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Taken for Grantedness

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Taken for Grantedness

The Embedding of Mobile Communication into Society

Rich Ling

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London, England

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Preface: Mobile Phone Balloons

In some ways, the mobile phone is disappearing. I say this knowing that every week many millions of people in India get a mobile phone subscription for the first time. I say it knowing that literally every teen in Denmark and Norway has one. The paradox is, however, that in some interesting ways it is disappearing from our sense of what is remarkable. Mobile communication is becoming embedded in society. It is expected. It is possible to see this, in some deeply refracted way, by looking at the sale of balloons during the national holiday of Norway, May 17.

On this day, the Norwegians celebrate intensely. Marking the nation's liberation from the Danes in 1814 and serendipitously from Germany in that same month in 1945, May 17 is a walloping celebration. People dress in the bunad (the nation's traditional costume, which can cost many thousands of dollars), flags are flown, bands play, the king and the royal family wave to crowds from the balcony of the palace, and there are parades. The day is also focused on the nation's children. The children march (actually marching sounds too martial; they walk) in parades behind their school bands. Games and activities are arranged and, at least according to my family's tradition, they get all the ice cream they can eat (given that in Norway May 17 can be cold and blustery, this is usually a safe promise on the parents' part).

To bring this back to balloons and mobile telephony, the children also often get balloons with the ice cream. As a sociologist who has followed this practice for more than two decades, it is interesting to watch the coming and going of balloon styles. Each year at least fifteen or twenty different types of balloons are sold by street vendors, reflecting, in some abstract way, a measure of the times. There are often rather generic characters such as unicorns, sea horses, exotic fish, or hearts. There are also gender-specific balloons that reflect popular culture. One year it might be a cartoon character (Pac-Man has been a common motif), an icon from a popular movie, or an improbable-looking car. If, for example, Lightning McQueen from

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the film *Cars* or Ariel from *The Little Mermaid* is popular one year, that type of balloon gets into the mix. From the perspective of the person selling the balloons, the point is to capture the imagination of the child and to pocket the money from the parent. If unicorns work, that's great. If the current buzz is all about *Angry Birds*, go for it.

About fifteen years ago, in the mid-1990s, I noticed mobile phone balloons being sold on May 17. Here was an object that had been picked out of all the other possible artifacts of our daily lives and was being offered as an element in our children's celebration of May 17. And why not? The mobile phone was new; it was becoming commonly available to ever younger teens (and certainly to the preteens and children who make up the main balloon market); it represented something interesting and exciting; it was an icon of the time. I have not done any sort of scientific study, but it seems that the popularity of the mobile phone as a May 17 balloon has come and gone. In the period when teens and indeed preteens were first getting mobile phones, a big buzz was associated with the device. Now, however, getting a phone is not novel. More than 80 percent of ten-year-old Norwegian children have a mobile phone. From the perspective of balloon themes, mobile phones are no longer cutting edge. This year's selection included the standard fantasy figures, but I saw only one mobile phone balloon—probably a leftover from previous years' inventories.

This is admittedly a crude measure, and my methods of data collection are also crude. However, the idea that mobile phones have lost their buzz is only partially true. The latest iPhone or Android device is still a big deal. However, they seem to have lost their place in the iconography of balloons.

The "balloon index" gives us a small albeit imprecise data point. On the one hand, the mobile phone has become more central to the functioning of society; on the other hand, it is also becoming less worthy of notice. Perhaps the thing that is remarkable is that it has become taken as a given. It is remarkable that a communication technology has been adopted by billions of people worldwide and that these people literally send trillions of text messages. It is remarkable that the mobile phone has become intertwined in how we do commerce, interact with family, and coordinate our daily life and any number of tasks. It is central to how we interact with our partners, our friends, and our children. To be sure, great numbers of shiny new phones that promise the moon are available on the market. Nonetheless, the mobile phone has become, in some ways, unremarkable: It has become taken for granted. In this book I examine how this has taken place.

Thus, at one level, this book is about the "disappearance" of the mobile phone. This book is also describes what the mobile phone tells us about

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society. Much commentary on information technology focuses on what it will do for the individual. I want to think about what a technology does for society. Margaret Thatcher once said, "There is no such thing as society." I beg to differ. Thatcher was talking about the government's responsibility to individuals (she went on to say: "There are individual men and women, and there are families. And no government can do anything except through people, and people must look to themselves first"). There is such a thing as society. Following Emile Durkheim (1974, 14), we should consider social facts as things. Often they are "things" that are quite subtle. They are so interwoven into the flux of our daily lives that we take them for granted; we simply assume them of one another. We assume that others have clocks and can tell time; we assume that others have a mobile phone or that they can drive a car. How does this happen? How is it that we assume of one another the mastery of timekeeping? How is it that we have come to think it natural that we must make daily commutes (which have horrible side effects in the toll taken by accidents, wasted time, and pollution)? Why is it that we feel at a loss when we leave home without our mobile phone?

I argue that these are traces of our commitment to society. Thatcher was wrong when she said that there is no such thing as society. Indeed, to evoke Erving Goffman (1967), we experience our social nature whenever we interact with one another, whenever we move into a particular line of action vis-à-vis one another, and whenever we make reciprocal assumptions of one another.

In my previous book *New Tech, New Ties* (Ling 2008), I focused on the way that mobile phones are used to create and maintain social cohesion, drawing on Durkheim's notion of ritual interaction and effervescence as well as Goffman's and Randall Collins's (2004) insights into everyday interaction. These were the keys to understanding how we create social structures. I found that the mobile phone helps us to maintain and elaborate connections in our most immediate sphere of friends and family. We can call or text our spouse or our close friends with incidental news ("I had to drop off a project proposal; can you go to the store and get bread and something for dinner?") or as we arrange a face-to-face meeting ("Let's meet at Jazz Café off Lille Grensen at 11:00"). Teens can call their parents in moments of need ("Dad, I crashed the car, I am ok, but there is a big ding in the bumper"), or we can call close friends at important moments ("Guess what! Sandra is engaged!"). It is through these mundane and not so mundane interactions that we develop and maintain our social networks. It is true, as I noted in my earlier book, that the ringing of the mobile phone can disrupt our engagement in the present moment. Nevertheless, having

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access to our nearest sphere of friends and family helps in the larger project of sustaining social cohesion.

This idea has not always fallen on fertile soil. The mobile phone is not a device that has been entirely well received into our midst. Perhaps rightly, it is often seen as a bother, a distraction, or a waste of money. It rings at inopportune moments, and using it in public is often seen as a sign of vulgarity. In some situations it is downright dangerous (driving while calling or texting is a case in point). Beyond this, it is important to understand how the mobile phone is embedded in our daily lives. It is important to consider how it is restructuring social interaction. After all, it is by far the most pervasive of all information and communication technologies in the world. There is no other communication technology that has spread as fast or as far as the mobile phone. To fail to study the social turbulence it occasions is to ignore a major social change.

The people who populate our intimate sphere are vastly important to us. We rely on one another for emotional support and social interaction. It is this group who laughs with us in good times and helps us through the bad times. They give us good—and sometimes not so good—advice. They help pick us up when we are down and to see the "angels of our better nature" when other emotions might be in danger of gaining the upper hand. More than anything else, at a completely mundane level, our intimate sphere of friends and family helps us in getting through the day. Teens and young adults meet up with friends for a pick-up game or to study together. Couples touch base during the day to find out what they will have for dinner or to simply say "hi." We prepare food and eat together. We wash one another's clothes and clean up after one another (some do more of this than others, but no genders will be mentioned here). In addition, we run errands, we try to keep track of our common projects—think children—and we try to be there for one another. The mobile phone also allows us to be in contact when there is an immediate need. We saw this in the wake of the July 22 bombing in Oslo. A common theme for Oslo residents was that they almost immediately called or texted their closest friend or relative. They wanted to check on their status or they simply wanted to alert them and share their questions, fears, and concerns.

It is in these mundane (and sometimes not so mundane) but vitally important ways that the mobile phone has become so important. It may not have the same panache as it once did (we don't see as many mobile phone balloons, for example). Nonetheless, it gives us a constant link to those three or four other people who are so important in our daily lives. It is an essential tool in our maintenance of the intimate sphere. The internet

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also does this; indeed, our spouse or best friend is probably also on our "friends list" of whatever social networking site we use. However, dozens if not hundreds or thousands of other people who are not nearly as close are also on that list.

The mobile phone is different in this way. It is an instrument of the intimate sphere. It is our link to those people with whom we are closest. Indeed, when we do not have our mobile phone with us, we have in some small way betrayed the link with our intimate sphere. We might not be there when the gang is deciding on which café to meet at, or we might not get the message from our spouse that our child is sick and needs to be picked up at school. In other words, group coordination is hindered if people are without their phones. Beyond that, we might not be reachable should there be a real emergency.

Thus, I suggest that the mobile phone has become taken for granted. It has become woven into our expectations of one another. I suggest that the mobile phone, like several other technologies such as mechanical clocks, the automobile, and the internet, is a technology that has become a part of the social fabric. It is part of what holds us together. We use it often and we expect the same of others. We feel slighted when others do not respect the time, underestimate problems of transportation, or forget important information. We have, in other words, an expectation of reciprocity with regard to these technologies.

The expectation that others in our immediate sphere are continually available, regardless of where they are, is something relatively new. It has led to an extended sense of our position in the social group. We are led to contact others at the least provocation. Instead of saving up our daily tidbits, we text one another immediately, and in this way, some of us are engaged in an ongoing conversation. Christian Licoppe (2004) calls this "connected presence." We can always get in touch with each other, and indeed we are never really out of contact. Further, we expect our interlocutor to also be there. If, for some reason, he or she does not respond to our texts, we might suspect that something is amiss.

We have been fascinated with the mobile phone as it has seemingly invaded every sphere of our lives. The device has awakened our indignation and has been seen as a technological fetish. We join the queue when the latest smartphone goes on sale, but we also have learned to put it in a certain perspective. More than anything else, the mobile phone is increasingly a vital part of our being social. However, it is disappearing into taken for grantedness.

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1 The Forgotten Mobile Phone

My sister-in-law, a librarian in a small town in western Norway, was staying with us while she attended a book exhibition in Oslo. On a pleasant Saturday morning, she and I took the train together into the city center. She was on her way to the exhibition and I was meeting my friends Per and Geoff for a cup of coffee. After boarding the tram, she started to look through her pockets and her small backpack with a quizzical look. As she did this, she told me that she had forgotten her mobile phone. She had a loose agreement with a friend to meet at the exhibition, and then she had plans to meet yet another friend for dinner. There were no concrete agreements as to time and place, only tentative arrangements. All three had assumed that they would call one another as the day progressed to agree on when and where they would meet. Not having a mobile phone put both of these plans in danger, since there was now no easy way to firm them up.

She considered turning back to get her phone but that would have meant a considerable delay, given the need to wait for a new tram, make transfers, and so on. I offered to let her make a call on my phone, but the others' numbers were only recorded in her own phone. I suggested that she could find a phone booth at the exhibition, call my wife for the phone numbers, and work out her lunch meeting. Another alternative was to count on the chance that she would meet the first friend at the exhibition. If she could meet up with the first friend, she could borrow her phone and call the second friend to firm up the dinner date. This was how we left it when we parted.

Our reliance on mobile communication becomes especially obvious when we find ourselves without it. According to Anthony Elliott and John Urry, not to have a mobile communication device is to be "walking blind, disconnected from just-in-time information on where and when you are in the social networks of time and space" (Elliott and Urry 2010, 61). We live in a web of interactions and expectations that are increasingly mediated

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through mobile communication. If for one reason or another we are without a mobile phone, we—and those with whom we interact—have to think up “work arounds.” There are alternatives (finding one of the diminishing number of phone booths, borrowing a phone from a friend, banking on the chance that you bump into your friends), but these are all difficult and risky. The easiest thing is simply to have the phone with you.

At the same time, the mobile phone is seen by many as an annoyance. We are disturbed by its ringing. It causes stress. People note that life was so much simpler without it. To be sure, we can come up with a long list of reasons why the mobile phone is evil. But it is increasingly a necessary one, as shown by my sister-in-law’s experience. In spite of all our protests, the mobile phone is nearly ubiquitous in many countries; there are billions of subscriptions in the world. Why the paradox? Why do we join in the chorus of people who say they hate mobile phones when we have them ourselves all the while? Some suggest that the mobile phone ties us into broad social movements and enables our participation in global society. This may be true, but I do not see it as the primary reason for the popularity of this necessary evil. The mobile phone has become important mainly because it facilitates the mundane aspects of our lives. It helps us to keep in contact with family and friends. It helps us to coordinate informal social interaction. To be sure, it is a tool of industry and commerce. In the guise of a smartphone[1] or a tablet, it gives us access, via “apps,” to information and functionality beyond our imagination. But it is, perhaps more than anything else, also an instrument of everyday interaction. Because of the mobile phone, we are increasingly obliged by our social network to be available to one another.

We may often feel inclined to think of the mobile phone as a personal technology. We choose a model that expresses our sense of identity. It is something that we have on our person—just like, for example, our jewelry or clothes. It is a place where we store personal information and perhaps our favorite songs and photos. As with our jewelry and clothes, we consider the style, color, and functions of the mobile phone quite carefully before purchasing (Fortunati 2005). Further, we are to some degree judged on the style and vintage of our mobile phones (Haddon 2003).

However, treating the mobile phone as a piece of jewelry or a bit of clothing captures only a part of its effect on society. It is, after all, much more than a piece of “bling.” It is perhaps just as correct to think of it, at least in its phase as a communication tool, as social technology. We are expected to be available to family and friends via the mobile phone. It is a device that embeds us in our web of social interactions. It provides us with individual addressability so that we can call individuals, not places (Sundsøy et al.

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forthcoming; Goggin 2009; Ling and Donner 2009). It helps us to micro-coordinate our daily interactions and to maintain our social relations (Ling 2002). We use it to coordinate meetings and to send greetings. We send quick text messages to our buddies wishing them a happy birthday and to iteratively decide at which bar we will meet to uncork the celebration. We use it to make dentist appointments and to tell work colleagues we will be five minutes late because of traffic. We use it to coordinate our individual affairs in the flux of everyday life and we use it to exchange expressive calls and text messages with those in our intimate sphere. In this way, it is becoming a part of the broader social metabolism. Mobile communication gives us an individualized communication device that we use for both the large- and small-scale interactions that form the fabric of everyday life.

As a result, the mobile phone has become a part of the common expectations we have of one another. It is no longer just "nice to have." It is not used just for our own convenience. Indeed, the use of mobile phones by a critical mass of people facilitates the smooth functioning of everyday life. We take it for granted that we are always able to a call a spouse or a good friend, and conversely, they expect that we are always available. If we forget our phone or are without it for some reason, it throws a cog into our social interactions (Lasén 2011). As my sister-in-law discovered, we are starting to assume that those with whom we wish to interact also have a mobile phone as a part of their everyday kit. If *they* are not available via the mobile phone, then it becomes *our* problem. Originally suggested by James Katz, this might be termed the "Katz principle" (Weiner 2007; Katz 2008).We need to somehow work around those individuals who are not available via mobile communication and use other, perhaps less efficient, forms of communication with them.

We might well ask why this matters. Why should we think about the intertwining of mobile communication in our lives? Why should others be available whenever we want to call? As Jeffrey Hall and Nancy Baym suggest, isn't this a case of overdependence (Hall and Baym 2011)? Wouldn't we be better off without?

The embedding of mobile communication in society matters because coordination is increasingly done via the mobile phone. As the mobile internet gains pace (as it is in many countries), we will be further reliant on mobile access to information. At a personal level, knowing how the mobile phone is increasingly interwoven into society helps us understand why we have become so attached to it and why we can have a sense of anxiety (some would say freedom) when we are without it. Understanding the process of social embedding helps us to think about whether this is pathology

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or just a healthy need for social interaction. It helps explain our worry when coverage is poor or when there is a technical problem in the system. Most of the time these are just simple annoyances, since the mobile phone is mostly used for mundane interactions such as deciding when and where to meet for a chat or to decide who will shop for groceries and who will pick up the kids at school. But other times the need is more urgent. Thinking of the mobile phone as a socially embedded system helps us see why we become so concerned when we cannot use one to reach our child or our elderly parent. Taking this to the horrific extreme, it helps us to see why the commentary regarding the shootings on Utøya in July 2011 often circled around mobile phone contact between parent and child. In short, it helps us to understand our deep-seated need to have a communication channel to our closest family and friends. Once we understand this insight, it may help us to frame policies that take into account the needs of users as we move on to ever new generations of mobile communication devices.

Mobile communication is not the only technology that is socially ingrained. Other technologies are similarly rooted and facilitate the functioning of social interaction. In addition to mobile phones, we can think of the car and mechanical timekeeping[2] as technologies that have become embedded in our lives, or at least, in the case of the car, in the lives of people living in the vast swathes of suburbia. These technologies challenged existing systems and firmly established themselves as necessary to the functioning of society. The car, the clock, and the mobile phone have all become central tools in our everyday lives. Although obvious exceptions do exist, these technologies are unquestionably central elements of contemporary society. Given the separation between home and work, and the fact that, for example, children's activities are in one quarter of the city, our shopping and commercial needs are serviced in another, and our social lives are carried out in yet a third location, communication, coordination, and transportation (and the technologies that facilitate these) all have central importance to the normal functioning of our lives.

Looking specifically at the automobile, in the 100 years following the late 1800s, it slowly developed from being an odd contraption on the edge of society to being taken for granted. In the late 1800s, none of the major elements of today's automobile culture was in place. Cars were rickety contrivances. They rarely had cabs for passengers, they needed constant prodding and maintenance, and they were more often than not seen as the hobby of determined tinkerers or eccentric millionaires. As if to ensure cars' marginal status, the roads were poor, and there were few gas stations and even fewer repair shops (Urry 2007, 113). If you owned a car at this time,

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you owned one almost in spite of its lack of usefulness. Society was clearly oriented toward other forms of transportation. This had consequences for the way that people organized their lives. Work, shopping, and schooling were often within walking distance. Daily activities did not require the individual to move about to the degree that we often see today. Neither the automobile nor the culture of the automobile had yet gained the purchase that they have today.

If we fast-forward 130 years or so to today, we see a huge difference. For better or worse, the logic of an automobile-based society has firmly established itself. Parking lots, paved roads, service stations, and all the standard automobile-related features of life are widespread. The car has also spawned strip malls and shopping centers. It is often easier to drive a few hundred yards from one strip mall to another (and belch out the consequent pollution), since walking involves detouring around multilane streets that are more car- than pedestrian-friendly. In addition, a whole sector of society is oriented toward servicing the automobile and its drivers and passengers. There are not just "filling" stations but service areas where we can attend to the nutritional needs of both the car and ourselves and where we can buy music, kitschy art, and reading material. This is not something that any single individual has brought about; rather, it is the collective sediment of social activity. For the vast majority of people (and in particular those who populate the suburbs), automobile culture is a given; and, while it gives us freedom of movement, it also forms and constrains our social activity (Urry 2000, 190).

In addition to having reformed the urban landscape, the automobile has spawned a supporting ideology: Not only is the automobile experienced as an essential means of transport (Hjorthol 2000), it is also a part of our identity that inspires a sense of loyalty *qua* dependency resulting in bumper-sticker-like statements such as "You can have my new SUV when you peel my cold, dead hands off its leather steering wheel" (Greenhut 2003).

Moreover, we often tacitly assume that others with whom we interact have access to an automobile. When we plan social events, set up meetings, or simply engage in planning the mechanics of everyday life (shopping for food, seeking entertainment, or meeting up with friends), we tend to suppose that we and our friends and associates have a car. Here again the Katz principle applies. In many cities if our friends do not have a car we need to develop elaborate ways of working around the logistical problem. To the degree that others rely on us being at certain places, our not having a car becomes an issue not only for us, but for them.

The automobile—and the system of social organization it has spawned—is an established feature of many metropolitan areas. In some cases it is

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possible (and perhaps desirable) to use alternative ways of getting around such as public transportation, walking, or bicycling. However, for many millions of people, the only realistic option is the car. Getting to work on time, getting the children to their activities, and shopping all demand the use of the personal car. This is not the car-owner's fault; rather, it is the consequence of a social trajectory. It is a part of the social structure. The automobile and its accompanying transportation system set the ground rules as to how sociation takes place. It is not necessarily that the automobile facilitates more social interaction; indeed, the opposite is probably more correct. However, it is a technology that mediates how we carry out our social lives.

The story of mobile communication is much briefer than that of the automobile. Although various forms of mobile radio have been possible since the early 1900s, the popular adoption of the cellular-based mobile telephone system is more recent (Farley 2005). Like the automobile, until recently mobile communication was the province of either the rich or the technically resolute. Mobile phone devices were heavy and required inordinate amounts of power. They were quirky, and the coverage was spotty. From the mid-1990s onward, we have seen mobile communication become much more commercially accessible, and we have seen the rapid acceptance of the mobile phone. This arrived first in the developed world and now is growing in the global south. It is increasingly imposing its reciprocally expected logic on the daily life of small groups. Love them or hate them, mobile phones are things we ignore at the peril of causing extra work for the people in our intimate sphere. As my sister-in-law discovered, we risk derailing our social arrangements if we forget our mobile phone, since it is becoming a taken-for-granted part of daily life.

Technologies That Mediate Sociation

In this book I examine how the mobile phone facilitates social interaction. In addition, I look at it vis-à-vis other technologies that also perform the same service, in particular cars and mechanical timekeeping. To be sure, there are other technologies of this type. Internet-based technologies such as email, and in particular the web 2.0 technologies like social network sites, also mediate sociation and indeed are the focus of much research (Katz and Rice 2002; Husinger, Klastrup, and Allen 2010; Consalvo and Ess 2011). In many countries the boundary between PC-based and the mobile-based internet is becoming difficult to discern. The diffusion of smartphones gives us access to many web services, in addition to uniquely

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mobile phenomena such as ubiquitous access to one another and location-based services. We are also seeing the growth of pads and tablets that combine mobility and internet access in different ways.

The interpersonal interaction afforded by the mobile phone is a medium through which, most of the time, we reach out to individuals rather than groups. It offers an intimacy ("Hi beautiful, I enjoyed our date last night ;)") and also an immediacy ("Help! The car battery is dead and we have to pick up the kids at day care. Can you pick them up while I sort out the situation with the car? :("). Texting and voice interaction are the mainstays of this, though the rise of smartphones and the mobile internet is giving this type of interaction a new functionality. All of these together are changing how small groups and individuals interact.

To be sure, the mobile phone is no longer just a voice- and text-based person-to-person communication tool. It is increasingly giving us new ways of interacting with one another in groups by way of "friend lists" and the latest information resources. The above-mentioned web 2.0 sites, accessed increasingly via the mobile internet, are most often used for quasi-broadcasting or "mass self-communication" (Castells 2009). The melding of the mobile phone and the internet is bringing us new possibilities in this sphere. We use our mobile access devices to get information from "the cloud" and location-based data such as maps and route descriptions. In addition, our ever more advanced phones are becoming repositories of individual as well as shared information.

I am interested in understanding the social construction of practices using certain technologies that have become common enough to be a shared part of our collective lives. These practices have social facticity and, at some level, we are coerced to use them. As technologies and systems that aid in the development and maintenance of social interaction (Green 2002), they have changed how we carry out major social practices; they have also changed the physical arrangement of society at the expense of alternative approaches. Finally and most importantly, we have come to have a common expectation that others use these technologies in about the same way as we do ourselves.

Social mediation technologies are legitimated artifacts and systems governed by group-based reciprocal expectations that enable, but also set conditions for, the maintenance of our social sphere. The use of social mediation technologies is not simply a matter of personal choice; it is in general an assumed part of social interaction. We use these technologies to orient and organize ourselves for instrumental as well as expressive purposes. We use them in our roles as family member, friend, and colleague. They are a part of

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the baggage associated with group interaction, and as such they can form, mold, constrain, facilitate, and set the conditions for sociation.

As such, these technologies provide us with efficiency and utility. This is not to say that they are socially, economically, or environmentally benign, nor does it mean that no power dimensions are associated with their use. They can have serious consequences on these fronts. It is obvious, for example, that the car is far more polluting than the horse. In spite of this, we have adopted the car and marginalized horse-based transportation, and along the way we have also built a structure of justifications that further entrench our use of the car.

Technologies of social mediation may be the norm for broad swaths of society, as is the case with mechanical timekeeping. However, their use and adoption can be characteristic of smaller social groups (think, for example, of foursquare users). The web of mutual expectations does not only function at the broad social level. It may be that members of a particular segment of society, people living in one area or participants in a special institution, share the expectation that others in that group will use a particular mediation technology. The use of collective calendars and scheduling programs is an example of locally based social mediation technologies.

There are also limits to the reach of many social mediation technologies. Time and timekeeping is nearly universal. However, I do not argue, for example, that the car is essential for everyone. In many cases there are alternatives, and a person simply does not need one. Indeed, in Copenhagen, a bicycle or a bus pass is more useful in many cases. That said, there are also people for whom the car is essential. The same is true of the mobile phone. Many groups of people simply do not need one or have alternatives for interpersonal communication. At the same time, there are those who seemingly live and die by having their mobile phone with them. The mark of a social mediation technology is that, for a particular group, by agreeing to use it (or being forced to use it in spite of our principles), we facilitate the functioning of the group. To not use it marks us, at some level, as deviants, and indeed there can be social pressure associated with the use of these technologies (Markus 1987, 493). By acquiescing in their use, however, we support the broader interaction of the group.[3]

It is worth noting that I use the word mediation with some apprehension. The word mediation has a long history of being associated with communication. However, the word has a flexibility that allows us to use it in a broad spectrum of situations. Indeed, Sonia Livingstone entitled her Presidential Address to the International Communication Association "On the Mediation of Everything" (Livingstone 2008). As she notes, this term

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has been applied to any number of ideas, theories, and situations. In discussions of communication, for example, mediation is often seen as the encoding of information that allows its transfer and eventual decoding by an interlocutor. In this book, mediation is used to denote a technological intermediary that facilitates our social dealings. This plays on the idea that a medium can also be seen as something that intervenes between actors. I use it to focus attention on the tools that we use to carry out social interaction, particularly interaction with that part of our social sphere that is not immediately at hand. The devices we use to coordinate, communicate, and transport ourselves are thus mediating the social interaction. This is the basis for the selection of timekeeping, car-based transportation, and mobile communication as technologies of social mediation.

Interdependences of the Clock, Car, and Mobile Phone

The social impact of mechanical timekeeping and the imprint of "car culture" are clearly more profound than that of the mobile phone. In many countries, they are more thoroughly interwoven into the fabric of society. Nonetheless, the three technologies share similarities and synergies. By examining their diffusion we can trace how technical systems become embedded in society. These three examples show how we grow to have the mutual expectation that our social interaction will be mediated through certain technological systems.

In addition, the car, the clock, and the mobile phone have interdependencies (Urry 2007; Elliott and Urry 2010). The car and vast suburban spaces have changed the need for interpersonal coordination and made us more reliant on synchronization with others; hence the growing use of the mobile phone for coordinating our activities (Ling 2004; Carey 1988). Microcoordination is changing the role of timekeeping in society just as the mobile phone can be said to complete the automobile revolution in the sense that it allows for ad hoc coordination in urban spaces (Ling 2004; Townsend 2000; Kwan 2006; Licoppe 2007). Until the 1990s, small-group sociation in suburban settings relied on transportation to specifically agreed-upon places at specific times. These arrangements may have been made telephonically via landline phones, but once made, they were largely fixed. There was little chance to renegotiate the agreement. If there was a misunderstanding, or if some were delayed in getting to their destination, the others were simply left to wonder.

Mobile communication changes this dynamic. Rather than making an immutable agreement, we work out a meeting iteratively. This gives us the chance to fine-tune our social arrangements, since we can make allowances

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for traffic and the accessibility of different locations. Our use of the mobile phone is reconstituting our use of mechanical timekeeping in making and keeping appointments just as the use of the automobile has. However, clock time retains its role as the governing metric of many social situations—we cannot run airlines or large "just in time" manufacturing concerns on the type of negotiated microcoordination that teens use when agreeing on when to meet. In addition to these real-time negotiations, it is fair to say that the internet (and the mobile internet) is a part of this complex. Millions of amateur soccer and baseball teams, sewing groups, and antique auto clubs post their meeting schedules on the internet. Thus, the internet is a part of the complex of coordination, communication, and transportation that is in some cases being accessed via smartphones and tablets.

Standalone Artifacts

If there are technologies that facilitate sociation, there are also technologies that have no noticeable networking characteristics. They are perhaps better characterized as "standalone" artifacts. Examples might be a favorite coffee cup, a toothbrush, or an umbrella. There are obviously social aspects to the use of these devices. If I do not brush my teeth regularly, it will affect my social life. People might not stand as close to me, and they might make comments behind my back. On the whole, however, these artifacts are not central to the mediation of society. Indeed, most of the things I own and use can be seen as standalone artifacts. These things help me through the day and perhaps flatter my sense of style. My clothes keep me warm and communicate a type of status aspiration or affinity to others (Davis 1985). The furniture I use has concrete functions, and at the same time, it reflects my family's sense of appropriate interior fashion and the limitations of our budget. Some standalone objects, once they have been placed in the room, need an occasional fluffing or cleaning in order to be maintained, but they are only marginally involved in the mediation of my social interaction. Standalone technologies may offer convenience and provide a service, but they do not usually mediate interaction. They are not directly essential in the arbitration of my social life.

It is clear that we can reinterpret artifacts. It is possible to take the most banal technology, a nail file or paper clip, and use it as a medium for social interaction ("If I leave the nail file on my desk, it means we can meet at the bar tonight"). While this is possible, it is a radical rereading of their design, just as using a mobile phone as a paperweight is a rereading of its design. In each case it is a stretch to reinterpret the artifact, but it is also obvious that this is a matter of continuum and not black-and-white categories.

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This is not to say that standalone technologies cannot have a disproportionate social impact, but this does not make them social mediation technologies. Think, for example, of the refrigerator (Robinson 1990; Levinson 2011). Refrigeration undeniably brought about social changes. It changed the way we store and prepare food. It changed our sense of nutrition, and it had a hand in changing the production and distribution of food. However, it is not a technology of social mediation. It is not a device through which we arrange and carry out significant social interaction. Thus, it is only marginally of interest to me if a meeting partner does not have a refrigerator (or a toothbrush or a coffee cup or a ski rack). By contrast, if they do not respect the use of clock time, if they cannot drive themselves to a meeting, or if they are not available via the phone, it can, following the Katz principle, become a problem for me.

Mobile Communication as a Moving Target

Finally, a caveat with regard mobile telephony: mobile communication is a central focus of this book, but it is very much a moving target. The functionality of mobile phones is not stable. The mobile phone has morphed into a device that encompasses a camera, a music player, and any number of other functions and "apps." Increasingly, people are adopting advanced mobile devices that give them relatively unhindered mobile access to the internet. The mobile phone is becoming more like a personal computer. Rather than simply being a single-purpose device through which we can call or text one another, it is also becoming the locus of social networking sites, text processing, email, gaming, payment and banking services, and much more (Ling and Svanæs 2011). In some cases, these features are similar to the traditional point-to-point interaction of telephony and texting, which people can use to exchange instant-messaging (IM) comments (Walton and Donner 2009).[4] The quasi-broadcast features are also becoming more popular (e.g., in Facebook and Twitter, a message from a single user is sent to many others). The nature of the mobile device is also changing with the introduction of tablets and pads. Finally, alternative networks like Skype, Viber, WhatsApp, and many more are challenging the position of the traditional network operators such as Vodafone and AT&T. Thus, mobile communication is a dynamic area. The advanced mobile devices that support this are currently most common in developed countries. Indeed, most teenagers in Denmark have some kind of advanced smartphone, whereas if we look to Bangladesh or Pakistan, we find very few users with this type of device.

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These changes mean in part that we are using the mobile phone for more than our private interpersonal interactions (e.g., "Hi, what should we have for dinner tonight?"); mobile communication is also including "status updates" sent out via Facebook to our social networking "friends" ("I saw the best film last night and then had a couple of beers with my friend Scott"). In the first case there is usually only a single interlocutor, whereas in the second it might include members of our closest sphere as well as others with whom we have less social commerce.

Organization of This Book

This book has four broad sections. They are:

1. General discussion of social mediation technologies (chapters 1 and 2);
2. Application of the framework to mechanical timekeeping and the car (chapters 3 and 4);
3. Application of the framework to mobile telephony (chapters 5 through 8); and
4. Synthesis (chapter 9).

In this and the following chapter I lay the framework for social mediation technologies. I discuss the need for a critical mass, a supporting ideology, changes in the social ecology that sustain the technology, and a web of mutual expectations regarding use.

Chapters 3 and 4 use historical information to examine this idea in the case of clock time (chapter 3) and the automobile (chapter 4). These cases are of interest because they illustrate the general process by which social mediation technologies can be diffused into society. They also have synergies with the mobile phone.

In chapters 5 through 8 I use material from interviews, focus groups, and quantitative analyses, starting in the mid-1970s, to explore how mobile communication has become embedded in society. In addition, I discuss quantitative analyses of ownership and use in other European countries and more recently the work supported by the Pew Internet and American Life Project.

Finally, in chapter 9 I bring together the analysis of the car, the clock, and the phone to see how the relationship between these technologies can be seen as part of the same complex. The ability to coordinate and transport ourselves and our wares relies on these technologies. The car, timekeeping, and the mobile phone are a part of the warp and weft of society.

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