MOBILE PHONES, JAPANESE YOUTH, AND THE RE-PLACEMENT OF SOCIAL CONTACT

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Abstract

What social structural factors relate to unique patterns in teen mobile phone usage, particularly text messaging? We propose that the power dynamics inherent in the institutions of family, public places, and peer relations are key factors. Teens use mobile phones because they enable new kinds of social contact, but also because teens are limited in access to adult forms of social organization. This paper relies on interviews with twenty-four Japanese college and high school students and a set of "communication diaries" and follow-up interviews with twenty-four mobile phone users of different ages. The paper analyzes this material in terms of intergenerational dynamics of mobile phone use in three kinds of places: the private space of the home, public spaces of public transportation and street, and the virtual space of online peer connectivity. The paper concludes that many patterns of teen text messaging are structured by adult control over the spaces that they frequent and an increasingly structured set of social norms governing mobile communications.

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This paper examines how the mobile phone is embedded in the power-dynamics of the home, school, and street for Japanese youth, looking at what cultural geographer Doreen Massey (1993) has called the "power-geometry of space-time compression." The mobile phone is an emblematic technology of space-time compression, touted as a tool for anytime, anywhere connectivity. Contrary to this popular depiction, workplace studies have demonstrated how mobile phones produce issues in the maintenance and construction of personal boundaries in the face of increased accessibility by the workplace (Churchill and Wakeford 2002; Gant and Kiesler 2002; Laurier 2002; Schwarz, Nardi, and Whittaker 1999; Sherry and Salvador 2002). By contrast, youth tend to see mobile phones as liberating and expressive personal technologies. While recognizing the unique social functions of youth mobile communications, we also believe that they can be understood in relation power-geometries of institutions and places. While youth do have large amounts of discretionary time, energy, and mobility that is the envy of working professionals and parents, they are limited in their activities by their weak social position and limited access to material resources. Their lives are governed by certain structural absolutes, such as dependence on parents, educational requirements, and regulation in public places.

This paper presents a picture of how Japanese youths' mobile phone use is both located within an existing power-geometry of space-time compression, and constitutive of new ones. We describe how mobile phone use is embedded in specific social and material locations that youth occupy in urban Japanese culture and society, and in turn, how usage changes their experience of places and their relationships to peers and parents. After first presenting the methodological and conceptual framework for this paper, we present our ethnographic material in relation to the power-dynamics and regulation of different kinds of places: the private space of the home, the classroom, the public spaces of the street and public transportation, and the virtual space of peer connectivity enabled by mobile communications.

Method and Conceptual Framework

Our Research

This paper draws from ongoing ethnographic research on mobile phone use and location, centered at Keio Shonan Fujisawa Campus near Tokyo. We draw primarily from two different sets of data. One is a set of ethnographic interviews conducted by Ito in the winter of 2000, with twenty-four high school and college students about their use of media, including mobile phones. The central body of data behind this paper is a set of twenty-four "communication diaries" and interviews collected between July-February 2003 by Okabe and Ito. We aim to collect detailed information on where and when particular forms of mobile communication were used by a diverse set of people. We seek direct observational records in addition to interview data, as it is notoriously difficult to capture the fleeting particularities of mobile communication after the fact. In another project, we are conducting observations of mobile phone use in public transportation. For this study, our intent was to capture the usage patterns of particular individuals. We adapted data collection methods piloted by Rebecca Grinter and Margery Eldridge (2001) where they asked ten teenagers to record the time, content, length, location, and recipient (or sender) of all text messages for seven days. As with interviews, this data collection method still relies on second-hand accounting, but has the advantage of providing much more detail on usage than can be recalled in a stand-alone interview.

We expanded the communication log to include voice calls and mobile Internet, and more details about the location and context of use. Participants were asked to keep records of every instance of mobile phone use, including voice, short text messages, email, and web use, for a period of two days. They noted the time of the usage, who they were in contact with, whether they received or initiated the contact, where they were, what kind of communication type was used, why they chose that form of communication, who was in the vicinity at the time, if there were any problems associated with the usage, and the content of the communication. After completion of the diaries, we conducted indepth interviews that covered general attitudes and background information relevant to mobile phone use, and detailed explication of key instances of usage recorded in the

diaries. Our study involved seven high school students (aged 16-18), six college students (aged 18-21), two housewives with teenage children (in their forties), and nine professionals (aged 21-51). The gender split was roughly equal, with 11 males and 13 females. 594 instances of communication were collected for the high school and college students and 229 for the adults. The majority of users were in the Tokyo Kanto region. Seven were recruited in the Osaka area in southern Japan to provide some geographic variation. This paper focuses on the communications of the high school and college students. We turn now to the theoretical and conceptual framework for our analysis.

Mobile Phones and Youth

In countries where there is widespread adoption, there are cross-cultural similarities in the intersection of youth and mobile phones. Richard Ling and Birgitte Yttri (2002) have coined the term "hyper-coordination" to describe the expressive and socially active uses of mobile phones by Norwegian teens. In contrast to the more instrumental uses that older subjects described, youths describe using phones for emotional and social communications, particularly for cementing peer relations. Ling and Yttri describe adolescence as a unique time in the lifecycle, how peers play a central role during this period, and how the mobile phone becomes a tool to "define a sense of group membership, particular vis-à-vis the older generation (2002: 162). A growing body of work with teens in locations such as the UK (Green Forthcoming; Grinter and Eldridge 2001), Finland (Kasesniemi and Rautianinen 2002), Norway (Skog 2002), and Sweden (Weilenmann and Larsson 2002), finds similar patterns in other countries. Text messaging appears as a uniquely teen-inflected form of mobile communication, in that is lightweight, less intrusive, less subject to peripheral monitoring, inexpensive, and enables easy contact with a spatially distributed peer group (Grinter and Eldridge 2001; Kasesniemi and Rautianinen 2002; Ling and Yttri 2002).

We believe that this body of work that has preceded ours has made the case for unique forms of teen mobile communication. Our data and other material on Japan (Matsuda 2000; Okada and Matsuda 2002; Yoshii et al. 2002) also support these general findings. Taking this body of work as a starting point, our analysis focuses less on the

distinctive qualities of youth communication and more on the institutional and material conditions in which this distinctiveness is produced. We argue that the practices and cultures of youth are not solely outcomes of a certain level of developmental maturity, or even of social relations, but are also conditioned by the regulative and normative force of places. We shift the center of attention from the practices and identities of youth themselves to their institutional and cross-generational surrounds, considering "youth" as a category constructed and consumed by people of all ages, and produced in particular power-geometries (James, Jenks, and Prout 1998; James and Prout 1997). We cut our data along these lines as well. We apply the category of youth to those institutionalized as such—high school and college students who are financially dependent on adults.

For a theory of place, we look to cultural geographical conversations on new media. We see place as a hybrid of the social, cultural, and material (including technology, architecture, and geography). Massey's insistence that hierarchical relations are key components of place-making are particularly important in our analysis. Critiquing "easy and excited notions of generalized and undifferentiated space-time compression," Massey argues that

different social groups are placed in very distinct ways in relation to late modern flows of media, people, and capital. This point concerns not merely the issue of who moves and who doesn't, although that is an important element of it; it is also about power in relation *to* the flows and the movement. Different social groups have distinct relationships to this anyway-differentiated mobility; some are more in charge of it than others; some initiate flows and movement, others don't; some are more on the receiving end of it than others; some are effectively imprisoned by it (1993, 61).

We draw from Massey's framing, but also work further to specify the particularities of these power-geometries of space-time compression by looking at the particularities of intergenerational power dynamics. Just as social theory has interrogated race, class, and gender, generational dynamics need to be analyzed with a

person."

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¹ In her study of Japanese youth, Merry White (1994: 11) describes the differences between US and Japanese labels for young people. The category of "teenager" of "cheenayja" has been borrowed from English, but is not in widespread use. The native categories are *shonen* and *seinen* which are closer to the English term "youth" or "young

similar social structural lens (Alanen 2001). Further, it is not only that certain people are differentially located within power-geometries. The same person can be alternatively in control or lacking control of communicative and cultural flows depending on lifecycle stage, different spatial and temporal locations and their access to new technology. Youth communications are regulated by peers or adults depending on place and time of day, and that access to mobile media takes a central role in managing and inflecting that control. Conceptually, our approach shares much in common with Nicola Green's in her analysis of the role of mobile phones in surveillance and monitoring between adults and teens and among teens (Green 2002). Mobile phones are embedded in existing power-geometries and creating new social disciplines and accountabilities.

Cross-cultural similarities in mobile phone usage can be understood in relation to shared and different structural conditions in the lives of young people. While this study does not present a comparative analysis, it does lay out conditions that contextualize Japanese youth's mobile phone use, and suggests that the cross-cultural similarities in mobile phone usage are partially an outcome of the similarities in the institutionalized status of youth. After an overview of Japanese youth usage of mobile phones, we examine the institutionalization of mobile phone use in relation to the urban home, school, street, public transportation, and online mobile space.

Japanese Youth and Communication Technology

Since the late nineties, youth have had higher rates of mobile phone ownership than the general population, but the gap is closing. A national survey of mobile phone communications conducted by Video Research (2002) in July 2002 found that the overall penetration of mobile phones in Japan was 73.7% with ownership by students age 12 and up at 75.7%. A survey the prior year by the Mobile Communications Research Group (Yoshii et al. 2002) found a more substantial gap between high school (76.8%) and college (97.8%) students and the general population (64.6%). Even as mobile phones have become common in all age groups, the younger demographic has a higher volume and unique patters of usage that differentiate them from older users. In contrast to the \$5613 average monthly payments of the general population, students pay an average of

¥7186 for their monthly bills (IPSe 2003). Particularly distinctive is usage of mobile email². 95.4% of students describe themselves as mobile email users, in contrast to 75.2% of the general population (VR 2002). Teens send twice as many emails than twenty-somethings, sending approximately 70 a month in contrast to 30 for the slightly older set (Yoshii et al. 2002). In contrast to the general population (68.1%), almost all students (91.7%) report that they send over 5 messages a day. They also tend to be more responsive to the email that they receive. Almost all students (92.3%) report that they view a message as soon as they receive it, whereas a slimmer majority of the general population (68.1%) is as responsive. May older users say that they view a message when convenient to them, or at the end of the day (VR 2002).

The current generation of college students has a particular historical relationship to messaging technologies. Many heavy users moved from using pagers in middle school and high school in the mid nineties, to using PHS (an inexpensive version of a mobile phone), switching over to the current mobile Internet in the late nineties. Different variants of mobile phones have proliferated since the late nineties, but in the past four years or so it has become common for high school students to carry them. Beginning with pagers, messaging functions have had a strong association with girls, particularly kogyaru (high school gals), a label attached to the newly precocious and street savvy high school students of the nineties who displayed social freedoms previously reserved for college students. In certain city centers, kogyaru continue to be highly visible, sporting platform sandals, brightly-colored fashions, sun-tanned faces, colored hair, and often a highly decorated mobile phone hanging from their necks. Unlike the male *otaku* (techno-geeks) associated with video games and computers, media savvy girls have been associated with communications technologies such as pagers and mobile phones. *Kogyaru* are commonly thought to be the social group that pioneered and popularized recreational uses of mobile communications, first with their appropriation of pagers in early nineties, and then with

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² I use the term mobile email to refer to all types of textual and pictoral transmission via mobile phones. This includes what Japanese refer to as "short mail" and Europeans refer to as "short text messages," as well as the wider variety of email communications enabled by the mobile Internet. At the time of this writing, this includes text, graphics, photographs and just recently, video clips. Since Japanese mobile phones became

mobile phones the latter half of the nineties. Within a space of a few years between 1995-98, mobile phones shifted from association with business uses to an association with teen street culture. This shift coincided with the high visibility of *kogyaru* in the media and on the streets.

These girls became the object public attention in the mid nineties as an indicator of trends in communication and fashion, as well as the most recent icon for ongoing laments about the moral decline and growing promiscuity of youth. *Kogyaru* culture flies in the face of mainstream norms that insist that young women be modest, quiet, pale, and domestic. Pagers as well as mobile phones have been associated with a low-achievement and pleasure-seeking mentality as it infiltrated the youth population. Until recently, the popular assumption has been that heavy mobile phone users are socializing rather than studying. These associations are fading now with the proliferation of phones, but much advertising and product design still caters to the youth market, particularly girls. Ads for cutting-edge phones tend to feature young women, and many designs feature cute characters and feminine colors. Mobile youth culture is an object of both fascination and concern, produced by adults and industrialists, as well as subject to regulation and repression. Even with pundits declaring the death of the *kogyaru* at the turn of the millennium, this youth subculture has a lasting legacy in mobile texting cultures.

Postwar Japanese youth culture has featured a succession of highly visible but transient youth subcultures like the current *kogyaru*. Most Japanese girls take stylistic cues from these subcultures—bleached hair, platform sandals, keitai usage—but tend not to have oppositional relationships with their parents and teachers. Even full-blown *kogyaru* often lead double lives, hiding their *kogyaru* identity from parents and teachers. In her study of American and Japanese youth, Merry White (1994) sees fewer conflicts between Japanese parents and youths than their American counterparts, and less pathologization of youth as a problematic life stage. Dependency has less social stigma that it does among Euro-American youths, and this is institutionalized in the protective functions of family that extend through college and often beyond. White also describes

Internet enabled in 1998, users have been able to communicate across service providers and have not been limited to the "short message" length of prior forms of mobile email.

how youth are defined by marital and employment status rather than by age, and "such institutional definitions have more weight than social and psychological identities" (1988: 11). Arguably, youth culture has been subject to more concern since the rise of *kogyaru* in the nineties, after White completed her work. Yet we believe her overall findings still hold, in that the regulatory and protective functions of institutions such as family and school still dominate the lives of Japanese youth into their twenties.

The life rhythms of high school and college students are substantially different. High school students spend most of their free time in school, particularly if they have sports and other after-school activities. By contrast, college students have extremely flexible schedules, and often stay up until all hours of the night and miss classes the next day. Unlike US university life, college students at even the top universities see their time in college as a relief from the pressures of academics that haunted them during high school. Rather than a time of independence where they leave the parental home, most urban college students live with their parents and are financially dependent. Unlike high school students, however, they are not expected to share the same life rhythms and meals of the household, and are allowed to lead relatively independent social lives. Our sample of college students for the communication diary part of our study is a bit skewed in this respect, as our student pool at the Keio campus was largely comprised of youth living on their own. As a suburban campus of an elite urban university, the situation at our campus is unique in attracting students from around the country in an area with a relatively low urban density. Overall, our interviewee pool represented a range from mainstream middle class to elite. Many of the high school girls we interviewed had the bleached hair popularized by the *kogyaru*, and all had a keitai, but none would have identified herself as a *kogyaru*.

Most college and high school students move back and forth from the space of the home—where they may have some privacy and discretion over their activities, but lack physical access to friends—and the space of school—where they are physically copresent with their friends, but have severe constraints on forms of social contact. Urban spaces such as the street and cafes become key sites for gathering on their own terms. The home, though not a place where youth congregate, is a privileged site for mobile communications, and we begin our entry into the empirical material at this location.

Mobile Youth Culture and the Politics of Place

Mobile Phones in the Home

There are peculiarities to the urban Japanese case with respect to the politics of location, particularly the home context. Most notably, Japanese youths, through college, have less private space compared their US and even European counterparts. The Japanese urban home is tiny by middle-class American standards, and teens and children generally share a room with a sibling or a parent. Most college students in Tokyo live with their parents, often even after they begin work, as the costs of renting an apartment in an urban area are prohibitively high. Because of these factors, urban Japanese youth generally take to the street to socialize. For high school students, this usually means a stop at a local fast food restaurant on the way home from school. College kids have more time and mobility, gathering in cafes, stores, bars, and karaoke spots. Unlike the US, there is no practice for teens to get their own landline at a certain age, or to have a private phone in their room. The costs of running a landline to a Japanese home are very high, from \$600 USD and up, about twice what it costs to get a mobile phone. It is thus extremely rare for a home to have more than one landline.

Here is an excerpt from an interview with four high school girls who are close friends.

Interviewer: You all live close to each other. Do you visit each other's homes? Student1: We don't. It's not that we are uncomfortable, or our parents get on our case, but it's like they are too sweet and caring, and you worry about saying something rude, or talking too loud. You can't be too rowdy. So we don't meet in our homes.

Student2: Occasionally. Maybe once a year. Actually, that's not even occasional. Student1: And if it happens, it is at a friend's house where they have their own room.

This stance was consistent across the youths that we interviewed. Meetings among friends almost always occurred in a third-party space run by indifferent adults, such as a fast food restaurant, karaoke spot, or family restaurant. Even for college students living

on their own, their space is generally so small and cramped that it is not appropriate for hanging out with groups of friends.

The phone has always provided a way of overcoming the spatial boundary of the home, for teens to talk with each other late at night, and shut out their parents and siblings. As noted in other studies (Green 2002; Ling and Yttri 2002; Skog 2002), the mobile phone has further revolutionized the power-geometry of space-time compression for teens in the home, enabling teen to communicate without the surveillance of parents and siblings. This has freed youths to call each other without the embarrassment of revealing a possible romantic liaison, or at hours of the day when other family members are likely to be asleep. All that we interviewed were consistent in stating a preference for calling a friend on a mobile rather than home phone despite the higher cost. Youths now do not have the home phone numbers of any but their most intimate friends. A high school girl describes how she makes gender-based choices of what phone to call.

If it is a boy, I will call their mobile. If they have one, I will call their mobile. If it is a girl, I will call their home. If it is a girl, well, I'm a girl right? So if I call they think I am just a regular friend. But if it is a boy, his family might tease him, and I've made a friend very uncomfortable in the past because of this. I've also been told some nasty things by a parent. I was totally pissed off when a parent of a boy told me off like I wasn't a proper girl. So since then, I don't use the home phone.

The home phone once was a means for parents to monitor and regulate their children's relationships with their peers. With the mobile phone, the spatial boundaries of the home become highly porous to discretionary communication. The spatial dispersion of homes, coupled with the freedom of communication via the mobile phone is an inversion of the dynamics of the classroom, where kids occupy the same physical space, but are not in control of their communications with each other. Communications in the home by youths are a combination of more instrumental uses, such as coordinating meetings and homework, and more social and chatty uses. Among close friends and couples, most youths (2 out of 3 in our sample) maintained ongoing lightweight contact as they went about their daily routines, sending each other messages about their current status and thoughts such as: "Just woke up with a hangover," "The episode (of the TV drama) really

sucked didn't it," or "good night." They enjoy a sense of co-presence with peers that they are not able to realize physically because of their dependence on the parental home.

Informants for our communication diary research included ten cases of high school students living at home: seven high school students, three mothers, and one father. We also had one example of a college student living at home. Parents exhibited varying degrees of comfort with the changes accompanying the mobile phone. On one hand, they enjoyed the phone as a device for them to get in touch with their children, exploiting the fact that their kids were constantly checking their mobile email. One mother, rather than shout up to her daughter to wake up in the morning, would send her a text message that she knew would get her out of bed to check the phone. Without exception, parents with children at home would send messages telling them that it was time to come home, or coordinating details such as pickup and meeting times. We saw mild to acute tensions surrounding extensive use of mobile phones by the children. Parents and children alike voiced a rule that emailing should not happen during mealtimes. Although the two parents in our study did not take such measures, one of the high school students described how he had gotten caught with cigarettes, and his mother had imposed strict limits on his mobile phone usage as punishment. All the parents we interviewed described a sense of unease and curiosity about their children's mobile communications. Conversely, all the children took measures to keep parents in the dark about the content of their email and calls. Generally this was done by going to their bedroom when taking a voice call. One high school girl in our study shared her study room with her father. When she received a voice call she would leave the house to talk outside, out of earshot, even in the dead of winter. One parent voices what we take to be a typical parental stance.

Okabe: Do you have a problem with her using her mobile phone during meals, or after meals in the living room, when you are together?

Mother: I don't have a problem with it when we are just lounging around. But during meals or when she is studying, I try to tell her to tell the other person on the line

Okabe: Are you curious or concerned about with who and what she is communicating?

Mother: I am concerned about all of it... though I can usually guess who it is.

Okabe: When you tell her to stop, does she stop?

Mother: She goes to her room... if I am strict about it.

. . .

Okabe: Do you ever ask her, like "What in the world are you talking about!" Mother: I do ask sometimes. But I just get a vague reply.

Of particular interest are the logs of one teenage couple in our study, which is a somewhat more intense version of couple communications that we saw in other instances. Their typical pattern is to begin sending a steady stream of email messages to each other after parting at school. These messages will continue through homework, dinner, television shows, and bath, and would culminate in voice contact in the late evening, lasting for an hour or more. A trail of messages might follow the voice call, ending in a good night exchange and revived again upon waking. On days that they were primarily at home in the evening, they sent 34 and 56 messages to each other. On days that they were out and about the numbers dwindled to 6 and 9. The content of the messages ranged from in-depth conversation about relational issues, to coordination of when to make voice contact, to lightweight notification of their current activities and thoughts. In this case, and to a smaller degree for other couples living apart, messaging became a means for experiencing a sense of private contact and co-presence with a loved one even in the face of parental regulatory efforts and their inability to share any private physical space.

Mobile Phones at School

In the school context, there is variability in how teachers deal with mobile phones. Some schools have greeted the recent ubiquity of mobile phones with blanket prohibition. Two high school students reported how their teachers would take the phones if discovered in class. Almost all school officially ban phones from the classrooms, but most students do use email during class at least occasionally. It is not uncommon for students to leave their mobile phones out on their desks during class, claiming that they use the clock function. All students, both in high school and college voiced the rule that they would not use voice communication in class, but almost all said that they would read and sometimes send messages. The mobile phone gets used most frequently during the lunch time hour and immediately after school, as students scurry to hook up with their friends. We saw email being sent during class in only two of our communication diary cases, but almost

all students reported in their interviews that they would receive and send messages in class, hiding their phones under their desks. Here is the response from one of the high school students who we did see using her phone during class.

Okabe: What sorts of places and situations do you use your phone a lot?

Student: At school, during class.... I leave my phone on my desk and it vibes.

Okabe: Your teacher doesn't care?

Student: Well, the teacher pretty much knows. He doesn't do anything about it.

Okabe: Really? You can leave it out?

Student: Everyone has them out.... Some kids even let their phone ring, and the

teacher is like, hey, it's ringing... I think this is just our school.

. . .

Okabe: Do you take voice calls during class?

Student: No. That would be going to far.

Okabe: Oh, so you wouldn't answer. What kinds of exchanges do you have over

email during class? Do you send email to people sitting in the same classroom?

Student: Yes, I do that too.

Okabe: What do you say?

Student: "This is boring."

Okabe: And you get a reply?

Student: Yes.

Okabe: When you write your email, do you hide it?

Student: Yes. When the teacher is facing the blackboard, I quickly type it in.

Like this student, three other students described conversations with students in the same classroom, making comments like "this sucks," "this is boring," or "check it out, the teacher buttoned his shirt wrong." More commonly, students reported that they conducted "necessary" communications during class, such as arranging a meeting or responding to an email from somebody with a specific query. The communications in class that we saw in the diaries involved coordinating meetings after school or receiving email from friends who were absent, asking for notes or other class information. In all

these cases, mobile email is being used to circumvent the communicative limitations of the classroom situation, much as passing notes and glances across the classroom did in an earlier era. Perhaps more uniquely, the mobile phone in the classroom is a way to challenge the communication hierarchy of the traditional lecture format that insists that students passively listen to an active teacher. Mobile email enables students to resist their role in this one-way communication and to make more productive use of their attentional "dead time" between jotting notes and waiting for teachers to finish writing theirs.

Mobile Phones in Urban Space

Our research has focused on the greater Tokyo metropolitan area, which is an extremely dense urban setting well connected to its more suburban surrounds. This urban landscape is amenable to appropriation by youth because of the extensive public transportation system, and the fact that it is quite safe to be on public transportation and out on the street even for young women at night. Youth will take public transportation from city outskirts and congregate in city centers like Shibuya and Ikebukuro, considered the epicenters of youth culture. Not surprisingly, Shibuya crossing has the highest density of mobile phone use in the world.

Mobile phones embody a fast and footloose street culture beyond the surveillance of the institutions of home and school. For example, there is a practice called *enjo kousai* that started in the nineties, where high school girls, particularly *kogyaru*, meet older men on the street and date them for money. The argument has been that without mobile phones this would not have been possible. Such practices have reinforced the perception that mobile communications support superficial and fleeting relationships. Japanese researchers have argued that their observations do not bear out these pervasive fears about the corruption of youth, and that mobile phones have made youths' relationships selective rather than superficial (Matsuda 2000). Public perception, however, persists that youth technoculture is related to moral decline. For example, the popular weekly magazine, *Aera*, ran a series of articles about *kogyaru* and *enjo kousai*, depicting Lolitacomplex middle aged men and "old man hunting" teenagers meeting on the street,

keeping in touch with pagers and mobile phones (Hayamizu 1996). In part, this association between mobile phones, declining morals, and personal (rather than business) communication translates to a negative image of youth usage and intensifying efforts at regulation of mobile phones in urban space.

Most trains and buses display "no mobile phone signs," and announcements are made every few minutes prohibiting use of mobile phones. The street and train platforms are open to voice calls, but are generally extremely noisy, and it is difficult to have a sustained conversation in these locations. In a separate study, currently under process, we have been observing uses of mobile phones on trains and subways. In over a hundred cases observed, almost all involve text input. When voice calls are received (we have no instances of calls being initiated on a train), people will without exception cut the call almost immediately.

Our interviews and communication logs also bear out this norm. Without exception, and regardless of age, interviewees said that they did not make voice calls on public transportation and in formal restaurants. There was some variability as to whether they would answer a call on public transportation, but if they did, they stated that they would cut the call right away and call back later. Phone ringing is also considered a violation in public space. Interviewees who were heavy mobile users almost invariably reported that they put their phones in "manner mode" (silent mode) when they left the home. In the communication diaries, we saw only once instance of a voice call being initiated on public transportation, when the subject was the only passenger on a bus (see example below). The call lasted only a few minutes, and was cut as soon as another passenger entered the bus. Despite the virtual lack of voice mobile communication on trains in the Tokyo area, the announcements are relentless, attesting to a high level of social regulation work even in the absence of major transgressions.

In contrast to voice calls, mobile email is considered ideal for use in public spaces. Some trains announcements and signage specify no voice calls, thus implying that Internet and email use is permitted. While bus drivers will prohibit someone speaking on a mobile phone from entering a bus, we have not observed any instances of regulation of silent mobile phone uses. Just as the power-geometries of the home make email a privileged, private form of communication, regulatory efforts on public

transportation have also contributed to the rise of email as a preferred form of mobile communication. Largely because of the risk that their interlocutor may be on public transit, a social norm has arisen among the younger generation that you should not initiate voice calls without first checking availability with a text message. Unless certain that their recipient is at home, most youths (there were two exceptions in our study) will send a message first asking if they can call.

During a physical gathering, youth will generally prioritize the co-present encounter, but there are instances when they are interrupted by a mobile email or call. Unless in public transport or fancy restaurant, they will attend to the interruption. All interviewed voiced a general rule that family and fast food restaurants were acceptable for voice calls. Email will be attended to regardless of place. Those that require an immediate response, such as a mother asking when they are going to return, or a message from somebody they are planning to meet, will be responded to right away. When with friends, youth will almost always take the call, but will cut it short if it is a one-on-one gathering. When multiple parties are meeting up (we saw this in two of our documented cases), it is common for mobile communications to be used to contact those that have yet to appear on the scene, adding relevant information to the current co-present encounter. At other times, contact with distant others can be used to augment a particular gathering. One observation I made of a group of high school students on a bus illustrates this dynamic.

I am sitting near the front of a bus that is not very crowded. Most seats are occupied, but there is nobody standing. A group of five high school boys in black uniforms are congregated just behind me, speaking rather loudly across the middle aisle. They are discussing some kind of gathering they are arranging. I am not able to determine exactly the nature of the gathering, but they are involved in a heated dispute over who is coming and why some members are not coming, and suspicions that somebody is sabotaging the arrangements.

"Ask 'Ken." One boy suggests. "Ask him if he is coming." One of the boys carrying a phone punches in a message. As they await their reply they continue to debate about what is going on. "If the girls are coming, they the guys will come too." "Send a message to 'Kei' then." "Or do you want me to send it?" "No, you send it." In the meantime, Ken has responded that he thinks he will come, a fact that the recipient announces to the group. "Okay, then he's not the problem" they all agree. The exchange continues in this manner, with the boys making selective contact with their friends and collectively developing a theory of the fate of their planned gathering.

A feeling of urban anonymity is disappearing as youths stay in ongoing and lightweight contact though messages with their peers and loved ones. Out shopping, a lone girl sends a picture of the shoes she is buying to a friend. Another sends a message announcing that she just discovered a great sale. After a physical gathering, as friend disperse on trains, buses, cars, and on foot, a trail of messages often continues the conversation, thanks somebody for a ride, or announces that they forgot to return an object. This kind of communication is freed from prior contingencies that required infrastructures of pay phones and physical co-presence. Rather than fixing a meeting place, gatherings between youth are now almost always arranged in a fluid way, as people coordinate their motion through urban space, eventually converging on a shared point in time and space. At the same time, mobile communications are highly responsive to the power-geometries of urban space and an emergent set of social and communicative norms. I present one example from our communication diaries of one female college student who carried on a text message conversation while moving between different forms of public transportation. She has just finished work, and makes contact with her boyfriend after she boards the bus.

- 22:30 (boards bus)
- 22:24 (send) Ugh. I just finished (> <). I'm wasted! It was so busy.
- 22:28 (receive) Whew. Good job. (> <)
- 22:30 (send) I was running around the whole time. Are you okay?

- 22:30 (Only other passenger leaves. Makes voice call. Hangs up after 2 minutes when other passengers board.)
- 22:37 (send) Gee I wish I could go see fireworks (; _;)
- 22:39 (receive) So let's go together! I asked you!
- 22:40 (gets off bus and moves to train platform)
- 22:42 (send) sniff sniff (; _;) Can't if I have a meeting! I have to stay late!
- 22:43 (receive) You can't come if you have to stay late?
- 22:46 (send) Um, no... I really want to go... (; _;)
- 22:47 (receive) Can't you work it out so you can make it?
- 22:48 (boards train)
- 22:52 (send) Oh… I don't know. If I can finish preparing for my presentation the next day. I really want to see you. (>_<) I am starting to feel bad again. My neck hurts and I feel like I am going to be sick. (;;) Urg
- 22:57 (receive) I get to see you tomorrow so I guess I just have to hang in there!
- 23:04 (gets off train)
- 23:05 (send) Right right. I still have a lot of work tonight. I can't sleep!

In our interview, she describes how her messaging embeds subtle clues that indicate her status and availability for communication keyed to her physical location.

Okabe: You talk about the fireworks for about ten minutes. Is this the kind of thing you usually communicate about over email?

Student: Part of the way through, it becomes just something to keep the conversation going just for the sake of continuing. Around when this firework topic comes up. All I wanted to really say was about my work day, but since I still have some time to kill. I didn't really care about the fireworks. Oh, I shouldn't be saying this.

Okabe: So you didn't really want to go.

Student: It isn't exactly a lie, but since I couldn't go, I wrote "Oh, I don't know," kind of grinning.

Okabe: So the important thing was to keep the conversation going.

Student: Yes, that's right. And after I started feeling that this was going on too long, I suddenly changed topic to my physical condition.

This last change of topic that she describes happens just as she is getting ready to get off the train. The change of topic is an indicator that the conversation has come to an end. She has enlisted a companion on her solitary bus ride, successfully filling dead time with small talk, ending it at precisely the moment when she arrived at her destination. This is but one example of many that we have gathered that attests to the highly nuanced and

place-sensitive nature of mobile communications made in transit. Approximately half of the students in our study engaged in this sort of chat like sequence while in transit. The regulatory efforts of public transport operators in Japan have structured a set of emergent social practices coordinated to the rhythms of youths' motion through urban space. We conclude with an analysis of the technical and social structuring of the online space of mobile connectivity.

Mobile Virtual Places

The use of email, and the growing expectation that mobile phones define a space of persistent connectivity, points to an alternative sort of technosocial space being defined by new mobile technologies for Japanese youths. While mobile phones have become a vehicle for youths to challenge the power-geometries of places such as the home, the classroom, and the street, they have also created new disciplines and power-geometries, the need to be continuously available to friends and lovers, and the need to always carry a functioning mobile device. These disciplines are accompanied by new sets of social expectations and manners. One interviewee explains:

I am constantly checking my mail with the hopeful expectation that somebody has sent me a message. I always reply right away. With short text messages I reply quickly so that the conversation doesn't stall.

When unable to return a message right away, there is a sense that a social expectation has been violated. When one girl did not notice a message sent in the evening until the next morning, she says that she felt terrible. Three of the students in our diary study reported that they did not feel similar pressure to reply right away. Yet even in these cases, they acknowledged that there was a social expectation that a message should be responded to within about thirty minutes unless one had a legitimate reason, such as being asleep. One describes how he knows he should respond right away, but doesn't really care. Another, who had an atypical pattern of responding with longer, more deliberate messages hours later, said that her friends often chided her for being so slow. In one instance, a student did not receive a reply for a few hours, and his interlocutor excused himself by saying he

didn't notice the message. The recipient perceived this as a permissible white lie that got around an onerous social expectation. All students who were asked about responses delayed an hour or more said that they would generally make a quick apology or excuse upon sending the tardy response.

With couples living apart, there is an even greater sense of importance attached to the ongoing availability via messaging. The underside to the unobtrusive and ubiquitous nature of mobile email is that there are few legitimate excuses for not responding, particularly in the evening hours when one is at home. Five of the ten student couples in our study were in ongoing contact during the times when they were not at school, and all these couples had established practices for indicating their absence from the shared online space. They invariably send a good night email to signal unavailability, and would often send status checks during the day such as "are you awake?" or "are you done with work?" We saw a few cases when they would announce their intention to take a bath, a kind of virtual locking of the door. Just as mobile workers struggle to maintain boundaries to between their work and personal lives, youths struggle to limit their availability to peers and intimates.

Conclusions

This paper has described the institutions and places which condition Japanese youths' mobile phone use. We see place as a power-geometry that integrates the social, material, and cultural. We have argued that this perspective is a useful complement to prior research that has examined the more personal and relational aspects of mobile phone use by teens. Another goal of this work has been to argue that far from destroying the integrity of place with unfettered communication, mobile phones participate in the structuring of new forms of place-based norms and disciplines.

Given this perspective, we can understand youths' penchant for text messaging as an outcome of a wide range of factors. These include the unique expressive functions and styles of this form of communication, as well as certain economic and historical factors unique to this generation. In this paper, we have focused on factors that relate to regulation and surveillance in particular places. Japanese youth, particularly high-school

students move between the places of home, school, and urban space that are all subject to a high degree of regulation and surveillance by adults. Even urban space is highly regulated by certain codes of social conduct as well as a range of regulatory efforts that limit communications on public transportation. Unlike the institutions of family and school, youth peer groups and couples are "institutions" that lack ownership and control of place. The outcome of these power-geometries is that couples and friends have few opportunities for private conversation. Although a limited form of contact, mobile email has fulfilled a function akin to co-presence for people that lack the means to share the same private physical space. As these same couples get married and share a home, we would expect that their messaging would shift toward the more instrumental functions that Ling and Yttri (2002) have described as micro-coordination. Our research with married couples bears out this hypothesis. New technologies become infrastructure for new disciplines and institutional relations as much as they challenge old ones that they grow out of, and the mobile phone is no exception.

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