Introduction: Personal, Portable, Pedestrian

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The three terms *personal, portable, pedestrian* point to a technological imaginary[1] embedded in the social and cultural specificities of Japanese mobile phone use, interpreted on a transnational stage. In contrast to the *cellular phone* of the United States (defined by technical infrastructure), and the *mobile* of the United Kingdom (defined by the untethering from fixed location) (Kotamraju and Wakeford 2002), the Japanese term *keitai* (roughly translated, ''something you carry with you'') references a somewhat different set of dimensions. A *keitai* is not so much about a new technical capability or freedom of motion but about a snug and intimate technosocial tethering, a personal device supporting communications that are a constant, lightweight, and mundane presence in everyday life.

This introduction serves to locate the *keitai* as a particular sociocultural object in relation to the international state of mobile communications adoption and sociocultural research. Beginning with an overview of Japanese mobile society and culture in the transnational arena, this chapter introduces the theoretical themes and papers represented in this volume. Roughly corresponding to different methodological and disciplinary frameworks, these themes, corresponding to the book's parts, are the social and cultural construction of technological systems (social history), cultures and imaginaries (cultural studies), social networks and relationships (sociological surveys), practice and place (ethnography), and reports on emergent developments. The conclusion identifies emergent dimensions of *keitai*-enabled social life that cross-cut these disciplinary divisions and theoretical debates.

Technological and Intellectual Geopolitics

Ever since NTT DoCoMo launched its i-mode mobile Internet service in 1999, which was received with surprisingly high adoption rates, international attention has been focused on Japan as defining the future of ''the mobile revolution.'' Although the United States and Scandinavia initially held the lead in the deployment and adoption of mobile phones (Agar 2003), the rapid spread of Japan's mobile Internet services, the

popular uptake of mobile devices, and innovative handset design by Japanese companies stole the wireless limelight in the twenty-first century. In *Smart Mobs* (2002), a book that catapulted mobile cultures into heightened visibility in the West, Howard Rheingold opens with a scene of texters eyeing their mobile phones as they navigate Shibuya crossing in Tokyo, allegedly the site of the highest mobile phone density in the world. A BBC reporter writes in a piece titled ''Japan Signals Mobile Future,'' ''If you want to gaze into the crystal ball for mobile technology, Tokyo is most definitely the place to come to'' (Richard Taylor 2003). The heavy use of the *keitai* Internet and text messaging as well as a particular variant of gadget fetishism has made Japan distinctive in the transnational arena.

The view of Japan as a curiously urbanized incubator for the future of mobile technology is based on an international appreciation of how Japan has pushed the envelope on mobile technology design, business practice, and use—an appraisal that seems well-placed given Japan's unparalleled levels of adoption of the *keitai* Internet (see chapter 1) and its steady march into new areas such as camera and video phones, location-based services, broadband *keitai* Internet, and m-commerce. Portable gadgets and wireless business models are a cornerstone of Japan's emergent ''gross national cool'' (McGray 2002), helping define a hip Japanese popular culture embodied in animation, video games, comics, food, and other Japanese cultural exports. Tamagotchi, Game Boys, Pokémon cards, and *keitai* are intimate, personal, and often cute media technologies scoring high on both Japanese cultural distinctiveness and global appeal (Iwabuchi 2003; Kinsella 1995; Tobin 2004). While recognizing the persuasively globalizing image of Japanese technoculture, however, I would like to insert some cautionary notes about using Japan as a template for a mobile future in other countries. We argue collectively in this book for the international importance and even centrality of the Japan case without losing sight of the specificities of social, cultural, and historical contexts in structuring the development and deployment of mobile phones.

The current Euro-American fascination with Japanese technoculture has deeper roots than the recent turn to the *keitai* Internet. Invoking Japan as an alternative technologized modernity (or postmodernity) is nothing new. At least since the late 1970s, with rapid industrialization and emergence as an economic and electronics powerhouse, Japan has confounded Western models of modernization and technologization (Miyoshi and Harootunian 1989). Harking back to the international attention focused on Japanese management and electronics in the 1980s and 1990s, current Western interest in Japanese mobile phones and technoculture echoes a familiar mix of fascination and unease. On the one hand, i-mode is held up as a technological and business model to be emulated; on the other hand, discourse abounds on the cultural strangeness of Japanese technofetishism that casts it as irreducibly foreign. William Gibson's inspired cyberpunk Tokyo landscapes, *Wired*'s steady stream of oddities in its ''Japanese schoolgirl watch'' column, ongoing coverage of the Japanese video game industry in

Euro-American gaming magazines—Japan provides fertile fodder for a wide range of techno-imaginings that are valued at least in part because of their cultural distinctiveness. As Tim Larimer (2000) writes in his cover article for a special issue of *Time Asia* on ''Gizmo Nation,'' ''More than any other country on earth, Japan has put its faith—and future—in the hands of technology.''

Despite the high-tech and postmodern trappings, transnational cultural politics retain many of the same contours of fascination and unease as in the 1980s: emulation of a ''Japan as Number One'' (Vogel 1979) economic success, coupled with the popularization of the image of the inscrutable Japanese salaryman. Coining the term *techno-orientalism*, David Morley and Kevin Robins (1995) have argued, ''Japan has come to exist within the Western political and cultural unconscious as a figure of danger, and it has done so because it has destabilised the neat correlation between West/East and modern/premodern'' (160). And just as international attention fed back into a revitalized Japanese nationalism in the 1980s (Yoshino 1999), mobile businesses have become a source of national pride even in the face of the post-bubble recession and failing political system since the 1990s (see chapter 1). Marilyn Ivy (1995, 8) describes a ''coincident modernity'' of Japan and the West that has led to an image of Japan as composed of a core of tradition surrounded by protean outer trappings of modernity.

Despite the ascendancy of the vision (and fears) of a Japonesque mobile future for the world, there are reasons to question an eventual global technology upgrade to the latest and greatest Japanese version. The United States, the supposed vanguard of the information society, has been stubbornly resistant to the allures of mobile messaging, and NTT DoCoMo's exported i-mode model has been facing challenges in Europe. Perhaps most significant are countries outside the high-tech Euro–American–East Asian axis, particularly those using wireless to leapfrog from a struggling land line infrastructure into the information age. Famously armed with cheap prepaid phones, the mobilization of the Filipino ''Generation Text'' against Estrada demonstrates the explosive alchemies of a newly informatted generation mixed with repressed political tensions (Rheingold 2002; Agar 2003). In her ethnographic survey of international mobile phone use, Sadie Plant (2002, 75) writes about how wireless telephony is being introduced to villages previously lacking land lines in places such as Swaziland, Somalia, and Bangladesh.

Hsain Ilahiane (2004) has found that among Moroccan urban poor who make their living with freelance service work, mobile telephony has become a means to organize a newly networked work life, often resulting in income increases of over 200 percent. In this context, mobile phones are as indispensable as they are for Japanese teens, but with striking differences in how and to what effect the phones are used. The features and services valued by these Moroccan users also differ from those used most frequently by Japanese *keitai* aficionados. There, voice telephony is the dominant modality rather than text, which is the central modality for heavy mobile phone users in

Japan and many other settings. These stories provide an important counterbalance to the weighting of international attention toward Japanese mobile culture. While this book contributes to this weighting, it also aims toward a certain parochialization and grounding of the Japanese case. The development of *keitai* uses and cultures is a complex alchemy of technological, social, cultural, economic, and historical factors that make wholesale transplantation difficult.

Following the lead of prior international studies of mobile phone usage (Agar 2003; Katz and Aakhus 2002; Plant 2002; Rheingold 2002), this book seeks to examine the social and cultural diversity in mobile phone use. Our strategy, however, is to approach this issue not through a comparative or global survey of mobile phone use but rather through a multifaceted and sustained engagement with one national context. An important dimension to our approach is to draw primarily from Japanese intellectuals rather than surveying the scene from a more sweeping viewpoint. All the first authors in this book can stake some claim to being ''native'' intellectuals. Despite a vibrant business and policy literature and prolific coverage of the topic in the popular media, research literature on the social and cultural dimensions of *keitai* use in Japan has been curiously absent in the English-speaking world. Three edited volumes on social studies of mobile phones surveyed use across a wide range of national contexts, including various European countries, the United States, Korea, China, Philippines, Russia, Israel, and Bulgaria (Brown, Green, and Harper 2002; Katz 2003; Katz and Aakhus 2002), but these volumes included no research on Japan. There are only a few articles in English on Japanese mobile phone use from a social or cultural perspective (Hjorth 2003; Ono and Zavodny 2004; Holden and Tsuruki 2003). The absences are not accidental (though still striking) given barriers of language and academic practice. Although a steady stream of English social science texts are translated into Japanese, the reverse flow is relatively rare. We seize the opportunity presented by the current fascination with Japanese mobile phones to showcase native intellectual production as well as the intricacies and range of Japanese mobile cultures and social life.

Emergent Technologies, Emergent Theoretical Conversations

Current social and cultural study of mobile phone use is reminiscent of the state of the study of the Internet ten years ago. As new technical capabilities have entered popular consciousness and use, a small entrepreneurial community of researchers has been galvanized into developing methods and frameworks for studying practices supported by the new technologies. Many of the same writers and researchers have entered this new field. Much as Rheingold's book *The Virtual Community* (1993) heralded a groundswell of popular and academic interest in online social life, his *Smart Mobs* (2002) propeled popular and academic interest in mobile communications. Academic researchers have been drawing the connections between Internet and mobile communications,

juxtaposing and integrating articles in both camps through edited volumes such as *Virtual Society?* (Woolgar 2002), *Machines That Become Us* (Katz 2003), *The Internet in Everyday Life* (Wellman and Haythornthwaite 2002), and *Japanese Cybercultures* (Gottlieb and McLelland 2003). Many researchers have moved from Internet studies to mobile communications studies.

At the same time, mobile communications demand a set of engagements at various methodological and theoretical points that differ substantially from Internet study. This has meant building interdisciplinary theoretical and methodological bridges between technology, media, and communication studies as well as forging alliances across regional and national boundaries. Although we are still just beginning to define the conceptual frameworks for understanding the role of *keitai* in Japanese life, already a series of theoretical problematics are emerging that challenge frameworks from Internet and communication studies. What follows is a discussion of these theoretical problematics in relation to the chapters that form the body of this book. The framing is inflected by my own background in Internet research and positioning between Japan and the United States.

The Social and Cultural Construction of Technological Systems

As described, the intellectual and technological geopolitics of mobile media have foregrounded sociocultural diversity in a way that was not, at least initially, evident in Internet studies. Unlike the Internet, where the United States has dominated both development and adoption trends, contemporary mobile communications have been driven forward most prominently by Asian and European countries, upsetting the geopolitics of information technology advancement. This disruption of the status quo, combined with the diversity in implementation of mobile communications infrastructures, has meant that wireless technology has been seen from the start as located in specific social, cultural, and historical contexts rather than as a cross-culturally universal solution (as Internet protocols are often portrayed). Perhaps the most frequent question that I have received in relation to my work on Japanese *keitai* use has been, ''Yes, but to what degree is all this specific to Japanese culture?'' It is difficult to imagine a similar question being asked with such frequency about the Internet as an artifact of U.S. culture.

A growing cadre of researchers has been insisting that PC hardware and Internet protocols and infrastructures also rest on a set of social and cultural predispositions. For example, Jason Nolan (2004) has argued that the ''hegemony of ASCII'' systematically discriminates against certain languages. Related critiques have been mounted from the viewpoint of gender difference (Cherny and Weise 1996) and generational identity (Ito et al. 2001). Studies of Internet use outside of North America got off to a slow start, but now constitute a growing body of literature (e.g., Miller and Slater 2000; Gottlieb and McLelland 2003; Wellman and Haythornthwaite 2002; Woolgar 2002). In their

contribution to this volume, Kakuko Miyata, Jeffrey Boase, Barry Wellman, and Ken'ichi Ikeda describe the continued international variability in forms of Internet uptake despite original expectations that other countries would follow the U.S. model. In contrast to Internet research, the first collections of mobile phone studies represent a wide range of national contexts (Brown, Green, and Harper 2002; Katz 2003; Katz and Aakhus 2002). Our book exploits this international perspective. Rather than having to argue for it, we can build on the recognition that technology is not independent of social and cultural setting. Further, the Japan mobile Internet case represents a counterweight to the notion that PC-based broadband is the current apex of Internet access models; ubiquity, portability, and lightweight engagement form an alternative constellation of ''advanced'' Internet access characteristics that stand in marked contrast to complex functionality and stationary immersive engagement.

In the case of the PC Internet, differences in adoption were most often couched in terms of a digital divide, of haves and have-nots in relation to a universally desirable technological resource. By contrast, mobile media are frequently characterized as having different attractions depending on local contexts and cultures. The discourse of the digital divide has been mobilized in relation to Japanese *keitai* Internet access (see chapter 1) and is implicit in the discourse suggesting that the United States needs to catch up to Japanese *keitai* cultures. At the same time, uptake of mobile communications has tended to be viewed less as a single trajectory toward a universal good than as a heterogeneous set of pathways through diverse sociotechnical ecologies. For example, among post-industrial countries, the United States has been characterized by slow uptake of texting and mobile Internet use. This could be attributed as much to the greater presence of PCs and broadband access as to inadequate business models and technological standards. In the United States mobile phones are not universally heralded as an advance but have been questioned as a problematic technology that erodes personal space. Meanwhile, mobile messaging and Web access have been questioned as second-rate versions of their PC counterparts. The metaphor of a digital divide does not fully describe an arena that was from the start characterized by multiple deployment trajectories.

Rather than seeking to explain or transcend national differences in uptake of a technology, we take cultural, social, and technological specificity as a starting point. We critique a pervasive assumption that society and culture are irreducibly variable but technologies are universal. In this, we join ranks with various approaches to the social construction of technological systems (e.g., Bijker, Hughes, and Pinch 1993; Bijker and Law 1992; Callon 1986; Dourish 2001; Hine 2000; Suchman 1987; Wellman 1999). These approaches posit that technologies are both constructive of and constructed by historical, social, and cultural contexts, and they argue against the analytic separation of the social and technical. Although not necessarily intentionally, research agendas that survey a wide range of national contexts can have the effect of producing a

perception that we are dealing with a single technology deployed across multiple settings. James Katz and Mark Aakhus (2002, 310) state this stance in positing an "*Apparatageist*" of "perpetual contact": "*Apparatageist* can be broadly vocalized because universal features exist among all cultures regarding PCT [personal communication technologies]. . . . Regardless of culture, when people interact with their PCTs they tend to standardize infrastructure and gravitate towards consistent tastes and universal features." By contrast, our approach is that technological universality, rather than being a structural given, is a contingent production of a wide range of actors, including governments, technologists, and scholars.

The current variability in wireless deployment is not necessarily on its way to becoming standardized toward universal access but is a symptom of fundamentally heterogeneous and resilient sociotechnical formations that vary across lines such as gender, nation, class, institutional location, and age. Our narrative is not of a single technology disseminated to multiple contexts but of the heterogeneous co-constitution of technology across a transnational stage. Although we may see a transnational alliance push for the emergence of technological standards that integrate the current international patchwork of protocols and infrastructures, this does not mean a homogenizing of imagining, use, and design. Unlike the Internet, created by a relatively narrow and privileged social band (predominantly educated, white, male, North American), mobile technology owes not only its uptake but its actual form to people more on the social and cultural peripheries: Scandinavian texting teens, pager cultures of Japanese teenage girls, multitasking housewives, Filipino youth activists, mobile service workers. Clearly cross-national similiarities in the form and use of these new technologies abound. I would argue, however, that they result from similarities in structural conditions and transnational articulation rather than from a context-independent technological form. For example, the international boom in youth texting cultures stems from the similar position that youth occupy in postindustrial societies (Ito forthcoming).

Chapters 1, 2, and 3 describe the development and deployment of *keitai* in Japan as structured by particular social and cultural contexts and historical junctures. Misa Matsuda describes the cultural and intellectual history of discourse on *keitai*, beginning with the etymology of the term, and going on to trace how Japanese researchers and journalists have engaged with the topic of *keitai* and society. She follows how popular and research discourse began with a focus on business-related uses of *keitai*, shifting to a focus on youth relationships in the late nineties, to the current nationalistic celebration of Japan's lead in *keitai* technology. Tomoyuki Okada describes how *keitai* cultures developed out of the fertile ground of youth street practices and visual cultures and a history of text messaging that extended back to youth pager use in the early 1990s. Drawing from his own interviews with youth as well as historical materials, he illustrates how Japanese youth cultures pushed mobile media in the direction of personalization and multimedia functionality, presenting an alternative design paradigm that

differed from the original thrust toward networking business institutions. From the perspective of an engineer and executive at NTT DoCoMo, Kenji Kohiyama focuses on a pivotal decade in the development of Japanese mobile communication technologies between 1993 and 2002. He describes the historically contingent details of certain key junctures, particularly the competition between the pager, Personal Handyphone (PHS), and *keitai* in the mid-1990s. The details describing the emergence of cellular-based DoCoMo and the i-mode model as a national standard in the late 1990s demonstrate the local vagaries of technological implementation and concretize the contention of constructivist orientations to technology; it could have been otherwise.

Cultures and Imaginaries

Returning to Internet studies as a useful point of theoretical contrast, we again find an intriguingly different set of issues in the field of cultural analysis. Much early Internet research grew out of theoretical interests in virtual reality and cyberspace. In their review of Internet ethnography, Daniel Miller and Don Slater (2000, 4) write, ''[An] earlier generation of Internet writing ... was concerned with the Internet primarily through concepts of 'cyberspace' or 'virtuality.' These terms focused on the ways in which the new media seemed able to constitute spaces or places *apart from* the rest of social life ('real life' or offline life).'' Christine Hine (2000, 27) has a similar view of ''virtual ethnography'': ''A focus on community formation and identity play has exacerbated the tendency to see Internet spaces as self-contained cultures, as has the reliance on observable features of social organization.'' Miller and Slater (2000, 5) suggest that we start from an assumption, now well-established, ''that we need to treat Internet media as continuous with and embedded in other social spaces, that they happen within mundane social structures and relations that may transform, but that they cannot escape into a self-enclosed cyberian apartness.'' By integrating ongoing work on social networks with studies of new communication technologies, Wellman (1999) has made complementary arguments about how the Internet articulates with existing personal and communal networks.

The extroverted, out-of-doors nature of mobile communication, as well as its low-profile origins in the pedestrian technology of telephony, has meant that the online component of mobile communications has not been experienced as cut off from everyday reality, places, and social identities. Internet studies have been tracing the increasing colonization by real-life identity and politics of the hitherto ''free'' domain of the Net; *keitai* represent the opposite motion of the virtual colonizing more and more settings of everyday life. Haruhiro Kato analyzes latent themes in video productions by Japanese college students on the subject of *keitai* (see chapter 5). Narratives center on imagining of a life without *keitai*. In their comments and their productions, students portray *keitai* as a thoroughly mundane and indispensable aspect of their everyday lives. Narrative tension and drama are created simply through the imaginary force of

extracting *keitai* from their lives; very few narratives explored the possibility of alternative online identities and worlds through the medium of *keitai*.

Rather than something inherently disjunctive, *keitai* suggests a vision of the virtual seamlessly integrated with everyday settings and identities. With a broader brush, Kenichi Fujimoto surveys what he describes as a ''new cultural paradigm'' in mobile communications defined by youth street cultures (see chapter 4). He frames *keitai* as a business-oriented technology that was hijacked by popular youth consumer cultures in the late 1990s. For Fujimoto, *keitai* supports a *nagara* (while-doing-something-else) culture of kids simultaneously cohabiting online and physical worlds, and is an ''anti-ubiquitous territory machine'' (Fujimoto 2003a) that carves out spheres of personal space within the urban environment. Rather than being conceived by an elite and noncommercial technological priesthood and gradually disseminated to the masses, as was the Internet, *keitai* came of age as a mass consumer technology framed by cultures of gadget fetishism and technofashion. Unlike the immersive and often escapist idioms of Internet social life, Fujimoto suggests, *keitai* functions more as a medium of lightweight ''refreshment'' analogous to sipping a cup of coffee or taking a cigarette break. It is a street-level device packaged and mobilized in the ongoing status displays of everyday life.

Social Networks and Relationships

Studies of mobile communications lie between computer-mediated-communication studies and personal communication studies. In contrast to Internet studies, which initially focused on community online (Jones 1995; 1998; Rheingold 1993; Smith and Kollock 1998), mobile communication studies have focused on private communications and connections between intimates. Several chapters in this book suggest how, for most heavy users, *keitai* reinforces ties between close friends and families rather than communal or weaker and more dispersed social ties. In line with research findings in other countries (Grinter and Eldridge 2001; Kasesniemi 2003; Kasesniemi and Rautiainen 2002; Ling and Yttri 2002), Japanese youth send the majority of their mobile text messages to a group of three to five intimates (see chapters 6 and 12; Ito forthcoming). These findings contradict moral panics over fast and footloose *keitai* street cultures (see chapter 1). Far from *keitai* being a tool for producing indiscriminate social contact in an undisciplined public urban space, most youth use *keitai* to reinforce existing social relations fostered in the traditional institutions of school and home (Matsuda 2000a). As Richard Harper (2003, 194) found in a survey of use in the United Kingdom and Germany, ''people who knew each other before the onset of GSM [a mobile phone standard] now use the technology to call each other more often'' in a process of ''invigorating'' social relationships.

Miyata, Boase, Wellman, and Ikeda found that *keitai* use correlated with a greater volume of e-mails to people geographically and socially closer than those sent by PCs (see

chapter 7). These findings tie into conclusions that build on Wellman's theory of ''networked individualism'': the trend towards individualized over more traditionally communal and spatially defined social ties. ''The person has become the portal.'' Matsuda's description of ''selective sociality'' (see chapter 6) also notes that *keitai* users participate in a similar trend towards contact with chosen intimates at the expense of both given and serendipitous relationality. While new communication technologies offer the possibility of an expanded range of partners and means of communicating, most communication gets channeled into a narrow and highly selective set of relationships. Matsuda also locates *keitai* in an ecology of personal communication in Japan that has increasingly valued the discursive production of intimacy, particularly between family members and couples. Telephone calls and *keitai* messages become one way to create a ''full-time intimate community'' (Nakajima, Himeno, and Yoshii 1999). Further, *keitai* enables the maintenance of close friendships fostered in community institutional contexts like neighborhood play groups and middle schools even after people may have dispersed to different schools or workplaces.

These intimate circles of contact are what Ichiyo Habuchi describes as ''telecocooning,'' the production of social identities through small, insular social groups. Habuchi and Tomita contrast this more prevalent mode of relating with new forms of meeting and relationship building through *deai-kei* (encounter/dating) sites; *bell-tomo*, or *beru-tomo* (relationships fostered through pagers); and *mail-tomo*, or *meru-tomo* (relationships fostered through mobile e-mail). Habuchi provides an overview of *deai* practices among Japanese youth, analyzing the current role of *keitai* communications (see chapter 8). She focuses in particular on the new practices that emerged with pager cultures, particularly relationship building between people who never meet face-to-face. While only 7.9 percent of young people report they engage in such relationships through pagers or *keitai*, they represent a significant subcultural trend among youth who seek relationships outside traditional peer structures. Habuchi analyzes the emergence of this minority as a side effect of the growing mainstream reliance on telecocooning to define social identity. The narrowness and intimacy of peer groups produces a claustrophobic reaction in some. Tomita focuses more specifically on *deai* cultures through telecommunications and the emergence of the ''intimate stranger'' as a new and compelling kind of social relationship (see chapter 9). Reviewing the development of anonymous encounter sites in voice mail and telephone clubs of the 1980s, Tomita provides historical context to contemporary *deai* practices that flourish on both the PC and *keitai* Internet. Although consistently marginalized and denigrated by the mainstream, anonymous *deai* sites represent a variant form of *keitai*-mediated relationality that is an inseparable shadow of the more prevalent forms of *keitai* use.

Taken together, the chapters in this book suggest that *keitai* are implicated in a heterogenous set of shifts keyed to social and cultural differentiation and growing out of prior forms of practice. In other words, we see reason to be skeptical of sweeping claims

describing a shift to a new mobile society characterized by dispersed and fragmented networks rather than localized and integrated ones; or most classically, the shift from *Gemeinschaft* to *Gesellschaft* (Tonnies 1957). While we do see the strengthening of discourses and bonds of intimacy and selective relationality, the forms that these take in everyday practice are so varied that they cannot be reduced to a single model of sociability. In fact, the chapters in this book point to the resilient salience of structuring institutions such as life stage, school, workplace, and home in contextualizing and differentiating social relationships. Even among youth there are significant variants in the way social networks are created and maintained. In the ethnographic cases that compose the next part, studies of different social groups such as workers (chapter 12) and housewives (chapter 11) provide even more evidence of how stratification of cultures and practices demand different forms of communication and relationships. As Harper (2003, 187) has argued, ''The mobile age is not rendering our society into some new form; it is, rather, enabling the same social patterns that have been in existence for quite some time to evolve in small but socially significant ways.''

Practice and Place

While community studies drove early Internet ethnography, studies of mobile use in public spaces constituted the initial focus of mobile phone ethnography (Ling 2002; Murtagh 2002; Plant 2002; Weilenmann and Larsson 2001). Consistent across both of these is the tendency for ethnography to gravitate toward sites of publicly observable communal action, whether online or physically located. Studies of mobile phone use in settings such as public transportation (chapter 10) and restaurants (Ling 2002; Taylor and Harper 2003) continue to provide important insights on topics such as identity display, manners in public space, and the situational constraints on mobile phone use. At the same time, it is becoming clear that mobile communication studies need to engage with a reconfigured methodological toolkit that takes into account both public and private communications and their layering within any given setting. This means designing new observational methods to document private communication and trace practices that span physically demarcated localities. In contrast to the questionnaire and interview methods that are basic to studies of social networks and relationships, practice-based studies of mobile sociality demand a substantial revision of traditional ethnographic method and theory. The ethnographic papers in this part of the book represent a range of approaches, including diary-based study (chapter 13), shadowing of users (chapter 12), visits and interviews in domestic space (chapter 11), and observations in public places (chapter 10).

Chapter 10 takes on the issue of manners in public places, the entry point for much ethnographic work on mobile phone use. The ethnographic core of the chapter is a series of observations on public transportation, framed by ethnographic interviews regarding *keitai* manners and a survey of public discourse on the topic. The chapter

describes the evolution of the current social consensus that silent uses of *keitai* (e-mail, Web) are permissible on public transport but that voice communication is not. It also documents how this social order is instantiated at an interactional level, describing the subtle strategies for how users handle gaze and voice in disciplining and managing social transgressions. In contrast to the public social setting of the train, Dobashi (chapter 11) examines the domestic setting of the home, focusing on the practices and identity construction of the Japanese housewife in relation to *keitai*. The public transportation work is a study of *keitai* regulation and discipline; Dobashi provides a parallel case in the domestication of technology in the private sphere. He describes how *keitai* becomes integrated into the existing political and social configuration of the home and the resilient identity of the housewife. In contrast to the PC, which demands a certain amount of focused engagement, *keitai* Internet fits into housewives' need for constant ''microcoordination'' (Ling and Yttri 2002) in managing family relationships and the fragmented temporal demands of domestic work. Dobashi argues that housewives' *keitai* use provides an important counterpoint to the focus on social change and youth street cultures. Domestication demonstrates variable uptake depending on social location as well as the conservative dimensions of the new technology. Taken together, chapters 10 and 11 represent case studies in the maintenance of social orders through the regulation and domestication of new technologies.

Tamaru and Ueno's study of copier service technicians represents another counterpoint to the field's focus on youth cultures (see chapter 12). Their fieldwork involved interviews and shadowing technicians as they traveled about their service areas. Tamaru and Ueno describe how a simple mobile Internet bulletin board system transformed the service technician's experience of place and the work of social coordination by providing constant and lightweight access to information about colleagues' location and dispatching. Again, a new technology has been domesticated by a highly structured social order, but it has also enabled new forms of communication and uses of place. This study joins the ranks of a small but growing corpus of work that documents how mobile phones are part of an assemblage of technologies that constitute a distributed workplace (Brown and O'Hara 2003; Churchill and Wakeford 2002; Laurier 2002; Schwarz, Nardi, and Whittaker 1999; Sherry and Salvador 2001).

Chapter 13 rests on a notion of ''technosocial situation'' as the frame for practices that hybridize technological, social, and place-based infrastructures. For example, mobile texters have developed practices for conducting online chats that are keyed to their motion through different physical locales. Ito and Okabe relied on a diary-based method of data collection adapted from prior mobile communication studies. Chapters 12 and 13 both represent an attempt to conduct fieldwork and theorize practice and place as constructed through an interaction between physical and geographically based structures and technologically mediated remote connections. These two studies both

build on frameworks from face-to-face interaction, which have been foundational to practice-based study; we continue to attend to the details of local social orders but do not take for granted grounding in physically co-present encounters.

In contrast to Internet communication and community studies (where most work continues to focus on the online setting without taking into account the physical locale of the users), mobile communication studies are tied to a revitalized attention to locality and place. As referenced in part II, Culture and Imaginaries, the *keitai* Internet has never been imagined as a domain of ''cyberian apartness'' from everyday physical reality but has always been a site of tension and integration between the demands of face-to-face encounters and footwork and the demands of the remotely present encounter and visual attention to the handheld screen. *Keitai* users are characterized by their attention to and immersion in the physical environment and social order, even as they increasingly maintain contact with distant personal relations through an intimate portable device. The *keitai* both colonizes and adapts to the structures of existing practices and places. A crucial emergent area of inquiry is the need to theorize the layering of different forms of social and physical presence and to study interactional practices for managing simultaneous presence in multiple social situations.

The social life of *keitai* resonates with research traditions in computer science of ''pervasive'' or ''ubiquitous'' computing, which have argued for a model of computing more seamlessly integrated with a range of physical objects, locations, and architectures (Dourish 2001; Grudin 1990; McCullough 2004; Weiser 1991; Weiser and Brown 1996). In many ways, contemporary *keitai* use is an instantiation of these visions of computation as it has migrated away from the desktop and into settings of everyday life. Yet contemporary *keitai* use differs substantially from many of the visions of sensors, smart appliances, and tangible interfaces that characterize the field of ubiquitous computing. What the work in this book demonstrates is that ubiquitous computing might best be conceptualized not as a constellation of technical features but as *sociotechnical practices* of using and engaging with information technologies in an ongoing, lightweight, and pervasive way. Paul Dourish's (2001, 3) phenomenological stance is ''more concerned with interaction than with interfaces, and more concerned with computation than with computers.'' In this formulation, the features of portable, personal, and pedestrian refer not to technologies but to action and experience that can be altered and enhanced by new media technologies.

Emergent Developments

Part V of this book contains two chapters that report on new developments in the area of *keitai* use. Chapter 14 reports on the growing adoption of mobile phones by elementary and middle school children, the reasons cited for adoption, and use patterns. Chapter 15, on camera phones, is a preliminary foray into how these new devices are

beginning to be used and might be used in the future. The camera phone is tied to new visual literacies that are being articulated in relation to the pervasive presence of social connectivity.

Conclusion

This book has been organized by theoretical and disciplinary categories at the expense of highlighting interdisciplinary themes. In conclusion, I would like to use some broader strokes to invoke a more speculative picture of the patterns emerging from the interdisciplinary linkages this book represents and to bring the research discussion back to the issues surrounding Japan in the transnational arena.

One cross-cutting theme is the salience of ''the personal'' and discourses of intimacy in *keitai* communications. Decisive was the shift in the late 1990s from *keitai* primarily identified as a business tool to its identification as a tool for personal communication and play. Now, even when being used for serious work purposes, *keitai* in the workplace and in public places generally (and often negatively) invoke ''personal business.'' Even before the *keitai* Internet, voice communications created a juxtaposition between private affairs and public places, tagging the *keitai* as a narcissistic device that invaded the communal with the demands of the personal. Now, widespread mobile e-mail and other online communication tools lead to these intimate spheres' being even more pervasively present; mobile text and visual communication can colonize even communal places where telephony would be frowned upon (public transportation, classrooms, restaurants). The microcoordination between family members and the ubiquitous spaces of intimacy between young couples and peers are the most evocative of these new dimensions of always-on intimate connection. Even workplace studies have documented *keitai*'s now indispensable role in coordinating small and tightly coordinated work groups. These telecocoons and full-time intimate communities represent an expansion of the long-standing sphere of intimate relations. The papers in this book have only begun to explore the profound implications for the production of social identity, the experience of public and urban spaces, and the structuring of institutions such as households, couples, and peer groups.

This dimension of the pervasively personal is tied to an out-of-doors and low-profile vision of informational and communication networks that goes against the metaphors of indoor, immersive experience that have dominated our imaginings of virtual reality, cyberspace, and Internet social life. *Keitai*'s social value is tied to its colonization of the small and seemingly inconsequential in-between temporalities and spaces of everyday life. Whether it is the quick text reminder sent by a multitasking housewife, the service technician who wants to keep track of which team members are out to lunch, or young couples texting sweet nothings as they take the bus to school, *keitai* connectivity is a membrane between the real and virtual, here and elsewhere, rather than a portal of

high fidelity connectivity that demands full and sustained engagement. Metaphors of *keitai* engagement are as often side-by-side as they are face-to-face, as much about ambient and peripheral awareness as they are about demanding attention in the here and now.

The mostly young natives of the *keitai*-pervaded world experience social presence through pulsating movement between foreground and background awareness rather than through clearly demarcated acts of ''logging in'' or ''showing up'' to a sociotechnical space. This is a view of the mobile universe that sees remote and networked relations as a pervasive and persistent fixture of everyday life rather than something that is specifically invoked through intentional acts like making a phone call or powering up a networked PC. This is about the seamless and unremarkable integration of this ''virtual domain'' into more and more settings of everyday life, simultaneously residing both here and elsewhere as a comfortable and unremarkable social subjectivity.

The chapters in this book document *keitai*'s incorporation and domestication into a wide range of social practices and institutions. Even within Japanese society, we see *keitai* use stratified along lines of age, gender, and profession. Mobile phones are characterized by malleability in uptake, while they also serve as an articulation of a distinctive new model of communication. As we work to identify stratification factors in *keitai* use, we may find that certain social categories trump national identity as a predictor of use. Already, cross-cultural comparison of youth *keitai* use indicates that social structural location can determine uptake more than the specifics of technology deployment or business models. Youth texting cultures have caught on in a wide variety of postindustrial social contexts despite very different technological infrastructures and deployment trajectories. These types of resonances suggest how we can frame and define the study of technological systems in ways that differ from the nation-based frame that we have developed for this particular book.

As I discussed earlier, our aim with this book is not to hold up Japan as a nation that defines the mobile future for other countries, nor to suggest that Japan is irreducibly culturally other in its approach to technology. Rather, by locating Japanese *keitai* use and discourse in historical, social, and cultural contexts, our hope is, somewhat paradoxically, to move beyond national identity as the primary tag for social and cultural distinctiveness. Stressing heterogeneities *within* Japanese culture and society, the papers collected describe current *keitai* use as contingent on a wide range of social, technical, and cultural factors, some of which might be shared with certain social groups elsewhere, others of which may not be. In other words, we argue against the idea that variable technology use is an outcome of a universal technology (the mobile phone) encountering a particular national culture (Japan); both technology and culture are internally variable and distinctive. Japanese *keitai* use is not a transparent outcome of Japanese culture but emerges from a historically specific series of negotiations and contestations within and outside of Japanese society.

Notes

This chapter has benefited from comments by Barry Wellman, Justin Hall, and members of the Southern California Digital Culture Group faculty seminar.

1. I use the term *imaginary* in the sense that George Marcus (1995, 4) describes in the introduction to *Technoscientific Imaginaries*, ''a socially and culturally embedded sense of the imaginary that indeed looks to the future and future possibility through technoscientific innovation but is equally constrained by the very present conditions of scientific work.'' In other words, the term references shared imaginative projection of technological futures as grounded in everyday practices and the cultural present.