Handbook of Mobile Communication Studies

edited by James E. Katz

1 | Introduction

James E. Katz

Hello, Neil and Buzz, I am talking to you by telephone from the Oval Room at the White House, and this certainly has to be the most historic telephone call ever made.

—U.S. President Richard M. Nixon to Apollo 11 astronauts Neil Armstrong and Edwin ''Buzz'' Aldrin, July 20, 1969 (White House History Association 1997)

Whether or not this ringing up of the astronauts was the most historic of telephone calls, it did set a long-distance record, and a mobile one at that. President Nixon's 1969 call to the moon capped an era of increasingly distant and mobile interpersonal communication technology and services that began in 1876 when the first voice message to be electrically transmitted occurred, which was of course Alexander Graham Bell's cry, ''Watson, come here; I need you.''

The calls of Nixon and Bell contrast to one made on April 3, 1973, which was the first public mobile telephone call ever made. On that spring day, an inebriated Martin Cooper of Motorola placed a call from a Manhattan street to Joel Engel, his relentless New Jersey–based rival at Bell Labs. Thus was opened the era of the portable cellular telephone. As Cooper recalls the story, he and Engel had been competing abrasively for years. Cooper says he would often call Engel to annoy him or just to brag. When Engel answered Cooper's call at his Bell Labs office, he had no idea that Cooper was using the occasion to show off the newly developed Motorola technology. Cooper began the conversation by crowing, ''Guess who this is, you sorry son-of-a-bitch.'' Engel— having been pestered by Cooper for many years, and not appreciating the circumstances of Cooper's call—apparently did not respond directly to Cooper. Rather Engel said (perhaps to someone else in his office), ''It's him again'' (Orenstam 2005). The call apparently was to Engel an irritating interruption.

Nixon's call was ponderous but important as a crafted effect and symbol. Bell's call was a spontaneous expression of need. Cooper's call, though, was to break some important news and, perhaps more importantly, to brag. Nixon's and Bell's calls were different from Cooper's in another way: unlike the recipients of their calls, the recipient of Cooper's call was initially unaware of the weightiness of the historic moment.

Additionally, the Cooper-Engel exchange adumbrates the countless billions of mobile phone calls to follow: misinterpretation and social competition. Moreover, it seems that during that mobile-originated call Engel was having to juggle his interaction with the caller and a physically co-present colleague.

All three archetypical calls—which among them have served to convey important information, act as public symbols, seek assistance, and engage in piquant competition—are themes commonly found in the chapters presented in this volume. More specifically, the book's aim is to present a collection of analyses of the mosaic of mobile personal communication, and most especially the mobile phone. It provides telescopic and microscopic views of phenomena that are transforming the structure of global organization as surely as the intimacy of ordinary life. Authors seek to understand how mobile communication reconstructs the organization and content of daily life in a variety of contexts. In doing so, the contributors reveal a range from critical to quotidian, and from humdrum to surprising instances of communication.

Many of their efforts yield intriguing points of comparison with the three kinds of telephone calls sketched at the chapter's outset. As was the case with President Nixon's call to fully mobilized astronauts, some chapters highlight astonishing and amazing qualities of new mobile communication. Other chapters are aligned more closely with the unanticipated interaction and social dependency emblematic of Mr. Bell's urgent cry for help. His was a spontaneous cry seeking intervention by a distant party (in this case only slightly distant, but sufficiently so as to make the cry historic). Yet other chapters hone in on the type of call that was prototyped by the call of Cooper's mobile phone call to Bell Labs's Engel. Mr. Cooper's call was one of social competition; it carried news phrased in banal terms but was in fact of transcendent importance. Billions of calls daily, historic or not, are now integral parts of the never-ending struggle through which people communicate their thoughts and interact with other people, and even with machines.

This handbook aims to convey in manageable form recent thinking and research on the social aspects of mobile communication. No handbook—especially one that addresses a subject as vast as the way three billion or so people use an endlessly flexible technology—can include all related topics. Neither can those that are included be necessarily dealt with to the depth that one might wish. These are the cruel realities that face any editor, and must be resolved in a way that cannot always be to everyone's satisfaction.

My choice of topics has been guided by the overarching idea that mobile communication has become mainstream even while it remains a subject of fascination in usage configurations and social consequences. As such, the handbook aims at examining the way mobile communication is fitting into and altering social processes in many places around the globe and at many levels within society. In essence, then, it presents a series of analyses of how the reality of being mobile and in communication with distant

information and personal resources affects daily life. Of course, with more than a third of all humans in the world operating under such conditions, it is hard to make precise claims that are at once manifestly universal and useful. Yet, as the chapters in this volume demonstrate, there are some remarkably consistent changes in personal routines and social organization as a result of literally putting mobile communication resources into the hands of people.

The contributors show how mobile communication profoundly affects the tempo, structure, and process of daily life. Topics discussed include

- who is integrated into mobile communication networks and why.
- how social networks are created and sustained by mobile communication.
- how mobile communication fits into an array of communication strategies including the Internet and face-to-face.
- the way traditional forms of social organization are circumvented or reinvented to suit the needs of the increasingly mobile user.
- how quickly miraculous technologies become ordinary and even necessary.
- how ordinary technology becomes mysterious, extraordinary, and even miraculous.
- the symbolic uses of mobile communication beyond mere content.
- the uses of mobile communication in political organizing and social protest, and in marshaling resources.

The chapters in this volume cut across vast social issues and geographic domains. They highlight both elite and mass users, utilitarian and expressive uses, and political and operational consequences. The chapters also have foci that range from individual to collective issues, and from industrialized to rapidly (or slowly) developing societies. The themes also cut across psychological, sociological, and cultural levels of analysis. At their heart, though, is an enduring theme of how mobile communication has affected the quality of life in both exotic and ordinary settings. Mobile communication is now a mainstream activity in all human activities, and is increasingly sharing if not (yet) predominating life's center stage in both intrusive and subtle ways.

The volume has four main themes, with chapters drawing out each of them. These themes are digital divides and social mobility, sociality and co-presence, politics and social change, and culture and imagination. The book concludes with a few comments by the editor and an afterword by Manuel Castells. In terms of specific coverage, it is useful to sketch here the volume's chapter contents.

1. It begins with the present chapter wherein major issues are briefly sketched, followed by substantive chapters.

2. Lara Srivastava shows on a global and comparative scale the enthusiastic embrace of the cell phone by people from all regions and strata. In terms of speed and breadth of adoption, the mobile phone is without historical parallel. Recounting the enormous worldwide success enjoyed by mobile communication, she indicates that mobile

communication has done more to overcome the digital divide than the PC, the device that had been the favored hope of international aid agencies.

3. Jonathan Donner investigates Manuel Castells's assertion that the Informational Society has brought about a ''Fourth World'' of marginalized peoples who are bypassed by information technologies and excluded from significant participation in the economic and social organization of the new millennium. Dr. Donner finds that mobile communication will narrow the gap between the Fourth World and more developed countries, but cannot in themselves close it entirely. He also considers if a new smaller digital divide will open within Fourth World villages between the ''less poor'' and ''poorest poor,'' an important issue that requires monitoring in the years ahead.

4. Ragnhild Overå describes the context of Ghana and shows how improved access to telephones, and especially mobile phones, affect daily life and economic opportunities for Ghana's traders in agricultural produce. She focuses on the way in which traders change social, economic, and spatial practices when they acquire mobile phones, and shows how some resources are increased but in a far-from-equitable way. Ms. Overå also traces gender implications of the distribution of new communication technology.

5. Pui-lam ''Patrick'' Law and Yinni Peng discuss mobile phone use among the migrant workers in southern China and how it has aided the formation of free-floating networks. The rapid and extensive penetration of mobile phones among the migrant workers in Guangdong since early 2000 has expanded contacts with their fellow villagers who have been widely scattered. Mobile phones can also for the first time extend and continue networks developed originally in the factories. With these expanded and flexible networks, migrant workers are more resourceful in getting job market information. It also helps them demand greater rights and lead more autonomous lives.

6. Judith Mariscal and Carla Marisa Bonina trace the dramatic rise of mobile phones in Mexico, partly attributable to prepaid subscription availability. While there are gender and economic status–based digital divides among subscribers in Mexico, it remains noteworthy that more than a quarter of Mexico's lowest economic segment has mobile phones. In a survey conducted for this book, the authors discovered that young women have a perceived heavy dependence on the mobile, and that young teens say they find little difference between face-to-face and mobile communication, suggesting that the traditional distinction older people have between real and virtual is being erased. The mobile is becoming a central feature for the people of Mexico.

7. Jan Chipchase points out that relative to developed markets, emerging markets have vast numbers of textually nonliterate people. Effective use of growing numbers of mobile phone features in these regions requires an understanding of textual features such as prompts, contact management, and synchronous communication. This presents the textually nonliterate with a severe challenge. Mr. Chipchase argues that resolving this challenge would benefit the nonliterate poor in developing countries, and give them unprecedented opportunities in a host of other and even novel service settings.

8. Patricia Mechael shows how despite the rapidly growing importance of mobile communication in healthcare, there are many difficult and often nuanced problems in its application. Although these obstacles are not going to stunt use, particularly in the developing world, her ethnographic report provides an important complement to the system-centered approaches that often characterize donor approaches to creating health care infrastructures.

9. Lourdes M. Portus explores how Filipino urban poor residents in a squatter community give meanings to the mobile phone and how they negotiate its acquisition and use. She finds that despite grinding poverty, the mobile phone is increasingly critical to social role fulfillment and one's self-perception; it can also reduce or exacerbate interpersonal tensions. Dr. Portus uses her focus group interviews to show that ordinary ''talk'' about the mobile phone reflects the values and socioeconomic outlook of its users and would-be users.

10. Sherry Turkle explores communication mobility and its implications for those who live in the upper strata of the advanced industrial societies. The professionals who ''phone it in'' are scrutinized from a sociological view. So too are today's teens who apparently experience Paris as an opportunity for texting rather than a romantic or political engagement. Mobile connectivity while away from home leaves little time to inquire, as perhaps both Adolph Hitler and Jacques Chirac did in their day, ''Is Paris Burning?'' She also examines the digital dustbin awaiting those who are no longer wanted in the brave new technological world. In the process of her examination, she raises important questions about the use of human beings as the opportunities grow to leave emotional work to the infinite patience of robotic pets.

11. Christian Licoppe examines ringtones as a form of social exchange. He also highlights how the choices of musical introductions are done with careful forethought of the likely effect they will have on both the individual recipient and the anticipated and potentially unwilling ambient audience. Professor Licoppe underscores the ''connected presence'' dimension of ringtones, and that although ringtones are seemingly personal statements, they are also a means of maintaining bridges with others.

12. Scott Campbell sees that the recent explosion of mobile phones and other wearable personal communication technologies (PCTs) calls for a reconceptualization of the relationship between technology and body. PCTs are now worn on the body and are clearly often regarded as part of one's personal statement or fashion. He applies a theoretical framing that Mark Aakhus and I developed, called *Apparatgeist* (Katz and Aakhus 2002), to predict accurately what relational uses of the mobile phone are linked to perceptions of PCTs as fashion, while logistical and safety/security uses are not. This suggests that theories focusing on the unique aspects of mobile communication may lead to valuable new insights.

13. Richard S. Ling examines societal cohesion and social ritual in light of increasingly mobile communication. He extends to mobile telephony the analyses originally

developed by Durkheim, Goffman, and Collins. He asks if there is something special about face-to-face interaction, for which nothing can substitute, no matter how "rich" the medium. Ling suggests that interaction can become just as fulfilling distantly as when it occurs face-to-face, and thus there are no enduring barriers to developing a seamless continuum of social interaction across media.

14. Naomi S. Baron finds that a variety of technologies—landline telephones, e-mail, instant messaging (IM), and mobile phones—are increasingly enabling users to regulate interpersonal access in terms of speech or textual acts. Using the metaphor of differentially "adjusting the volume" of individual linguistic interactions, Baron explores the social consequences of technologically empowering individuals to manage the terms of linguistic engagement.

15. Peter B. White and Naomi Rosh White look at tourists' experiences of communicating using mobile and fixed telephones in New Zealand. Drs. White and White find that tourists use the voice and texting functions of telephones to create a sense of co-presence with people from whom they are temporarily separated by long distances. Such people were eager to be seen by group members as being continuously engaged in their social groups and relationships even while acknowledging the distance separating them from those back home. There were many strategies addressing mobile communication to control the frequency and nature of contact. The findings of Drs. White and White have intriguing implications for the psychology of travel, tourism, and leisure.

16. The chapter by Kakuko Miyata, Jeffrey Boase, and Barry Wellman presents one of the first studies to collect information about social networks and e-mail use over time, in this case in Japan. Japan is particularly interesting because both mobile and PC-based telecommunication are popular there. As such, it offers a unique opportunity to map out the adoption of *keitai* (Internet-enabled mobile phones) to communicate with close friends and family. This chapter probes how it is used currently and how it appears to affect relationships, especially in terms of change over time. It examines the prospect that as the first generation of *keitai*-savvy young adults matures, they may continue to make *keitai* their primary means of electronic communication. The answer to this question raises the prospect that there will be a gradual demise of PC e-mail in Japan.

17. Howard Rheingold explores how mobile phones and SMS (short message service) technology in conjunction with Internet tools have become powerful influences on public demonstrations and elections as well as in spreading information that has been officially suppressed. Ghana and Korea are among the many countries where these mobile technologies have affected voter turnout as well as the way the elections themselves turned out. Also, Mr. Rheingold notes, these tools can be appropriated for violent protest and terrorism.

18. Ilpo Koskinen focuses on multimedia services, or MMS. In terms of this technology, he surveys their social uses including moblogs (Web sites accessible with mobile

phones), citizen journalism, and mobile mass media. Professor Koskinen argues that mobile multimedia primarily add social, sensual, and emotional elements to mobile telephony. He says that although moblogs may break the boundary of private and public content and enable citizen journalism, they will more likely just become another means of sharing private photo albums over the Internet. He believes, as does Kenneth Gergen, that mobile multimedia will lead to society being increasingly grouped into monadic clusters that turn their attention away from civil concerns.

19. Mohammad Ibahrine examines mobile communication in the Arab world, especially the way it disrupts traditional structures and methods of regulating interpersonal communication. Dr. Ibahrine discusses the production and distribution of mobile media content by the Arab masses as well as the changing patterns of social and cultural understanding and practices within a large communicative context between individuals and communities. Dr. Ibahrine also examines the sociopolitical mobilization of some segments of the ''Arab street'' via mobile hyper-coordination.

20. On-Kwok Lai discusses the ways in which location remains important in Japan despite much heralded expectations that with new telecommunication services such considerations would become minimized. Dr. Lai details how cultural, demographic, policy, and technological factors comingle to yield services of particular utility to the young and the aged in Japan.

21. Shahiraa Sahul Hameed examines mobile communication in three spheres of Singaporean life—education and youth, antisocial behaviors and security, and religion. Incidents involving the use of mobiles and text messaging have gained public attention; the widespread debate they provoke says much about the interaction between culture and technology. The incidents also make problematic certain taken-for-granted norms. Ms. Hameed finds that the mobile is an important agent of social change but also presents an opportunity to reinforce standards of conduct.

22. Kenneth J. Gergen reviews structural changes of the past half century in the character of democratic process, with special attention to the increasingly important function of mobile communication. Dr. Gergen holds that mobile communication has become increasingly important because it helps give rise to democratic participation lodged between the overarching structure of government and the local community, an area he terms *Mittelbau*. On the local level, mobile communication alters civil society by giving rise to monadic clusters, which are small groups linked in close and continuous communication. Such clusters lead on the one hand to political disengagement, and on the other to political polarization. Professor Gergen also sees that mobile communication is contributing to an erasure of the individual as the locus of political decision making (''the heart of democracy''), and opening the door to a view of democratic process as relational flow.

23. Gustavo Mesch and Ilan Talmud discuss how culture modulates the use of information and communication technologies (ICTs) among Israeli teens, contrasting those from Jewish and Arab ethnic groups. The Jewish adolescents used communication

technologies in ways that do not depart greatly from patterns in other Western societies. Their choices among cell phone, instant messaging, and e-mail depends largely on cost considerations and is made to expand and maintain social ties. Network expansion was achieved through meeting new buddies online, but with the goal of moving quickly to cell phone calls and face-to-face meetings. Contrarily, Arab adolescents used cell phones to maintain local ties when face-to-face communication is an unrealistic alternative. As well, many ties with the opposite gender were created by seeming ''mistakes''; these are kept secret and tend to remain virtual to avoid violating norms.

24. Jonathan Donner, Nimmi Rangaswamy, Molly Wright Steenson, and Carolyn Wei analyze the way mobile phone technology acts as both a change agent and a site where existing tensions in Indian middle-class families are played. It also offers a snapshot of the aspirational consumption that is characteristic of the new middle class in India. Three case studies relate mobiles to family financial decisions, romantic relationships, and domestic space. The studies show that whereas elements of autonomy and individuation do arise from mobile phone use, the adoption of mobiles as a family process more accurately describes its diffusion in middle-class India.

25. Thomas Molony discusses the mainstreamed situation in the East African country of Tanzania. He notes that the recent impression of ICTs in Africa is of countless motivated individuals using mobile phones and the Internet to pull themselves out of poverty. This view should be countered by an understanding of the ordinary adoption of mobile phones. Using data from a series of semistructured interviews conducted in Tanzania in 2005 and 2006, he concludes that there is an important informal economy of the acquisition and sale of mobiles. While potential economic benefits of ownership are valued, Dr. Molony says, to users the social networking aspects are probably of paramount importance.

26. Gerard Goggin presents an overview of cultural studies of mobile communication. He sketches some of the main research findings in this area. As part of his analysis, Goggin shows that while the early absence of cultural studies of mobile technology is slowly being rectified, there are some important topics left unexplored. He uses the balance of his chapter to identify pressing needs for research on cultural aspects of the mobile.

27. James E. Katz, Katie M. Lever, and Yi-Fan Chen discuss the mobile music phenomenon. They show how the technology is designed and used to provide a soundscape (or audio ecology) for one's life; it is important to users not only for its entertainment capabilities but also as a form of environmental control. It allows users to control interaction with others, especially those who might wish to gain ''face time'' with the technology's possessor. Style and self-expression dimensions are important in guiding acquisition behaviors and display behaviors. But perhaps the most surprising finding is that for a substantial minority of users, the technology seems to be employed to

build bridges and make social connections for potential new friends and to solidify bonds among current members of one's social circle. As sharing capabilities of the devices grow, so will users avail themselves of its bridging aspects. Formerly a technology of personal isolation, like so many others before it, the mobile as well seems destined to be expanded into a technology of conviviality.

28. Bart Barendregt and Raul Pertierra analyze the religious and supernatural aspects of mobile communication technology, primarily in Indonesia and the Philippines. Belief in the ability of mobile phones to communicate with the supernatural is widespread, and local media feature the uncanny experiences users have had with their phones. Asian phone ghost stories could be considered a metacomment on modernity itself and the mobile phone becomes one of modernity's main icons. In keeping with cultural views of technology, Pertierra and Barendregt assert that popular beliefs about the supernatural meld with people's orientations toward technology and its uses.

29. Madanmohan Rao and Mira Desai survey the mobile environment in India, one of the world's fastest-growing mobile markets. They address three sets of impacts: civic, media, and social. E-government services for citizens, as well as political mobilization and communication by citizens, is increasing, due largely to SMS functionality. Media impacts include use of mobile services such as SMS polling for TV programming and gaming, and surveys of questions on issues such as appropriate social behavior. Finally, they examine social impacts of mobiles when extended to family relations, dating, and space-time negotiation based on an original survey conducted in Mumbai. They conclude that mobiles will play a critical role in India's modernization. The discussion covers broader implications of the technology in day-to-day life.

30. Sophia Krzys Acord and James E. Katz interrogate the world of mobile-mediated gaming, comparing it with traditional games and nongaming mobility. While a large and lively area, in contrast to many other mobile applications, gaming has not grown at anywhere near the expected rate. They identify three modalities of gaming, each with varying normative consequences for social relationships, individual psychology, and public space.

31. Youn-ah Kang looks at users of an online world to compare those who have both mobile and PC-based access versus PC-based alone. Ms. Kang finds significant differences between the two groups, with the mobile users much more active and involved. Using both qualitative and quantitative methods, she believes the uses of mobile technology are leading to greater convergence of online and offline worlds. It seems that such convergence is likely to lead to greater social integration, just the opposite result of what pessimists often fear about results of the growth of communication technology.

32. In the concluding chapter, rather than providing a summary of summaries, I identify issues that I see emerging from the studies presented in this handbook, and which I believe are likely to not only remain consequential but also grow in importance.

33. The afterword by Manuel Castells presents his summative view as to the long-term and profound impact of mobile communication. His four points serve to not only highlight and recapitulate central points that may be discerned among the chapters here, but cast in clarity a long-term research agenda that may be pursued to better understand human potential as mediated through personal, powerful communication technology. Readers would be well served by attending closely to his statement.

Before turning to the specific chapters, it is useful to highlight some points that underlie analytical and case-study chapters. They are presented here to obviate repeating them in specific chapter contexts.

First, the mobile device is seldom used as an isolated technology. In the developed world, it exists in relation to technologies such as the landline phone, physical cable infrastructure, and the Internet. Even in the developing world, there are many modalities for communication, and sometimes they also interact across platforms. As shown by Dr. Ibahrine, for instance, this is the case in Lebanon (and formerly in Saudi Arabia) where one could use one's mobile to vote favorably for talent performance being shown on television. Overå shows how public payphones are used to supplement mobile phones, and Mesch and Talmud analyze the interplay and substitutability of the Internet and mobile phone.

Second, the emphasis here is on using mobiles for conventional interpersonal communication in various settings. This is but one of many possible emphases. Everywhere, the mobile is a multipurpose device, the uses of which extend far beyond voice or text messaging. It has become a music platform, calendar, watch, alarm clock, calculator, and game player. It is also a PC terminal for interacting with the Web and Internet. TV viewer, social date-finding service, game center, and medical data repository are among its popular uses. It is a portal to advertising, health monitoring, and, seemingly, the supernatural. Mobiles are environmentally interactional and useful for a host of geolocational services. There are some exciting innovative uses such as "smart mobbing," distributed mobile games, "art happenings," and "symphonies" (generally performed by the young).

This book's central purpose is to look at the ordinary life of the mass of users. It is less engaged with analyzing emerging experiments of those walking (and talking) on the wild side. So while the innovative and unusual topics mentioned above are probed to some extent, the emphasis is on everyday uses by everyday people, and what these uses mean for social organization and interpersonal communication.

Third, there are a good many people who are not mobile phone users, though each day there are many fewer of them. Some of these people desperately want mobile devices but cannot afford or otherwise obtain or use them. There are a variety of reasons for this, including accidents of geography and location as well as one's physical or fiscal condition. And it is worth pointing out, as seen for example in chapter 6 on Mex-

ico, where at any given time there may be a good number of former users or ''mobile phone dropouts.'' Most of these dropouts will be future users and they usually become dropouts because of temporary financial setbacks (Rice and Katz 2003). Yet that being recognized, it is important to point out that others directly reject the technology. This may be because they do not want to be beholden to others ringing them up at times unknown, or because of cultural or religious reasons.

Fourth, the analyses in the chapters show that sometimes there are surprising and novel uses for mobile devices, and that these uses are not readily foreseeable even though they may have dramatic consequences. Still more noteworthy, these uses are often undertaken by those who ordinarily are not associated in the public mind with innovative technology. These include religious groups and diviners, matchmakers and con artists. The perceived value and symbolism of having a mobile also extends far beyond the mobile's functional use. These perceptions may vary widely by particular subculture, too, as seen in chapter 9 by Portus on the Philippines, for instance.

Finally, this volume is not aimed at dissecting mobile communication uses in business, commercial, or professional settings. Nor does it aspire to analyze regulatory or macroeconomic policies. Finally, we do not aim to report on avant-garde experiments and imaginative one-off innovators. All of these are fascinating areas, but fall outside the scope of this book. Rather, its interest is in the social side of human life, what is known as ''studies.'' Contributors seek to understand the cultural, familial, and interpersonal consequences of mobile communication in a global context. They are exploring contextualized issues against cultural and national backdrops. They in essence pinpoint how mobile communication has become part of mainstream human existence, how major cultural and social interaction patterns are being readjusted, and what newly created structures and processes result therefrom. That is ample enough for even the most ambitious single-volume study.

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