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The age of the thumb: A cultural reading of mobile technologies from Asia

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**The age of the thumb:
A cultural reading of
mobile technologies from Asia**

GENEVIEVE BELL

Introduction¹

The People's Republic of China is currently the world's largest market for cell phones. Indeed cell phones are now such a commodity, that some fashionable Chinese women wear them as jewelry, on chains around their necks. One young professional I interviewed joked that China is now in a new age, the age of the thumb [*muzhi shi dai*]. She was referring not only to the remarkable text message traffic in China—an estimated 100 million messages per day for the more than 340 million cell phone subscribers in that country—but also to the growing sense that mobile technology is ushering in a new era in Chinese history and culture, as well as a new place for China on the world technology stage. Chinese cell phone users account for slightly less than one third of the world's total number of phone users. It is not unimaginable at this point that the next big thing in cell phones might happen in

1. This chapter started as a talk at the Institute of Design's annual 'about, with, for' conference in 2002 and I am grateful for the organizers for their insistence. The text was fleshed out in discussions with Nina Wakeford, Malene Skaeved, Paul Silverstein, Victor Margolin, Nicola Green, Julian Orr, Katrina Jungnickel, Jim Mason, Joseph Jofish Kaye, Larissa Hjorth, Eric Paulos, Diane Bell, Bettina Ngwenou, Mimi Ito and Danah Boyd. The chapter has benefited from the close readings of Paul Dourish, and I am grateful for his suggestions and patience. Original research materials for this chapter were gathered and organized by Ellie Blue, Katrina Jungnickel and Joshua Rohrbach, and additional materials were shared with me by many friends, colleagues and fellow travelers and I thank them all. I also thank the various organizations within Intel that continue to support this kind of research and have found value in its results, along with my colleagues in Peoples and Practices Research and Intel Research.

China, rather than Europe or the US. In fact, one of the most popular services on phones in China right now bears witness to that potential. China Mobile—the largest of the Chinese mobile providers—is currently offering a novella in serial form on its cellular handsets. This approach is possible because of the ideographic nature of Chinese characters. Most cell phones offer text messages of somewhere between 160 to 240 spaces in length. In English and other languages with non-character based scripts, these spaces are taken up with letters; hence the need for smart abbreviations and short words. Even with these textual plays, texting in English is limited. Chinese, however, is a character based language, and as such, each of the 160 to 240 slots in a message can be filled with a character, or word. Thus a far richer messaging experience is possible, extending to novellas by installment—the cell phone becomes a literary device, in way, almost unimaginable in the West.

The Asian cell phone market has seen rapid and remarkable growth in the late 1990s and early twenty-first century, defying analysts' expectations. Indeed, it is the case that in many Asian countries, most recently India, the number of cell phones in circulation has eclipsed the number of domestic landlines, and the rate of adoption of cellular technology far outpaces fixed line deployment. In fact, in Singapore, there are more cell phones than citizens. These rapid rates of adoption also reflect an interesting constellation of factors: existing patterns of high (albeit localized) social mobility outside of the home; strong government regulation mandating national, or pan-national standards; poor existing terrestrial telephony, high rates of urbanization and very good national cell coverage; and competitive and strategic calling plans and pricing policies. The impact of calling plans and pricing policies should not be underestimated. As of 2003, in most of India and China, consumers do not pay for incoming calls. In India in 2002, although Bombay, Bangalore and Calcutta did not charge for incoming calls, Delhi's local mobile companies do, and as a result there was a marked absence of cell phone use as compared to the other cities. Indeed, Asia, as a region, bears a stronger resemblance to Europe than the United States: there is a single standard (GSM) which means that cell phones can operate across many geographies; metered local phone calling is still the norm, though in many places consumers pay only for outgoing calls which means that phones are left switched on all the time; prepaid phone cards and calling plans are typical; text messaging (SMS) is extremely popular; and phones are common across most age groups. But there is more going on that this set of facts and figures might suggest.

For the last three years, I have been running a research project to critically interrogate the ways in which cultural practices are shaping people's relationships to new information and communication technol-

ogies (ICTs) in urban Asia.² This project was shaped by the work of George Marcus, and his theoretical interventions: “This mode of constructing the multi-sited space of research involves tracing the circulation through different contexts of a manifestly material object of study (at least as initially conceived), such as commodities, gifts, money, works of art and intellectual property” (Marcus 1998: 91). It also owes much to the contemporary literature on consumption, consumer and material culture, in particular the work of Appaduri (1988; 2001) and Miller (2001). The multi-sited ethnographic research followed information and communication technologies through seven different sites of production, consumption and resistance, encompassing urban life in India, China, Malaysia, Singapore, Korea, Indonesia and Australia.³ In the one hundred households I visited from 2002 to 2003, I relied on a range of ethnographic methods, including participant observation, semi-structured interviews, ‘deep hanging-out’, and genealogies of ICTs.

Throughout this research, I was repeatedly struck by the ways in which people were appropriating cell phones, inscribing local cultural practices, solving local problems, and re-charting social relationships fractured by colonial and post-colonial geographic separations.⁴ These appropriations and usages provide some useful interruptions to our assumptions about technology in emerging markets, and as such, are worth rehearsing here. There has been a lot of good work focusing on usage models of cell phones in particular (mostly Western) geographies (Brown et al. 2001; Crabtree et al. 2003; Ling 2004; Taylor and Harper 2002) and some good surveys across multiple locations (Katz and Aakhus 2002; Berry et al. 2003; Harper 2005), here I am interested in documenting some broader cross-cultural understandings of cellular technology, and in so doing, suggest a different vantage from which to consider mobile phones. I am particularly interested in the ways in which cell phones are being deployed, consumed, regulated, rejected, and naturalized in urban Asia.

2. I am grateful here for the assistance of Debashis Chaudhuri, Adam Yuet Chau, Eunyun Park and Katrina Jungnickel throughout this project.

3. These sites represented a diversity of governmental structures, geo-political and colonial histories, policies re: ICTs, family and social organization, religions and the role of women within the home. We visited 19 cities: India—Pune, Hyderabad, Chandigarh; Malaysia—KL, Ipoh, Penang; Singapore; Indonesia—Jakarta, Pekanbaru, Surabaya; PRC—Shanghai, Guangzhou, Xiamen; Korea—Seoul, Pusan, Daejeon; Australia—Newcastle, Melbourne, Adelaide.

4. Bill Maurer’s recent work on globalization also informs this examination by calling attention to the importance of such things as historical and cultural forces (including kinship relationships) on the circulations of goods (2000a; 2005).

Cultures of mobility in Asia

In America, a great deal of social activity, intimacy and affect goes on within the home. Within certain demographics, the locus of social activity is entirely domesticated. However, outside of the US, there is a great deal more slippage between the notion of social activity and the appropriate site that such an activity might take place. There are range of sites through which people transit and linger and a variety of ways by which such sites are connected, and disconnected, from the home. This sort of social mobility can be critical to understanding the ways in which mobile devices have been adopted and used. I would argue that pre-existing patterns of social mobility outside of the home play an enormous role in the up-take of mobile devices and the uses to which such devices are put. Here I am suggesting that 'mobility' is inflected through a profoundly cultural lens—what it means to be 'mobile' (or away from home) has distinct cultural meaning. To put it another way, the construction of 'home' and 'public' and the relationships between them also impacts the adoption and use of mobile devices. Social mobility also implies a certain notion of geography, where distances can be collapsed or negotiated. Some forms of social mobility are very local, (i.e.: the *danwei* as organizing principal for Chinese workers in the 1950s-1980s); others imply wider networks and spaces (i.e.: the American 'road warrior'). Social mobility also recalls the particulars of history and geo-politics.⁵ It is into these different cultures of mobility that cell phones have been deployed, consumed and sometimes resisted.

Cell phones were present in almost every household we visited. As such, they represent an important part of the constellation of ICTs within daily life, but cell phones are a very different sort of ICT than computers. In Asia, phones are also performing multiple cultural functions; they operate within a range of cultural and symbolic registers. They are more than just technologies; they are sites of cultural production. For rather than validating the centrality of the United States as a center of innovation, technology production and consumption, a closer examination of cell phones in Asia, even in its emerging economies, suggests a very different, albeit complicated, vision. Indeed my recent experience suggests, that in many ways when it comes to technology uptake, the US is more the anomaly than the rule. Technology uptake

5. For instance, until the last ten years, most of China operated under a system of government that actively discouraged mobility beyond well-defined and heavily policed boundaries; certain sites were off-limit and social activities and social circles were prescribed. Indeed, the legacy of the *hukou* [residency papers] system is such that cell phones are the only sorts of phones some Chinese citizens can obtain.

and distributions are mapping an unexpectedly new terrain of haves and have-nots, suggesting not only new centers of innovation and demand, but also, to borrow the vernacular of the wireless industry, new 'dead zones.'

In this chapter, I want to chart some of this terrain, using particular features of this new landscape to highlight critical divergent paths for technology's adoption and use. These new paths provide remarkable perspective on the cultural work of technology—that is, to see the ways in which technology is linked to different cultural narratives and forms of material and cultural production, beyond the well rehearsed tropes of modernity, progress and even revolution. In looking across all of my research material and field sites, I have been struck by some surprising similarities in the ways people imagine and actively use cell phones. In this chapter, I identify four different ways in which phones function as cultural, rather than technological objects—as objects for communication, as manifestations of information, as a form of identity politic, and as sites of anxiety and control.

We talk every day: Cell phones as a communication tool

Cell phones sometimes augment existing fixed land line infrastructure, sometimes replace them, sometimes provide access where none has existed previously, and sometimes the service providers offer new rates and pricing packages. In Indonesia, where there is still greater mosque density than tele-density, there are three times as many mobile phones as fixed lines. In China and India, there are now more cell phone subscribers than there are fixed land lines. In Australia, Korea, Singapore and Malaysia, more than 80 percent of the population owns a cell phone, meaning that almost all citizens have some form of access to one. It seems safe to say that cell phones are pervasive in middle class, urban Asian homes and as such they are embedded in daily life and culture (Ito 2004; Hjorth 2003b; Robison and Goodman 1996). In the former British colonies of India, Singapore, Malaysia and Australia, people talk about *mobile phones*—the experience of mobility is the modifier. In Singapore and Malaysia, people also talk about *hand phones*; in China, *Shouji* [hand-machine]—how the phone is carried is the relevant modifier in these contexts. In Indonesia, the label *hand phone* has been shortened to the initials *HP* and then re-interpreted through a more *Bahasa* sound to *ha-pe*. More recently, in Australia, people have started to refer to their mobile phones as *my phone*, distinguished from *my home phone*, where the home is now the differentiating modifier. The cell phone nomenclature bears striking witness to colonial histories, contemporary capitalisms, multi-national agendas and understandings of technology (and the body). But, no matter what they

are called, in the Asian homes in which I spent time cell phones most obviously functioned as communication tools, resembling in many ways their fixed line antecedents.

When reflecting on their own cell phone habits, people described remarkably similar experiences: activities such as talk, chatter, gabbing, gossip, family business, and socializing. Sunia, a new thirty-something mother in Hyderabad, was quite clear about what she did with the shared family cell phone: 'I like to keep in touch. I know exactly what everyone is doing, all the details.'⁶ She called her mother every day, sometimes more than once; she communicated with her siblings and cousins and kept up with her friends from high school, university and work. She joked with me that she could spend hours on the phone every day and frequently did. For other men and women, it was less about needing to know everything about everyone than it was about this notion of 'staying in touch' or 'keeping in touch.' I think it is safe to say that much of this represents a form of light weight social interaction or what Proitz (2005), in her richly detailed accounts of young Norwegian romance via cell phones, calls 'intimate discourse'—a kind of intermediated togetherness where the social-ness of the interaction was more important than the time that it took.

Organizing co-presence appears to be another function of cell phones. Various described as micro-location work or the last fifty meter problem (Ling 2004), cell phones in Europe and the US are often used to co-ordinate the finer points of physical interactions. In Asia it appears to be no different. Angeline is a member of a large extended Chinese family in Penang, Malaysia. In her early 30s, she has a five year old son who is tended by his mother's mother and his mother's father's mother at the family's terrace (or link) home. Angeline uses her phone to co-ordinate day care as well as family time. She recalls with rueful laughter that the cell phone has changed the way her family gets around: 'Sometimes when we are all in the mall, I am on the first floor, and my mother is on the 4th floor. And she calls to say, where are you? Ten years ago we would have gone looking for each other but now we just call.' In other households, people told similar stories and recalled similar strategies for managing family and social interactions beyond the home. In Korea, this has been taken one step further. Mr. Lee is forty nine years old; he is married with two teenage kids. When I visited his family in their remodeled flat in Pusan in 2003, he had recently enabled location tracking functions on his daughter's cell

6. Households have been compensated for their participation, and have been guaranteed privacy. Thus throughout this chapter material drawn from interviews and household visits is disguised through pseudonyms.

phone—he remarked, ‘I know where my daughter is within a radius of 500 meters. I bought her a phone because she was back later and I was concerned with her safety.’

Mr. Lee is also not alone in his decision to purchase a cell phone for his teenage daughter. Children entering high school, or a time-consuming after-school academic academy, often prompted parents that I interviewed to acquire cell phones. Parents talked a lot about ensuring their children’s safety, and providing a communication channel in the case of emergencies. Richard and Jasmine, parents of teenage kids in Penang, recalling buying a cell phone for their two kids; ‘we got it more for security than anything. It was for the kids, so that we can find them,’ they say. Parents also acquired phones for themselves so that their kids could track them down. As one Indian father of teenage boys put it to me, ‘technology has developed in this house because of my wife’s insistence.’ His wife says that ‘I have a mobile phone for my son only. He is supposed to call me when he gets home, because I am still at work. I worry about him.’ Not only are parents acquiring phones for themselves and their children for safety and security reasons, this same logic is applied to the purchase of cell phones for aging relatives. ‘My daughter bought me my first cell phone five years ago, we talk on it every day, but mostly I do all the phoning, because she is too busy. She says to me, I am too busy. What is it? What is it?’, recounts another Penang resident, a retired sales woman in her early 60s. Apparently it is possible to have a phone but not always have the desire to use it.

People also used cell phones for business and work-related activities. In some households I visited, particularly in Indonesia, it was standard practice to maintain two cell phones—one for work, the other for home and social life. This seems to hint at a strong demarcation between public and private lives. In other cases, dual phones were maintained for domestic and international travel—one aid worker we spoke to had three hand-sets and four SIM cards to accommodate a travel schedule that included Australia, the United States, Afghanistan and parts of Europe. For the most part, however, it was more likely that people blended domestic and business lives. For some this led to inevitable tensions—a journalist who claims that the stories follow him home. Others have developed strategies for maintaining some barriers. One forty-something Australian consultant we interviewed talked about assigning his wife and co-parent of his three young children a distinctive ringtone: ‘For Ginny, there is a certain ring tone and I can pick it up immediately. As soon as it sounds—bingo—I know it is Ginny. The only time I take a call in meetings is Ginny [...] I only answer it for her.’

Most Koreans we interviewed used a similar, albeit elaborated, strategy, applying it to all the contacts in their address books. In Pusan in 2003, Mr. Lee told us that he relied on his cell phone for everything. At that time he estimated that he had more than 500 entries in his

phone's address book. This prodigious number of entries (one of the highest we encountered in any Asian country) was organized into eight folders—family, business clients, business support, company, friends, relatives, *dong a ris* [semi-official circles of friends or shared communities] and his bowling club. Each folder was assigned its own ringtone. Younger people in Korea use similar methods to organize and regulate their social contacts: Sun-Hye also lives in Pusan, with her parents and older sister. At twenty, she is still at university and has a busy social life. She described her phone: 'currently I have five different bell tones for five designated groups; family, girls, boys, *dong a ris* and junior/senior classmates.' All of these organizational methods owe some of their structure to the nature of the Korean language and its use of formal and informal predicates and pronouns. In order to avoid giving offense, one uses formal pronouns for those more senior to you (by rank, age, birth order, career, or university graduation)—cell phones help in that process, by making sure that you always know who is calling and how to respond. Communication here is not just about the exchange of words, but of the right form of those words.⁷

The high density of cell phone users in many Asian cities, and in some Asian countries (including Singapore, Australia and Korea with adoption rates over 85 percent), has created the possibilities of cellular platforms providing more than just a means of communication. In addition to this function as a communication tool, resembling in many ways their fixed line cousins, cell phones also seemed to function as a site for, and a source of, situationally relevant information production and consumption—that is the use of text messaging or SMS, and the various forms of media or information enhanced messaging (MMS). Unlike the United States where SMS has yet to see real adoption, almost all of the Asian countries I visited have remarkably high SMS traffic. In Singapore, there are an estimated 75 million messages sent a month from 4.3 million phones; in Korea, it is estimated that more than 100 million messages are sent per day, from 12 million cell phones.

In most of the households I visited, personal SMS was a regular part of people's daily usage of their phones—rates, contents and contexts varied considerably by age, occupation, life stage and gender. This fact is clearly recognized by service providers. One of Australia's leading providers advertises 'SMS your mates for FREE, 9pm to midnight', while Malaysia-based Maxis offers prizes and glory for speeding texting. In China, where texting is a complicated matter of negotiating a QWERTY keyboard phone-pad input through *pinyin* to Mandarin, SMS

7. Kim (2002) describes Korean cell phone practices as reflecting hierarchical authoritarianism (2002: 68), crony collectivism (2002: 69), personalism (*ibid*) and "appointment reciprocity" (2002: 71). This produces a constellation in which social interaction is incredibly important and is a measure of one's social network.

traffic is always high. Chinese consumers are using SMS to communicate all manner of information outside formal channels; it is probably not surprising then that the Chinese government recently announced that they were monitoring all SMS traffic in China. As one young Shanghai entrepreneur put it to me, 'my friends send me garbage messages, jokes, proverbs, silly sayings. The hottest topic is sex, because we cannot talk openly about it. Second to sex is politics.' He and his friends have many such messages saved on their phones (Taylor and Harper 2002). I am shown some: 'Christmas is arriving, so the Shanghai municipal government is cleaning up the streets and they have decided to get rid of ugly retarded men like you, so go hide. Don't tell anyone I told you.' Or, 'What's happiness? Happiness is a thankful heart, a healthy body, a good job, someone who loves you, a group of friends you can trust. When you get this, you will have everything.' Or, 'Good friends are like underwear; even if you fall very badly and rise spectacularly, it will always wrap around you. Very good friends are like condoms, always thinking of your safety. Best friends are like Viagra when you cannot find your strength to raise your head, they will help. Happy New Year.' The richness of these messages, irregardless of the value of their content, again points to the remarkable ways in which Mandarin lends itself to the SMS domain like no other language. Many of China's largest portals offer web to phone services, allowing you to input messages on a larger keyboard and send them to a phone, or giving you pre-entered messages to circulate and share.

In China, it might be all about contraband content, but in Singapore and Malaysia, at least when it comes to SMS, it is sometimes just about speed. Both countries regularly host speed SMS championships and a Singaporean woman recently took the crown for the fastest text messenger in the world, entering 26 words in 43.24 seconds. While this kind of record breaking speed was not something that most people I spoke with aspired to, they certainly did talk about the comparative ease of SMS as a way of sharing information. Denny, a Surabaya business man in his early 30s remarked that his wife used SMS when she wants to avoid confrontations: 'She uses SMS if she doesn't want to shout at me. So rather than calling and asking when I will come home, she sends SMS saying, "I am hungry, bring me food."' Ratnasari, a mother of five young children who lives with her husband in a suburb on the outskirts of Kuala Lumpur offers a slightly different take. An IT professional in her mid-thirties, she has a busy life, between full time employment and all the obligations of her children's education. She relies on her mobile phone to co-ordinate child-care with her mother who lives next door, Koran lessons, after school activities and meals, as well as to take care of various professional obligations. 'We use SMS, we don't play with it. The thing about SMS is that if you cannot call them, especially at night, you can send a message. And it is so much

cheaper than calling. You don't have to talk longer, you just send a message.' By contrast, Phil and Susan, a recently married Australian couple talked about using SMS to rally members of the Church group — 'we used SMS to contact people. It is very immediate because you can do it on a Saturday night, and catch people's attention.' That SMS can both grab attention ('Come to church in the morning') and be low band width ('I have sent the presentation') speak to the wide range of ways in which the mobile platform itself is integrated into people's lives—cell phones are pagers, notice boards, answering machines, fridge front doors, and bedside tables.

There are also barriers to adoption of SMS and these came up frequently too. In her early 20s, Gloria lives and works as a secretary in Xiamen. She is a heavy cell phone user, by her own account, but really does not like SMS. She says, 'Mostly I just call. I am too lazy for short messages. I don't like to send messages because I think you can spend too much time putting in one letter. My thumbs move too slowly.' I heard this refrain over and over again in China, in particular, but the issue of access to SMS was also one for older people, where arthritis made the size of the keypad difficult to manage, or the font and screen size were hard to manage for those with fading eye sight or bi-focals. The mother of a Korean teenager tells me that she perseveres with SMS, despite the difficulties, for her son: 'I have to do this so that my son will not think that I am uncool. He gets so excited and boasts to his friends when he gets a text message from me. I guess not many mothers can do it.'

Wickets while you wait: Cell phones are for information

The use of the mobile phone as an information platform does owe much to the rapid uptake of personal SMS and many of the early services and applications offered rely on that format, or things that evoke that format.⁸ Information services send stock, weather and sport updates. Sports information is a good example—both information push and pull models exist. Some information push models consist of simple text notifications, others are more sophisticated. One Australian mobile carrier offers cricket updates—*Wickets while you wait*—as a streaming video service on its 3G platform. In Malaysia during the 2002 soccer World Cup when consumers were encouraged to use their cell phones

8. Various Malaysian political parties used SMS to rally voters during the 2004 election cycle, sending out more than 50,000 messages daily to party faithful. Not much against a backdrop of more than eight billion messages sent per month in Malaysia, but perhaps a harbinger of an interesting trend and certainly a sharp contrast from the last big information push.

to obtain up-to-the-minute soccer scores by accessing proto-internet services. For many of the people we interviewed this was their first attempt to use their phone to get up-to-the-minute information and the experience was often frustrating.

For many service providers moving consumers into these new information spaces is a challenge. In Korea, for a nominal fee, you can get SMS notifications of all credit card charges allowing for immediate verification of the charges. One young career woman in Seoul uses her phone as an extension of her wallet—paying for coffee in cafes, donating money to charities, and paying for things on the web. She says, by way of explanation, 'I am a communication freak. I feel nervous when I don't have access to a phone and email. I have been like this ever since I was a little girl.' JungEyn is not the only one using her phone for a wider and wider range of information practices. The mobile nature of cell phones creates the new opportunities for location-based services—everyone in Singapore jokes about the impossibility of hailing a taxi without a cell phone. Standing on Orchard Road one night in a sudden tropical down pour, I discovered just how true this was. Most public locations in Singapore now have some kind of code which you send in a SMS message to a taxi company who dispatches a taxi to your location—simple, but effective. Airports seem to be a favorite cellular enhanced location in Asia. Singapore's Changai International Airport provides interactive gaming stations for SMS users, cell phone and laptop recharging stations and real time flight information updates if you notify the airport you are present through an SMS message. Sydney's Kingsford Smith Airport responds to text requests for flight arrival and departure information.

Perhaps one of the most provocative information services provided on cell phones can be found in Malaysia. Maxis, Malaysia's largest provider, which offers a range of services targeted to different demographics. For Malaysia's substantial Muslim population, a cell phone can function as a *qiblah* or direction arrow pointing to Mecca. For an additional charge, you can also receive regular reminders of *salat* or prayer time customized to your location in Malaysia. This set of services is very popular in Malaysia (and indeed in other Muslim nations around the world). Information here is of a religious or ritual nature, yet is stored on a device frequently linked to ideas of modernity and progress (Bell 2004a). This tension seems less in Malaysia where the notion of a modern Muslim nation is common currency but again serves to highlight the different sorts of cultural work that cell phones are performing in Asia.

Sites of anxiety and control

Pick up any newspaper in urban Asia, and you can read a story about new technologies—many times these stories worry at great length about the negative effects of the internet, mobile phones and computers on society at large. Cell phones have been blamed for everything from the rise in divorce rates in India, to teenage suicides, political unrest and government overthrow. In 2003, cell phones were fast becoming an indispensable item for middle class urbanites living in Indonesia—whilst they represented a kind of new economy, or simply a new-found wealth, they also signaled a new vulnerability. Several people I interviewed worried about what it meant to be seen carrying a cell phone, and they had good cause. In Jakarta, the ‘Red Axe Gang’ targeted drivers stopped at red lights, talking on their cell phones. Whilst brandishing an axe menacingly, they would say ‘your hand phone, or your windshield.’ The logic here is simple: the most valuable thing in the car is the cell phone—it yields money on the black market and can be easily resold. It is also faster and cheaper to replace your cell phone than your windshield. Whilst never so well organized elsewhere, newspapers in India, China and Malaysia all reported on similar acts, one dubbing them ‘lifestyle crimes.’ As cell phones have become increasingly pervasive technologies, they have also become sites of anxiety and control, both on the part of individual users and of larger social institutions.

Over the last decade, social and governmental institutions across Asia have grappled with how to regulate cell phones, both as an industry and also as potential sites of social unrest or disruption. The Chinese government, which has maintained increasing tight control over digital media, is known to monitor all SMS traffic—a remarkable technical feat when you consider that Chinese subscribers sent more than 220 billion text messages a year, or more than half the world’s text messages. In July of 2004, the government announced new regulations that effectively allows mobile service providers to police and even filter (i.e. censor) SMS content. Although designed to control the spread of pornography and ‘fraudulent’ content, many commentators believe that this move should be read against other government policies tightening control over the spread of electronic information (Lim 2004). The Indian government has asked mobile operators and service providers to develop and deploy technology to facilitate the monitoring and interception of SMS (Shahin 2002). In Singapore, ongoing debates about how national censorship regulations and practices impact text messaging transpire against the backdrop of new services like ‘Hanky Pranky’—which offers consumers pre-recorded prank voice messages and SMS to send to their friends—and the 2001 decision by the Islamic Religious Council of Singapore (MUIS), the Sharia Court and the Registry of

Muslim Marriages that divorce via SMS was unacceptable. Although the rationale for cell phone purchases is the safety and well-being of one's children (see above), school officials in many countries have banned phones on school property as they served as a distraction to students.

Information services on mobile platforms are also subject to forms of governmental and social regulation, oversight and control. In Malaysia, the National Fatwa Council, a group of Islamic scholars appointment by the King, have recently barred Malaysia's Muslim population from participating in prize winning competitions and lotteries via SMS. Until February 2005, China Mobile and other mobile service providers have offered their customers the lunar almanac via SMS. However, in a surprise move, coming only a week before the Year of the Rooster began, the State Administration of Radio, Film and Television banned "any advertisements that harm young minds or violate regulations" through the promotion of superstition—this included 'birthday decoding', and 'new year fortune telling' text messages and phone services (The Age 2005). Shares in China Mobile and Sina took an immediate beating on the market as it became clear that much of their revenue stream was derived from these very popular and culturally grounded services.⁹

Of course, government regulation is just one dimension of the ways in which cell phones exist within cultural dynamics of anxiety and control. In Jakarta, a number of people commented on the utility of cell phones during periods of political instability to achieve personal safety. One remarkable tech-savvy sixty-something resident told me that her cell phone was vital—"it is easy access to everyone. When things happen in Jakarta, we use SMS. We say "be careful, don't go that way." We used it a lot during the "sweepings" [the riots of 1996].' Here phones kept people safe. Elsewhere phones are seen to put people in danger. In several households I visited in Malaysia, parents worried that mobile phone ownership put their children at risk of petty crime and street violence. Australian researchers recently published a study suggesting that phone ownership among young people often produces higher rates of debt (La Trobe University 2004); and over the last couple of years, Australian newspapers have carried warnings about the dangers of driving and talking, or driving and texting, comparing it unfavorably

9. According to a class-action lawsuit filed in United States District Court, Southern District of New York in February 2005, a substantial part of Sina Mobile (and presumably other mobile services providers in China) revenue stream came from 'fortune-telling' horoscopes, but this fact was not well known (Alexander O'Riordan, Individually and On Behalf of All Others Similarly Situated [Platiff] vs. Sina Corporation, Wang Yan and Charles Guowei Chao [Defendants]. Class Action Complaint, in United States District Court, Southern District of New York, February 18, 2005).

with drink driving—something that has surprising social stigma in Australia.¹⁰ In China, CDMA technology was launched in 2003 with an ad campaign that showed consumers holding bunches of grapes to their heads, as if they were a cell phone. The message was simple—our technology is clean, green and good for you—concerns about the negative health impacts of cell phone technology clearly resonates here. In southern China, I encountered young people having their cell phones blessed in Buddhist temples in part to neutralize any negativity the object might exude—here health and well-being take on a broader set of meanings.

In the pages of the popular press in India, debates have waged for several years now about the ways in which mobile phones are leading to a breakdown of traditional courtship patterns.¹¹ Late in 2002, the cover of *India Today*, one of India's largest circulating news magazines, proclaimed that it was "Love in the time of SMS", suggesting among other things that SMS stood for "some more sex" and that cell phones were the new Viagra (Vasudev 2002). Interestingly in this piece and several following pieces, much was made of the fact that women, in particular, were taking advantage of this medium to explore their sexuality, thwart their family's plans, or circumvent their husband's control (Shahin 2002)—here the anxiety seems to be about female sexuality. Of course, these articles also raise issue about phone etiquette—about when it is appropriate to text or not. Larger questions about phone etiquette still seem in flux. Some spaces in urban Asia have tried to put themselves off limits to cell phones—several churches in Seoul have installed cell site dampeners to discourage parishioners from using their phones during services. In China and India, sending text messages on important ritual holidays like *Chinese New Year* or *Diwali* is prevalent but still viewed as somewhat less caring than calling or sending cards.

Thinking of sons: Phones say something about who we are

Mr. Woo's clam shell phone is decorated with a wooden dangle, hanging on a black thread. On the coffee table, his wife's phone has a matching ornament. In Korean, her reads, 'Mother, I love you', his

10. Drunk dialing is apparently sufficiently prevalent in Australia that at least one mobile service provider offers a phone lock to preclude phone calls within a particular time window.

11. Researchers have explored the link between new technologies and sex and sexuality in a number of Asian countries (Berry et al. 2003; Ellwood-Clayton 2003; 2005).

'Father, I love you.' They were gifts to the phone's owners from their teenage daughter before she went away on a long school trip. In addition to their more obvious cultural functions as communication and information tools, cell phones also say something about who their owners are. Cell phones operate as forms of intimate computing (Bell 2004b)—they are carried close to our bodies, are embedded into our daily lives, become an extension of ourselves and our personalities, our social relationships and larger cultural contexts. There are lots of ways to customize phones: dangles, ringtones, covers, buttons, lanyards, face plates, services, carry cases, numbers.

At its most basic level, consumers can augment their cell phones with a range of charms, amulets and kitsch that hang from a small eyelet frequently located near the top of the phone case. Some of these charms have deep seated cultural resonances—*bok* pouches and golden pigs in Korea, zodiac animals and jade in China (Hjorth 2003a). The next level of after-market addition comes with new face plates. There is an astonishing cottage industry of face plates, with everything from fashion labels, brand names, sports franchises, actors, musicians, icons and cartoon characters available in face plate sized incarnations. In the Coex Mall in Seoul, this kind of customization is taken one step further with stalls offering custom illustrations painted onto your phone while you wait. In a mall in a small Malaysian city, on a floor mostly dedicated to selling technology, I came across a shop front selling all manner of face plates: Disney charters, Britney Spears, Manchester United, colorful dragons. Hanging next to Winnie-the-Pooh were two face plates. One bore the face of Osama bin-Laden surrounded by the kind of halo one associates with older paintings of saints. On it, in yellow plastic Arabic script is the phrase, 'Give me your sons and I will make them martyrs.' Hanging right next to this, in a matching pink Hello Kitty wrapper, was a face plate depicting the first plane crashing into the World Trade Center buildings in New York—this face plate bore the date stamp of 11 September 2001. These are shocking artifacts but speak powerfully about the ways in which cell phones and their decorative function as a kind of extended body politic.

Phones can also manifest all forms of familial and social relationships, as well as aspirations. In Korea, there seems to be a well developed set of practices of setting screen IDs, wall paper and messages to appear when phones are first opened or switched on. One Pusan teenager translated her screen ID as 'this is not a commoner's phone, please close the phone and go away.' The words floated over a cartoon empress fanning herself. Another older boy in the same city had hacked his parents' phones so that their screens displayed a photo of him and his older brother with the words 'thinking of sons' written over it. Yet another young girl, this time in Daejeon, sharing a cell phone with her mother, had set the screen to read 'please God, let me be top of the

school.’ These quite private messages are a revelation; teenagers are using cell phones to express their own identities but also to re-inscribe their relationships with their parents.

Although the dominant model of cell phone ownership seems to be at an individual level. It was also the case amongst many of the households that we visited that people shared cell phones—they were jointly used by parents and children, siblings, spouses, members of an extended household. These models of ‘ownership’ clearly violate some Western expectations about privacy, but they map onto extant cultural patterns around sharing and notions of social solidarity beyond the individual (Bell 2004b). In Malaysia, where phones are banned in school, it was quite common for teenagers to share phones with one or both of their parents. Benazir, a Malaysian teenager, shares a phone with her mother—she has it on weekends, and always carries it with her after school classes so that her family can track her down, but her mother uses it the rest of the time to arrange her own complex social life and the phone rings for both regularly. Again, this constitution of phone ownership speaks to larger social relationships and cultural practices.

In more than one household, choices about new phone purchases were driven by pragmatic concerns, like the brands of existing phones in the household—strategic purchase decisions make it possible to share parts, and batteries. Disposal of older phones represents an interesting set of social practices: older phones moved from husbands to wives, children to aging parents, or parents to younger children. Older phones also circulated outside of the home. In Indonesia, those living in Jakarta will send their aging phones to relatives in the outlying islands and smaller cities; in India, where second-hand cell phones have been a dominant part of the market, available handsets have often had prior lives in Hong Kong, Taiwan, and Singapore. It was also not uncommon for people to sell or trade-in cell phones and it was almost unheard of to throw one out, though many were damaged beyond repair in the comings and goings of daily life. Still this circulation and re-circulation of technology echoes older social, kin, political and geographic relationships (Maurer 2000b).

For many older people I interviewed, phones also said something about their age and relative abilities. In Korea, several men and women in their 60s, 70s and 80s described a rich and complicated pattern of cell phone usage for socializing, keeping in touch with family and friends, business contacts and university contacts. Unlike other age contemporaries I interviewed in Australia, China and Indonesia, the Korean seniors not only made and received calls, but also relied on SMS as a form of communication.¹² This was possible because there

12. At least one household in Australia also reported being unable to text message because of arthritis.

was a widely available hack that allowed consumers to increase the font size on their cell phone screens, empowering those with bi-focals or other eye-sight impediments to read the screen. Seemingly, this incredibly simple little detail—an unreadable small font—keeps the full functionality of cell phones out of the hands of many users. In China, knowledge of *pinyin*—the Romanized version of Mandarin and principle input method for cell phones—is also restricted to younger Chinese.

Phone form factors and after-market customizations are not the only ways in which phones are personalized, or linked to very particular sorts of identities and identity politics. When purchasing my own cell phone in Shanghai in 2003, I was told by the sales assistant that there were no phones in the store; it was a very Monty Python moment, because to my naive eye, the store seemed full of phones. As it quickly became clear, however, the problem was less the availability of phones, than the availability of a phone number that I could give others and that others would call. In China, and the Chinese Diaspora, where numbers are read as symbols with varying degrees of auspicious or inauspiciousness, phone numbers taken on new significance—not only are some numbers more auspicious (or lucky) than others, but certain sequences of numbers sound like auspicious phrases in Mandarin or Cantonese. The word ‘8’ is particular lucky as it resembles the word, in both Mandarin and Cantonese for ‘getting rich’, though groups of the number ‘3’ are also lucky.¹³ The word ‘4’, by stark contrast sounds very similar to ‘death’ in Mandarin. Number sequences too have alternate readings—‘168’ in Mandarin sounds like ‘a road to prosperity.’ Not surprisingly then, cell phone vendors display their available numbers outside their stores, and many consumers make decisions about cell phone purchases based on the phone number as much as the brand of handset. In Beijing in November of 2004, a man paid US\$215,000 for the ultimate in lucky cell phone numbers: 133 3333 3333. In the pages of the *Strait Times*, Singapore’s major daily, it was common in 2002 (and I suspect even today), to advertise services with an eye to these numeric practices. I have a full page ad from August 2002 that reads ‘\$88—StarHub and SCV have come together—discover why it’s double happiness in any language before these offers end.’ Not only did the ad play on notions of marriage, but all the prices quoted on the page ended in eight.

13. In Sichuan province in 2003, a land-line number (8888-8888) was auctioned off for nearly US\$290,000 to a local airline. In Vietnam, where the number nine is considered luckiest, the cell phone number 098 888 8888 was auctioned off for VN\$1.91m in 2004.

So what is a cell phone?

Cell phones are obviously pieces of technology; arguably they seem to be more communication than information technologies, but they are technologies nonetheless (Abowd et al. 2005). They are also, in and of themselves, mobile objects, crossing boundaries within and beyond the home with comparative ease. They are completely open to commodification and profound personalization, and they maintain relative ease-of-use. Cell phones are also becoming ubiquitous forms of computational technology and as such are sites of interesting technical, design and social experiments (Hooker and Rabe 2000; Höök 2004). As technical platforms, they are also undergoing transformations, upgrades and feature expansions; the business models by which they are defused and the strategies by which profits are made are similarly undergoing transformations, regulations and de-regulations.

However, for as much as cell phones are pieces of technology, they are also constellations of social and cultural practice. In June 2002, Malaysian newsstands carried the latest issue of *Mobile Stuff*—a magazine geared toward Malaysia's growing population of cell phone subscribers. On the cover, two young Malay men in clothing that suggests more LA hood and less KL suburbs, hold out their cell phones to the camera beneath the banner headline "Real Men Use SMS." Six months later, billboards in Shanghai carried the image of a woman's shapely calves and ankles, bound with black patent leather ankle straps; positioned beneath one strap is her cell phone. Beyond their utility as a technology of information exchange, cell phones it appears have inserted themselves into the cultural fabric of societies across the world. Even small children prize cell phone ownership and there is a burgeoning industry for up-to-date cell phone replica toys for children. At least one Singaporean parent complained that his son had more up-to-date 'phones' than he did. Clearly, cell phones, and their various accoutrements, have become key symbolic markers and objects of fetish for the Asian 'new rich'—as such they can be read as markers of modernity, success, wealth, social standing, class and filial piety.

Of course not everyone in urban Asia has embraced cellular technology. Several Indonesian families talked about not having the 'culture of *hape*', of not being ready for it. Others talked about cell phones as prisons, or constant interruptions. In Korea, a couple in their early 30s identified themselves as 'machine idiots' by way of explanation of their failure to adopt cell phone technology. An Indian small business owner said to me, 'my mobile phone makes me mobile, but less efficient. When we had just one phone, and no phone in the factory, and none in the office at all, I felt more efficient. I have to plan everything out well. Now I am less efficient. If I forget something, I can just call. I am the worst. I spend more money, I am always available, I

get nothing done.’ In Australia, there seemed to be interesting gendered resistances to technology, with young mothers deliberately ‘forgetting’ to take their cell phones with them to the grocery store while their partners remained at home on child-duty. The language used to describe these resistances was interesting too—one married thirty-something woman described herself as a rebel for steadfastly refusing to adopt a cell phone; another, in her early sixties, declared that cell phones were not ‘umbilical cords’ and that she could do without it.

The very nature of these resistances however, strongly reinforces the notion that cell phones are as much cultural objects as technology objects (Özcan and Koçak 2003). As one Indonesian commentator put it in the op-ed pages of *The Jakarta Post* —“They are not just objects and technology; but also a system of ideas—of family, of intimacy, emergency and work” (Yanuar 2002). In urban Asia, at least, these cell phones, rather than facilitating an idealized universal communication, actually contribute to the re-inscription of local particularity and cultural difference as dimensions of a larger political economy of value. Here I have been tracing certain circulations of an ICT across multiple Asian urban geographies, and how they disrupt globalization discourse. This chapter offers a very different set of vantage points on how technologies are naturalized, and suggests new research questions and challenges using ethnographic methodologies and theoretical vantage points.

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