life, the interest does not lie in the topic. People live in the middle of familiar surroundings, events, and routines of actions: senders have to *make* drama out of the banalities of ordinary life (see Battarbee and Koskinen 2004). Occasionally, they *account for* sending images others might not appreciate. For example, in one message a picture of a pond was accounted for with an excuse "I know that some people find pictures of nature boring, but I can't be but delighted when I find something beautiful in Korso." Korso is a poorly reputed suburb near Helsinki, which makes the beauty pronounced. More often, senders use "*interest arousers*" (see Sacks 1994, II: 226) to guarantee the recipients' interest. For example, events depicted in the image may be characterized as funny, uncommon or shocking enough to make them worth sending.

Finally, to guarantee recipients' attention, senders may resort to not just interest arousers, but to "*response-prompting actions*." A proper response to these messages is not just a quiet acceptance; the recipient is held accountable for producing a proper reply. The best examples for guaranteeing recipient response are *questions and riddles*. For example, in 2a, Jan sends a picture of a glass of wine to Thomas. In text, he first sends hig greetings to Thomas, and continues with a riddle asking what is in the travelers' mugs. In replying in 2b, Thomas first made a guess ("Red wine"), thus treating the message as a riddle. In audio, he sung a song from a well-known TV advertisement selling juice concentrate for children, transforming the response into a joke.

11 (27)

From Jan to Thomas . Greetings	Thomas to Jan. Our guess is red
from the Silja pub. A riddle: what's	wine, but we could not make sense
in the travellers' mugs? Have a nice	of the sound.
Sunday!	
Audio file:	Audio file:
((Background noise from	((Male voice, sings))
restaurant))	Aina maistuu Mehukatti,
Female voice: And the artist of the	Se on ihan matti,
night, Jari Mäki. A sample comes	Mehukatti
here.	((Rough translaion:
((background music: Who'll Stop	Always drink Juice Cat,
the Rain))	it always tastes great,
ule Kalli))	

Notice how in the first message, the image is *made ambiguous* and *problematic* in text, thus making the riddle possible. The indexicality of the image is not a problem for Jan, but a resource. This episode becomes a fun injection of sorts. The riddle is jokeful: the picture in the initiation is obvious, and is firmly situated to a bar, which is not a serious context. This is not *Who Wants to be a Millionaire*, but sheer fun. Riddles typically consist of three phases, the riddle-initiating question, guesses, and the right answer that closes the riddle (of course, a riddle may be followed by comments about its quality, but this is not a necessary part of the structure). However, their structure is open:

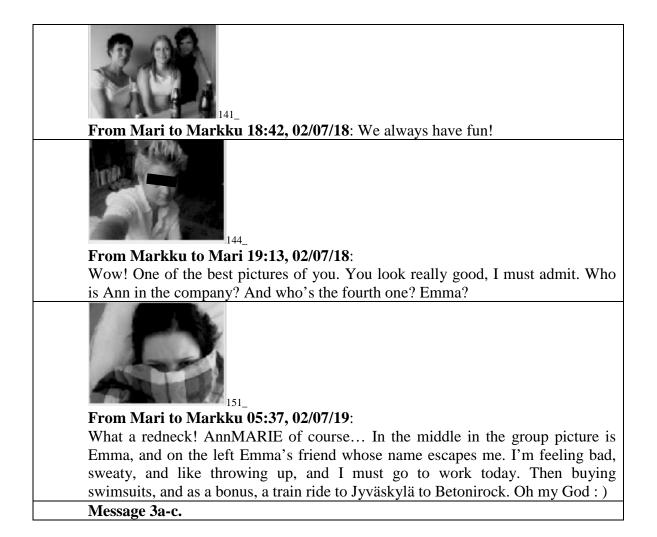
several recipients can participate in the guesswork, and also in the evaluation of the riddle, if there is an evaluation.

6. Clarification Requests as a Recipients' Action

In *Radiolinja*, recipients take several actions related to images. Typically, they "respect" the instructions they receive from the sender, as in the riddle described above. However, the recipients may go beyond the frame provided by the sender to initiate action on their own. Typically, these recipient-initiated "clarification requests" take place when there are unclear elements in the picture. The senders typically provide a response.

Perhaps the simplest example comes from the "evening out episode" already dealt with in Message 1a-b. In (3a), three young women are in party dress drinking beer on a festive mood, as the text tells. In (3b), Markku takes a picture of his upper torso, and asks Mari to identify Ann.³ The answer is in (3c). In this message, Mari first blames Markku for being slow-witted, and then goes on to identify the people in the original message. In the final part of the message, she ventures into a description of her present hangover, and closes the message by describing her plan to go a rock festival later in the evening.

Importantly, in 3b, Markku also asks who is the fourth person in the scene, although there is only three in the picture. The fourth person, Mari, is implied in the process: she took the photograph. Here we see how Markku uses his common-sense knowledge of ordinary action to fill in a missing element in the message. Unremarkable as it is, this example also shows that people can see events, people and action "through" photographs utilizing the common-sense knowledge of social action (see Garfinkel 1967). For Markku, the image and the text in (3a) is an index of something else: social action behind the image. The key feature of the perceptual organization in Markku's message is from the outside: it is not seeable in the original image, but provided for by him. Simultaneously, this understanding becomes his resource to initiate more action.



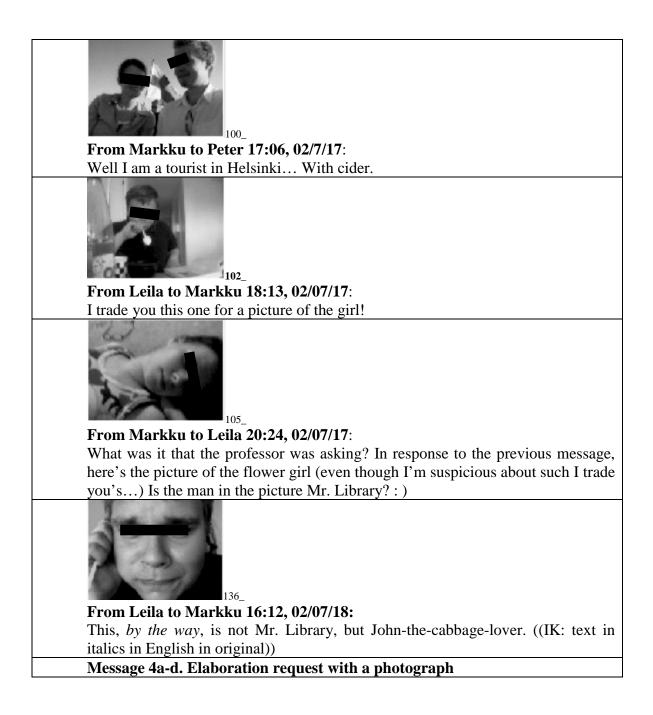
7. Elaboration Requests as Recipient Actions

Another recipient-initiated visual practice in MMS is in many ways like the previous one, but with a crucial difference in terms of its consequences. In *elaboration requests*, the first message introduces an image, and identifies a subset from the image as its key feature. In the second message, there is a comment, *but it is compiled so that it calls forth a visual response in the third message*. Therefore, the word "elaboration": we are typically dealing with an activity that leads to an improved, more accurate understanding by focusing attention to details that would have gone unnoticed otherwise. Elaboration requests are typically done with text, but they may be visual, as in the following case.

In the following case, Markku had sent sightseeing pictures from Helsinki all day long, and Peter had just called him a "tourist." In Message 4a, Markku jokefully ratifies this description, and adds that he is drinking cider. In so doing, he also sent a picture of himself with a girl from a boat (as the flag in the background shows). Leila got the message from Peter and then requests a better picture of the girl from Markku (4b). However, she also adds an image of a man into her message and writes that she wants to trade this picture for a picture of the girl. If her picture represents her boyfriend, the message may be taken to suggest that the girl in the first message is Markku's girlfriend. Through this image, she comes to uncover something of her life to others, which may be

taken as a gift that must first be accepted and then reciprocated (Taylor and Harper 2002;

Licoppe and Heurtin 1999).



In his reply (4c), Markku goes along with the question, and sends the requested picture. However, he also turns down the moral implicit in the notion of "I trade you" by labeling it as a questionable practice. Importantly, he asks who was the man in Leila's original picture with a candidate answer ("Mr. Library"), and gets a reply the next afternoon (4d).

In 4b, the response may be called a "prospective visual": *it is an image that calls for a visual response* (see Goodwin 1996 for "prospective indexicals"). Had Leila just asked about the girl's identity in 4b, Markku could not have made the query concerning the man in Leila's picture. Equipped with an imaging phone, she was able to turn the issue into a game of "I trade you this one for that one." However, she simultaneously opened up her private life for questions and queries (Boden 1994). Had she not sent the image, Markku could not have queried about Mr. Library's identity. In this sequence, Leila and Markku not just share pictures and make their understanding more elaborate, but also come to share intimate social information due to their ability to take and send pictures with their phones. These images, furthermore, place Leila's and Markku's people on the same line, as their possible loved ones. Simultaneously, they artfully negotiate bounds for their relationship by defining alliances and statuses – who can instruct whom, and who can resist such instruction (see Taylor and Harper 2002).

Thus, elaboration requests not just lead to a more accurate understanding, but they may also turn textual interaction into visual. It is one way in which people switch their mode from one type of understanding to another (Nyíri 2003). Typically, they are done in

situations in which there are problems in images. For example, unfamiliar references may arouse curiosity that leads to elaboration requests. Elaboration requests provide people with a visual reference and, consequently, an elaborated visual understanding of the context. The structure furthermore "empowers" the recipient, who can instruct the sender of the original message in an effort to provide a more elaborated shared vision.

8. Conclusions and Discussion

In this paper, I have explored how images work in mobile multimedia (MMS). Literature on photography typically focuses on semiotics of image (Barthes 1964), the functions of images (Bourdieu 1990), or their use in everyday life (Halle 1993; Chalfen 1987). In contrast, I have analyzed images as elements in interaction that proceeds on a turn-by-turn basis (Koskinen et al. 2002). When imaging takes place in the context of mobile technology, they differ from ordinary life because of three reasons: first, mobile phones practically speaking follow people perpetually; secondly, mobile phones offer a special technical environment for imaging; third, mobile phones connect people perpetually.

This paper explored some aspects of how a "perpetual visual contact" (Katz and Aakhus 2002) takes place in MMS. MMS gives people means to interpret and share their life visually, and elaborate their experiences together (see Battarbee and Koskinen 2004). However, MMS also leads people to interactional problems they have to solve in

messaging; this paper has described several methods people use in solving these problems. Senders have to secure the interest of the recipients, which, with few intrinsically interesting topics aside, is not a trivial task. To dramatize messages, senders account for sending messages others may find boring, and characterize events in pictures as somehow unusual, funny, or shocking. I also analyzed one riddle as an example of more complex use of images in interaction. Recipients also face problems that give them reasons to act on images. For example, something in an image makes them curious, something else is not understandable, some element is ambiguous enough to arouse interest, text in the message makes it impossible for people to interpret the image in a "natural" way, and so forth. I do not claim that this catalogue of methods is complete; however, I have shown that senders and recipients alike have means to take action in MMS. People not just share parts of their lives visually, but also make it problematic and commentable, sometimes laughable, and occasionally even a topic of rational discourse.

Throughout the analysis, we have seen how the indexicality of images is a resource rather than a problem for people. The point of messaging is typically in text, and people act on text rather than on images. Occasionally, such as in sociable messaging and in flirting, images get more stress: insignificant details outside the focus of the message become resources that offer a possibility to maintain social intercourse. Of course, this analysis is limited in scope. Note that mobile video may change the locus of action to be understood and responded to by placing it squarely *within* the movie. In one case, three children are playing. Two older children, aged around two to three years, sit on the floor with toys in their hands. They look at the camera, as instructed by the adult who is taking

the shot. A baby, also sitting on the floor, is absorbed in his own play, and looks away. The episode becomes a lovely scene in which parents and older children try to catch the attention of the little one, with no success. Action in still photographs is explained in text or audio; action in video is *in* the image. Another thing to note is that people may develop cultures that differ in how visual they are. In *Mobile Image*, the pilot group consisted of three industrial designers and two sociologists. They developed an image manipulation culture in which they conceptualized their world visually. For example, they treated each other as characters of *Star Wars* and *X-files* (Koskinen et al. 2002: Ch. 6). There are no similar behaviors in *Radiolinja*, perhaps because participants were not visually trained. How cultures evolve is an issue that needs to be addressed in the future in more detail.

Visual processes I have excavated in this paper are typically side issues in imaging. They take place, but are typical examples of the "seen but unnoticed" quality of action (Garfinkel 1967). The reason for this exercise has been to propose a rich analytic framework for studying images and to present an alternative to content analysis and to what C. Wright Mills (1959) once called "abstract empiricism" in the social sciences. The ultimate aim is to explicate social practices typical to MMS rather than to explain MMS with class position, social standing, or gender. To understand MMS, we need a research agenda that studies naturally occurring activities in natural settings by following people busy in living their lives.

9. References

Abrahams, Roger 1970. A Performance-Centered Approach to Gossip. Man 5: 290-310.

Arminen, Ilkka 2004. Institutional Interaction. Studies of Talk at Work. Aldershot: Gower.

Barthes, Roland 1964. Image – Music – Text. New York: Hill & Wang.

- Battarbee, Katja and Ilpo Koskinen 2004. Co-Experience: User Experience as Interaction. *CoDesign* 1(1). (forthcoming)
- Becker, Howard 1974. Photography and Sociology. *Studies in Anthropology of Visual Communication* 1: 3-26.

Boden, Deirdre 1994. The Business of Talk. Organizations in Action. Cambridge: Polity.

Bourdieu, Pierre 1990. Photography. A Middle-Brow Art. London: Polity Press.

- Chalfen, Richard 1987. *Snapshot Versions of Life*. Bowling Green, OH: Bowling Green State University Press.
- Daisuke, Okabe and Mitzuko Ito 2003. Camera Phones Changing the Definition of Picture-Worthy. *Japan Media Review*. Annenberg School for Communication, USC. <u>www.ojr.org/japan/wireless/1062208524.php</u>. Accessed April 15, 2004.

Frohlich, David et al. 2002. Requirements for Photoware. Proceedings of CSCW'02, Nov. 16-20, New Orleans.

Garfinkel, Harold 1967. Studies in Ethnomethodology. Prentice-Hall, Englewood Cliffs.

- Goodwin, Charles 1996. Transparent Vision. In Ochs, E., E.A. Schegloff and S.A.Thompson (eds.) *Interaction and Grammar*. Cambridge: Cambridge University Press.
- Grinter, Rebecca E. and Margery A. Eldridge 2001. Y do tngrs luv 2 txt meg? In Printz,
 W. et al. (Eds.) Proceedings of the 7th European Conference on Computer-Supported Cooperative Work ECSCW'01. Dortrecht: Kluwer.

Halle, David 1993. Inside Culture. Chicago: University of Chicago Press.

- Heath, Christian et al. 2002. Crafting Participation: Designing Ecologies, Configuring Experience. *Visual Communication* 1(1): 9-34.
- Hymes, Dell 1964. Language in Culture and Society. A Reader in Linguistics and Anthropology. New York: Harper and Row.
- Katz, James E. and Mark Aakhus (eds.) 2002. Perpetual Contact. Mobile Communication, Private Talk, Public Performance. Cambridge: Cambridge University Press.
- Kopomaa, Timo 2000. *The City in Your Pocket. Birth of the Mobile Information Society*. Helsinki: Gaudeamus.
- Koskinen, Ilpo, Esko Kurvinen and Turo-Kimmo Lehtonen 2002. *Mobile Image*. Helsinki: IT Press.
- Kurvinen, Esko 2003. Only When Miss Universe Snatches Me: Teasing in MMS Messaging. Proceedings of Designing Pleasurable Products and Interfaces, DPPI'03, Pittsburgh, PA, 2003. ACM, New York, 98-102.

Kurvinen, Esko, forthcoming. Prototyping Social. Helsinki: UIAH. Doctoral Thesis.

Appears in 2005.

 Licoppe, Christian and Jean Philippe Heurtin 2001. Managing One's Availability to Telephone Communication Through Mobile Phones: A French Study of the Development Dynamics of Mobile Phone Use. *Personal and Ubiquitous Computing* 5(2): 99-108.

Ling, Richard and Brigitte Yngri 2002. Hyper-coordination via Mobile Phones in Norway. In Katz, James E. and Mark Aakhus (eds.) 2002. *Perpetual Contact. Mobile Communication, Private Talk, Public Performance*. Cambridge: Cambridge University Press.

Livingston, Eric 1995. An Anthropology of Reading. Bloomington: Indiana UP.

- Mills, C. Wright 1959. *The Sociological Imagination*. New York: Oxford University Press.
- Mäkelä, Anu et al. 2000. Joking, Storytelling, Artsharing, Expressing Affection: A Field Trial of How Children and their Social Network Communicate with Digital Images in Leisure Time. *CHI Conference Proceedings: Human Factors in Computing Systems*, April 2000.
- Nyíri, Kristóf 2003. Pictorial Meaning and Mobile Communication. In Nyíri, Kristóf
 (ed.) Mobile Communication. Essays on Cognition and Community. Vienna:
 Passagen Verlag.
- Ochs, Elinor, Sally Jacoby and Patrick Gonzales 1994. Interpretive Journeys. How
 Physicists Talk and Travel through Graphic Space. *Configurations* 1: 151-171.
 Sacks, Harvey 1994. *Lectures on Conversation*. Oxford: Blackwell. 2 Vols.

- Smith, Dorothy E. 1974. The Social Construction of Documentary Reality. *Sociological Inquiry* 44: 257-268.
- Smith, Dorothy E. 1984. Textually Mediated Social Organization. *International Social Science Journal* 36: 59-75.
- Taylor, Alex S. and Richard Harper 2002. Age-Old Practices in the "New World": A Study of Gift–Giving Between Teenage Mobile Phone User. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, Minneapolis.
- vom Lehn, Dirk et al. 2001. Exhibiting Interaction: Conduct and Collaboration in Museum and Galleries. *Symbolic Interaction* 24(2): 189-216.

Notes

¹ For example, a Helsinki-based industrial designer who couldn't participate in a memorial service of a former classmate took an image of a candle she had lighted to her backyard, and sent it to the service, texting that in her thoughts, she is with the grieving people. The message was circulated in the service, and she later got a thank you messages for being considerate. I received the original message of the Helsinki case on March 8, 2004, a few days after the memory service. I have promised not to show it.

² The story was reported to me in Helsinki on March 2, 2004.

³ Markku's message begins with a compliment for Mari; this is a side issue related to a self-portrait Mari had sent him at 18:15.