

Cell Phone Culture

Mobile technology in everyday life

Gerard Goggin

 **Routledge**
Taylor & Francis Group
LONDON AND NEW YORK

First published 2006

by Routledge

2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

Simultaneously published in the USA and Canada

by Routledge

270 Madison Ave, New York, NY 10016

Routledge is an imprint of the Taylor & Francis Group, an informa business

© 2006 Gerard Goggin

Typeset in Perpetua by

RefineCatch Limited, Bungay, Suffolk

Printed and bound in Great Britain by

TJ International Ltd, Padstow, Cornwall

All rights reserved. No part of this book may be reprinted or reproduced or utilised in any form or by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying and recording, or in any information storage or retrieval system, without permission in writing from the publishers.

British Library Cataloguing in Publication Data

A catalogue record for this book is available from the British Library

Library of Congress Cataloging in Publication Data

Goggin, Gerard, 1964—

Cell phone culture : mobile technology in everyday life /

Gerard Goggin.

p. cm.

Includes bibliographical references and index.

ISBN 0-415-36743-3 (hardback : alk. paper)—ISBN 0-415-36744-1 (pbk. : alk. paper) 1. Information technology—Social aspects.

2. Information society. 3. Cellular telephone systems.

4. Mobile communication systems. I. Title.

HM851.G645 2006

303.48'330904—dc22

2006006442

ISBN10: 0-415-36743-3 (hbk)

ISBN10: 0-415-36744-1 (pbk)

ISBN13: 978-0-415-36743-1 (hbk)

ISBN13: 978-0-415-36744-8 (pbk)

1 Introduction: what do you mean ‘cell phone culture’?!

Since its invention in the second half of the nineteenth century, the telephone has become part of the everyday lives of billions of people around the world. By the middle of the twentieth century, talking to other people over telephone lines was a well-established way to keep in touch with friends and family, engage in social activities and organisations, and conduct business – at least in richer countries. At the opening of the twentieth-first century, the fixed telephone had been officially eclipsed – by its mobile counterpart.

Known as the cell phone, especially in the Americas, or the mobile phone, in Europe, Asia, Australasia, Africa and elsewhere, and by many other words in other languages, in roughly two and a half decades of commercial availability this technology has enjoyed a staggering rate of adoption. In 2004 there were an estimated 1,752 billion cell phone subscribers worldwide (up from approximately 91 million in 1995, and 1.158 billion in 2002): that is, 58.5 per cent of total telephone subscribers were using cell phones (ITU 2005a). As you might expect, rates of ownership and use of cell phones vary quite widely. In broad terms, the historically wealthy and powerful countries predominate. The fifty-eight countries in the world classed as low-income account for only a little over 98 million cell phone subscribers (a little over 4 per 100 subscribers). In comparison cell connections number over 775 million for fifty-four high-income countries (approximately 77 per 100 subscribers); some 606 million for fifty-three lower middle-income countries (about 25 per 100 subscribers); and roughly 276 million for thirty-eight upper middle-income countries (or 48 per 100 subscribers) (ITU 2005a).

The so-called emerging markets in Asia are seen as the new locales of the cell phone. Take, for instance, the top ten mobile operators in the world in 2004. A sign of the times was that China Mobile now ranked as the world’s biggest operator, followed in descending order by Vodafone, China Unicom, Deutsche Telekom, America Movil, France Télécom, Telefonica (Spain), NTT DoCommo (Japan), Verizon (USA), and finally TeliaSonera, the dominant, merged, Finnish and Swedish telecommunications company (ITU 2005b). Asia hosts 709 million of the world’s cell phone subscribers, compared to 573 million in Europe, 373

million in the Americas, 77 million in Africa, and only 20 million in Oceania (of which Australia and New Zealand would account for the lion's share). On 2004 figures, China, classed as a lower middle-income country, had 335 million subscribers, at a rate of a little over 25 per 100 potential subscribers. Also acclaimed for its rapidly growing cell phone market is the other current darling of the bourses, India, which has 47 million cell phone subscribers (but only a shade over 4 per 100 subscribers, and so classed as low income for these ITU statistical purposes) (ITU 2005a).

While these numbers on the distribution of cell phones reveal much variation and concentration, nonetheless it is safe to observe that in the mere two and a half decades since it was first marketed commercially, the cell phone has become much more than a device for voice calls – it has become a central cultural technology in its own right. Telecommunications has undergone a radical shift from being about voice (or fax) communications to becoming: mobile; flexible and customisable; associated with a person rather than a household (at least in some societies and situations); and a communications and services hub. Cell phones, mobile technologies, and wireless networks play an indispensable role in the everyday lives of consumers. A bewildering and proliferating range of cultural activities revolve around cell phones: staying in constant contact, text messaging, fashion, identity-construction, music, mundane daily work routines, remote parenting, interacting with television programs, watching video, surfing the Internet, meeting new people, dating, flirting, loving, bullying, mobile commerce, and locating people. Cell phones have come to be associated with qualities of mobility, portability, and customisation. They fit into new ways of being oneself (or constructing identity and belonging to a group); new ways of organising and conducting one's life; new ways of keeping in touch with friends, romantic intimates, and family; new ways of conducting business; new ways of accessing services or education.

At the same time, mobile devices are of intense economic and political interest because they are at the centre of the vast transformation in communication and media summed up by the rubric of 'convergence', or 'digital technology' or 'new media'. Cell phones are being integrated into television – in voting on programs like *Big Brother* or *Idol*, as well as picture and video downloads, as well as directly into digital broadcasting systems themselves. Wireless Internet has wide-reaching implications. Mobiles have become hybrid devices that articulate with other new technologies such as digital cameras, portable digital assistants, or location technologies. Third-generation (3G) and fourth-generation (4G) cell phones promise finally to realise ubiquitous and personal video communications.

Telephones have had something of an invisible presence in society and culture, but with the advent of cell phones the role of telecommunications has become much more central and harder to ignore. In this book, I explore the cultural dimension of cell phones and mobile telecommunication technologies generally.

Cultural treatments of telecommunications are still comparatively rare, but in the case of the cell phone such an investigation is essential. Not only have cell phones developed their own 'little' cultures of consumption and use that – though sometimes disparaged – merit and indeed require reflection; we need to grasp and debate the place of cell phones and mobile technologies in our larger cultural settings, interpreting what they signify, what people are doing with and around these devices, and what the implications of all this are for understanding culture at the most general level. Before we turn to considering how to approach cell phone culture, I would like to review briefly the main traditions of studying telecommunications in the humanities and social sciences.

Phone studies

Surprisingly, the telephone has been neglected by scholars of society and culture. Since Ithiel de Sola Pool lamented such inattention, in his pioneering 1977 collection on *The Social Impact of the Telephone* (de Sola Pool 1977), there has been some important work on the telephone from different perspectives and disciplines through the 1980s and 1990s. Leaving aside the vast number of technical and scientific studies, there has been an increasing amount of work on the economics of telecommunications as well as legal, policy, and regulatory aspects, especially with the transformations from the 1970s with new markets, forms of governance and regulation, and technological innovation. There have been important psychological and linguistic studies. The interest in the telephone and telecommunications among sociologists (and anthropologists) also grew. In the early 1990s a number of important studies of gender and telecommunications were published (Martin 1991; Moyal 1992; Rakow 1993). Studies have charted the development, history, and characteristics of the telephone and telecommunications in many countries (an exemplar being Fischer 1992). Study of the telephone and telecommunications has for some time been a respectable if speciality interest in disciplines such as communications (for instance, Katz 1999) and media studies, but little work has been undertaken by cultural theorists and scholars (one early exception being Ronel 1989).

With the liberalisation of telecommunications in the 1990s, and the growing centrality of telecommunications technologies and networks to other convergent media, social issues become of interest to policymakers internationally, with much debate and some research also. Important social and policy concepts in telecommunications had achieved acceptance with decades of monopoly delivery by unified state administrations (called PTTs, standing for posts, telegraph and telephone) around the world through the twentieth century. Taken-for-granted ideas such as universal service (or the notion that all citizens in a nation-state should have access to a telephone wherever they lived) were being challenged and transformed with the dismantling of monopolies, with privatisation of national

telecommunications carriers, with so-called deregulation and the introduction of competition in equipment manufacture and network operation. Much research was commissioned and funded by government, regulators, industry, and funding bodies to provide knowledge about the use of telecommunications, especially evolving new services, as well as to inform or intervene in fierce debates about the reforms and new telecommunications regimes.

As well as a greater appreciation of the social centrality of telecommunications to communications and everyday life, what slowly emerged too through the 1990s was a realisation that telecommunications was becoming central to questions of culture. As telecommunications networks became more complex, not least with their symbiotic relationship with the Internet and other online communications, and the use of cell phones for voice communications rapidly grew during the 1990s, the relative 'invisibility' of the telephone as both social object and a cultural technology could no longer be ignored. While there were some important inquiries into cell phones in the early to mid-1990s, especially the co-ordinated work carried out in Europe (well summarised in Haddon 2004), it was not until Kopomaa's pioneering *The City in Your Pocket* (2000), and then in 2002 the appearance in the same year of Plant's *On the Mobile* (commissioned by Motorola), Katz and Aakhus's edited collection *Perpetual Contact*, and Brown, Green, and Harper's anthology *Wireless World*, that comprehensive systematic scholarly work on the cell phone started to become available.

One of the interesting things about this work on mobiles is the comparative, cross-cultural aspirations shown. In recognition, no doubt, of the near simultaneous appearance and rapid adoption of the cell phone in many different countries, studies of the cell phone (or mobile society studies) have tended to be mindful of the national and social contexts of use. Recently, there has been a torrent of work on the cell phone pouring forth. As well as countless journal articles, there have been a number of important books, though mainly, to date, edited collections (interestingly enough), as an international epistemic community of engaged mobiles scholars has emerged. A central focus, still, has been the social dimensions of the cell phone, represented best perhaps by Rich Ling's *The Mobile Connection* (2004). There has also been keen interest in the implications of cell phones for communication (Nyíri 2003a). An abiding concern for scholars has been how the cell phone is implicated in the redrawing of boundaries between the private and the public, the subject of many discussions (in which Erving Goffman's work often reappears) but especially Ling and Pedersen's 2005 collection *Mobile Communications*. Text messaging has been a fascination in its own right, with one book-length study (Kasesniemi 2003) and two dedicated collections (Glotz and Bertschi 2005; Harper, Palen, and Taylor 2005). Important studies of the cell phone and work have emerged from different places but especially the computer-supported co-operative work tradition (see contributions to Brown, Green and Harper 2002; and Ling and Pedersen 2005 in particular). The Hungar-

ian philosopher Kristóf Nyíri has convened a series of symposia and subsequent collections on important political and social concepts and institutions, such as mobile democracy (2002), mobile learning (2003b), mobiles and place (2005). The relationships among social and cultural contexts, use and design have received some attention (for instance in a number of contributions to Harper, Palen, and Taylor 2005, Lindholm, Keinonen, and Kiljander 2003, Taylor and Harper 2003). Despite the great public concern over the psychological and linguistic aspects of mobiles, these have been two of 'several dimensions of the work on mobile telephony . . . not . . . as completely developed [as others]' (according to Ling and Pedersen, who include a section of useful studies on each of these; 2005: v). There has been significant work undertaken by anthropologists; two good examples are both concerned with text messaging, namely Bella Elwood-Clayton's 2003 and 2005 ethnographic work on SMS in the Philippines and Taylor and Harper's work on the gift and texting (Taylor and Harper 2002; Berg, Taylor, and Harper 2005).

As this selective and partial rendering of the exponentially growing literature on cell phones illustrates there is now a wealth of studies, analysis and debate in this area, though it is quite recent. Yet there is also much work to be done, and many conversations and debates to be had. My assessment of the work on cell phones is that we do have substantial discussions, if still largely fragmentary and incomplete, of how existing and new social structures, relationships, and behaviours have incorporated and been changed by cell phones. Thus far sociology has played an important role in studying cell phones. I also think there has been considerable study and debate on important aspects of communication and cell phones. There is recurrent public fascination and some scholarly work on how people communicate with cell phones, and to what extent – a recurring theme in new technologies and communicative practices – modes and patterns of communication have fundamentally shifted; or whether, in fact, the cell phone, like the Internet, has brought long-lived, fundamental aspects of human communication to the surface. It still remains very unclear – and is probably quite unlikely – that the nature of communication radically changed with the use of cell phones, and of course this is a large and philosophically testing question.

It seems to me that there are two important aspects of cell phones that merit sustained inquiry at this juncture. First, I think that *cultural* aspect of cell phones has been underexplored. While there have been quite some studies attentive to cross-cultural context, there has been little work that systematically explores local or international cell phone culture, and its implications for general accounts of culture. In particular, I think there has been a lack of recognition and analysis of how power relations and structures shape cell phone culture. Here international cultural studies have something to contribute with their historical and still current preoccupation with the inescapable constitution of culture through power. Secondly, an important way to approach inquiry into the nature of cell phone communication is to take the medium itself seriously. As Marshall McLuhan

wittily pointed out, the message cannot so simply be extricated from the medium that bears it. Intimately related to the matter of the medium – or media – are questions of culture. Communication is embedded in media, and ultimately too in the elusive yet nurturing realm of culture. To date, cell phone and mobile technologies studies may have not needed to consider the media dimension of cell phones. However, as the cell phone moves centre stage as a device criss-crossed by media flows and cultural forms and content, borrowing and cross-fertilising from audio and radio cultures, television cultures, print cultures, Internet and other new media cultures, and is increasingly regarded as a mobile medium, media studies approaches are likely to be very helpful.

About cell phone culture

In approaching cell phone culture, I begin with the ‘circuit of culture’ framework devised to theorise another mobile cultural technology, the Sony Walkman (du Gay et al. 1997). The starting point for the ‘circuit of culture’ approach is the proposition that culture is not merely reflective or expressive of other processes, as though in reductive versions of the Marxist tradition of culture being part of the superstructure of society rather than the economic base. Rather ‘culture is now regarded as being constitutive of the social world as economic or political processes’ (1997: 2). The task of understanding culture is compelling not just as an exercise in its own right, but rather as a necessary undertaking for understanding social practices and processes:

The production of social meanings is therefore a necessary precondition for the functioning of all social practices and an account of the cultural conditions of social practices must form part of the sociological explanation of how they work. Cultural description and analysis is therefore increasingly crucial to the production of sociological knowledge.

(1997: 2)

To inquire into culture in late modernity, du Gay et al. take as their case study the Sony Walkman, as a ‘typical cultural artefact and medium of modern culture’ (2). Their ‘biography’ of the Walkman seeks to take account of culture’s shaping by large, commercial, transnational enterprises. However, rather than just looking at the processes of production, the ‘circuit of culture’ model ‘analyses the biography of a cultural artefact in terms of a theoretical model based on the *articulation* of a number of distinct processes whose interaction can and does lead to variable and contingent outcomes’ (3). Following Stuart Hall’s definition, an ‘articulation’ is the

form of the connection that can make a unity of two or more different or

distinct elements, under certain conditions. It is a linkage which is not necessary, determined or absolute and essential for all time; rather it is a linkage whose conditions of existence or emergence need to be located in the contingencies of circumstance.

(Hall 1996: 3)

In seeking to explain a cultural artefact, du Gay et al. suggest, the analyst needs to study it through the five major interlinked processes they identify: representation, identity, production, consumption, and regulation: ‘Taken together, they complete a sort of circuit . . . through which any analysis of a cultural text or artefact must pass if it is to be adequately studied’ (1997: 3). As they note, such an approach has also been suggested by Richard Johnson (1986; cf. Johnson et al. 2004).

The ‘circuit of culture’ approach exemplified in the *Doing Cultural Studies* book and its accompanying volumes in the Open University series has been widely used for pedagogical purposes. The framework has also been taken up by a number of scholars to study media (Miller et al. 1998) and also new technology. In a rich paper in the *Wireless World* collection, Nicola Green invokes the ‘circuit of culture’ approach to understand the mobile. Drawing on an analysis of cell phone advertising and marketing, she considers some of the common narratives of use that have been represented. Then she attempts to contrast these with other narratives of use drawn from field-work and observation of mobile users (Green 2002). Green’s use of the ‘circuit of culture’ approach indicates its usefulness, as does its use and critical evaluation in a recent study of the Napster peer-to-peer technology (Taylor et al. 2002).

In considering the ‘circuit of culture’ approach, we might start with the similarities between the Sony Walkman and the cell phone. Foremost are the novel possibilities for mobility associated with each. For du Gay et al. the ‘Sony Walkman is not only part of our culture, it possesses a distinctive “culture” of its own. Around the Walkman there has developed a distinctive set of *meanings* and *practices*’ (10). More than this, however, the Walkman:

connects with a distinct set of *social practices* (like listening to music while travelling on the train or the underground, for example) which are specific to our culture or way of life. It is cultural because it is associated with certain *kinds of people* (young people, for example, or music-lovers); with certain *places* (the city, the open air, walking around a museum) – because it has been given or acquired a social profile or *identity*. It is also cultural because it frequently appears in and is represented within our visual languages and media of communication. Indeed, the *image* of the Sony Walkman – sleek, high-tech, function in design, miniaturized – has become a sort of metaphor which stands for or represents a distinctively late-modern, technological

culture or way of life. These meanings, practices, images and identities allow us to place, to situate, to decipher and to study the Walkman as a cultural artefact. To study the Sony Walkman 'culturally' is therefore, in part, to use it as a clue to the study of modern culture in general.

(du Gay et al. 1997: 11)

Such claims about the Walkman resonate with the cell phone too. In its turn, the cell phone has become a metaphor for a 'distinctively late-modern, technological culture or way of life' (11). And it is a metonym too, often used as a short-hand for this larger culture. It is fitting then that we study the cell phone to understand the modernities in which we are placed now.

There are resemblances between the Walkman and the cell phone, in thinking about how both are involved in the production of a cultural artefact. One of the important frames of reference for du Gay et al.'s biography of the Walkman is the cluster of meanings that gather around 'Japanese' and 'high technology' and 'modern'. An analogy could be drawn with the Sony Walkman and the Nokia cell phone. Although the US corporation Motorola played an important role in the development of the cellular cell phone in the 1930s through to the 1960s, it is the Finnish corporation Nokia that is most identified with the heyday of the 1990s and 2000s when the cell phone technology rapidly diffused and usage intensified. Nokia was a leader in designing cell phones to make them attractive and customisable. A number of meanings have become associated with Nokia such as cool design, the technical avant-garde reputation of the Nordic countries, and the technological, aesthetic and marketing savvy of a small, highly advanced European country. Nokia and its 'Finnishness' has also attracted much interest for its industrial and commercial success, in a manner reminiscent of the international discourse on Japanese companies, industrial and business culture, and technology from the 1970s onwards. Nokia fascinates business analysts because it is a case of a flagship company in a relatively small country competing worldwide.

However, while Nokia has played a leading role in cell phone culture, it is important to recognise the wider configuration of businesses, industries, communications platforms, services, and networks that have made the cell phone possible. Nokia, for instance, is a handset manufacturer, and it faces considerable competition from other handset manufacturers such as Siemens (Germany), Philips (Netherlands), Motorola (USA), Sony (Japan), Samsung (Korea), not to mention a number of newer, smaller handset developers around the world (often joint-ventures). These firms have also been responsible for many sociotechnical and technocultural innovations in cell phones. It is also important to note that mobile or cell phones are not a stand-alone technology in the way that the Walkman might appear to be. Rather, cell phones are a networked communication device. (In the same way, one of the successor technologies to the Walkman, namely the Apple iPod portable music player, is now reliant on ownership of

a computer and, in most cases, Internet access for obtaining music tracks or information about the music) (Fig. 1.1).

In this sense, telecommunications carriers and service providers have very much shaped mobile culture. There are former national telecommunications carriers, such as AT & T, British Telecom, Deutsche Telekom, or France Télécom,

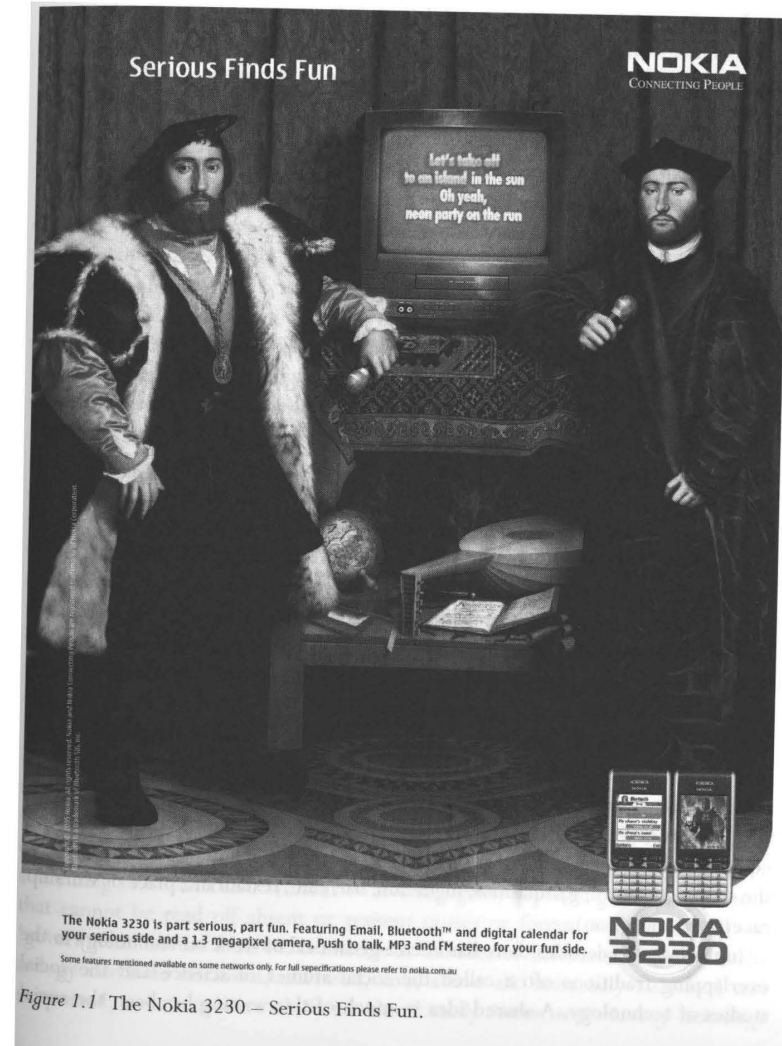


Figure 1.1 The Nokia 3230 – Serious Finds Fun.

which added mobile services to their existing telecommunications services during the 1980s. Then there are new international carriers specialising in cell phones, notably Vodafone (which rose to prominence with second-generation digital GSM cell phones), Hutchison (a pioneer in third-generation cell phones around the world), and emergent giants such as China Mobile. There are also companies which are specialising in mobile resale, or retail, such as Orange, as well as companies such as Virgin Mobile that offer other consumer services (travel and music, for instance), which now are prominent in selling mobile services in a number of countries (as a virtual mobile network operator).

Of course, the existence of the Sony Walkman too is only possible through complex corporate, technology, economic, and social networks – and the various portable music players that have now taken up its mantle (whether iPod, MP3 player, or cell phone with radio or digital music player) bear this out. However, the complexity of the commercial, technical (hardware and software), and regulatory characteristics of the cell phone are not brought together by one company, brand, or technology in the same way as the Walkman.

The cell phone as technology

The differences between the cell phone and the Walkman, and the things about the Walkman that the cell phone retroactively highlights, point to the need to draw upon another body of theory to extend and even reframe the ‘circuit of culture’ approach. To grasp cell phone culture, we need to understand not only the relationships between society and culture, as highlighted by du Gay et al., but also how these relate to another important concept, technology.

The cell phone is a technology, among the many other technologies that surround and constitute us. We often consider our society to be saturated by technologies of many sorts. Cell phones are often classed among information and communication technologies, and here we observe that, while communication has always been materially embedded and mediated, the importance of new forms of technologies is quite pronounced at the present time, as the use of the Internet, computers, and telecommunications demonstrates. Viewed from another angle, however, we might see cell phones as just one alongside many other technologies for living, whether these be commonly associated with the home (the microwave, vacuum cleaner, television, or baby monitor), transport (global positioning device, combustion or jet engine, railway track), workplace (elevator, computer, office equipment, video surveillance) or other public spaces (technologies to be found in the shopping centre, gymnasium, nightclub, bar, café, restaurant, place of worship, racetrack, and so on).

In the last two decades there has been a great deal of work on technology in the overlapping traditions often called the social studies of science and the social studies of technology. A shared idea in much of this writing has been the social

and cultural shaping, or construction, of science and technology (most famously presented in MacKenzie and Wajcman 1985 and 1999). MacKenzie and Wajcman point to the need to investigate empirically how the social shaping of technology takes place:

If the idea of the social shaping of technology has intellectual or political merit, this lies in the details: in the particular ways technology is socially shaped; in the light these throw on the nature both of ‘society’ and of ‘technology’; in the particular outcomes that result; and in the opportunities for action to improve those outcomes.

(1999: xvi)

In cultural and media studies in particular, one strand of the social studies of science tradition that has attracted considerable attention is actor-network theory. Associated most with the work of Bruno Latour, studies constellated by the rubric of actor-network theory have sought to rethink the binary opposition between machine and human. Latour, for instance, has pointed out that agency is not just exercised by human actors, it is also an attribute of the configurations of technology – and so one needs to consider the influence of non-human actors also. While actor-network theory has been critiqued, not least its account of gender and power (for instance, Wajcman 2004) for my purposes here, I want to highlight two aspects of actor-network theory.

First, actor-network theory characteristically refuses or reworks what it takes to be formulaic oppositions between technology and society, and rather directs our gaze to the manner in which both of these entities are created in tandem with each other. Just as it declines the lures of technological determinism, or the notion that technology exerts an inescapably powerful shaping force on society, so too does actor-network theory demur from the countervailing reaction that society determines technology. Neither technology nor society is taken to be pre-existing, nor is this couplet immutable, and so their mutual implication and creation, and ongoing reinvention and becoming, need to be carefully charted.

Leading on from this, secondly, actor-network theory has a strong anti- or de-essentialist tendency. It does not take a technology as a given, its history or future as stable. Instead, technology exists in networks of things, actors, actants, institutions, investments, and relationships. The fate of a technology – its ‘success’ or ‘failure’, or whether it is ‘useful’ or a ‘waste’, or a ‘white elephant’ or something one ‘can’t live without’ – is contingent, depending on many factors that cannot be read off absent or present causes or forces such as ‘capital’ or ‘government’ or the inherent brilliance of the idea or invention. Rather a technology needs to be loved, nurtured, and, above all, materially fashioned and supported, as Latour bears out in his classic study *Aramis, or the Love of Technology*

(1996). That is, to be kept alive and working, a technology needs supporters and resources, and active efforts to be made. All of which, in their turn, modify the technology.

From an actor-network approach, we need to be mindful of the multifarious, specific, and ongoing accomplishment that is the cell phone, or, indeed, the various technologies that we group under that heading. Cell phones and other mobile communications devices are a work-in-progress, comprising dynamic networks or assemblages. In appreciating the development and histories of cell phones, we will need to attend to the many people and things these devices have enlisted and to follow these actors as these technologies unfold (as I seek to do in attending to the complexity of histories of text-messaging in chapter 4).

Social studies of technology traditions, such as actor-network theory, have already been usefully brought to bear on the study of cell phones (especially in various contributions represented in Brown, Green, and Harper 2002 and Hamill and Lasen 2005). Take, for instance, Steve Woolgar's provocative and helpful meditation on the relations between theory and technology. Woolgar is keen to decry the 'schematic assumption that we are applying a given theoretical perspective to a fixed, singular and knowable entity: the technology'. Rather he draws upon science and technology studies to emphasise the '*interpretative flexibility* of technology', proposing that:

the particular form of a technology, its technical capacity and effects are historically and socially contingent. The form and capacity are not given, and, in particular, they cannot be straightforwardly extrapolated from preceding technologies. They are, instead, the upshot of processes of social construction. In short, the technology *could be otherwise*.

(Woolgar 2005: 27)

Woolgar elaborates this 'interpretative flexibility' to forestall any reification of technology as a found, monadic object in the world, countering:

the view that technology can (or should) be treated like any definite singular object, by stressing that interpretation, reading and making sense of technology are a constant feature of social life. Technologies are not given. They are instead discursive moves in a never ending cacophony of efforts at social ordering . . . [Technologies] are social arrangements rendered material. The social arrangements are thereby blackboxed, the inner workings of which are known only to technical experts, and which in virtue of their material construction attain an apparent robustness, resist deconstruction and endure.

(2005: 29–30)

From Woolgar's formulation here, one can see clearly how such an account of the

contingent, social (and cultural too) nature of technology complements (though not necessarily comfortably!) a modified 'circuit of culture' approach.

Technology and culture

To think about the pertinent relations between technology and culture, we might fruitfully compare work on mobiles with that in Internet studies. For instance, Woolgar proposes five rules of mobility, drawn from a similar set of propositions regarding Internet technologies. Among these are two worth mentioning here:

1. the uptake and use of the mobile technologies depend crucially on the local social context . . .
5. the more global the more local!

(2005: 39–40)

As Internet studies has consolidated as a field, and there has been a working through and critiquing of early notions of 'virtuality' and 'cyberspace', there has also been important work on information and communications technologies more broadly that resists both technological and social determinism, in favour of attending to the open-endedness of technology and its constitution in particular local social and cultural contexts. Much work already on mobiles, by comparison, has already incorporated such considerations of the interrelatedness of the global and the local, and the importance of attending to context and its constructions. It has become clear, though, that there needs to be much more documentation and discussion on this point, not least because of the growing cultural importance of mobile technologies.

To be more specific, it is fair to say that thus far scholarly study of cell phones has been dominated by a focus on European and North American examples and assumptions. Work on cell phones in other parts of the world – especially Asia – is now emerging, as it is, rather too slowly, in studies of Internet and other new media. Japan has been of particular interest, owing to the use of cell phones for accessing the Internet during the 1990s (Coates and Holroyd 2003; Funk 2001; Gottlieb and McLelland 2003). Ito, Okabe, and Matsuda's important 2005 collection is not only a rich and sophisticated set of studies for understanding mobiles in Japanese life, it is a model for systematic study of mobiles in general. Mobile use in other Asian countries is now becoming more widely appreciated, with a number of studies on China now published (Yu and Tng 2003). The mobile, as too the Internet, has been mutually implicated in cultural and social change in Asia (Berry, Martin, and Yue 2003). Just as the Internet is clearly internationalising – with the number of English-language speakers, and other European language groups and cultures, being overtaken by Spanish and Chinese, and other language groups – so too the sheer size, scale, and significance of mobile use in the most

populous countries especially is difficult for the Anglophone academy and analysts to ignore any longer.

There is a more profound question at stake here also, of how far theories about cell phones developed largely in Europe, the UK and the USA, and with their theoretical and geopolitical bearings in these societies, are adequate for comprehending the take-up and use of these technologies in Asia, Africa, Latin America, and elsewhere; and of how well these grasp the deeper cultural dimensions of different societies. An important question concerns the overarching concept of modernity, and what its relationship is to the cell phone. If it is the case that, from the mid-1980s until the early 2000s, theories of cell phones have been shaped by Western concepts of modernities, how well do these encompass Asian modernities and communication practices, as a 2005 conference theme (Lin 2005b) proposed? How do the social and cultural appropriations in cell phones by different societies and traditions relate to questions of design and templates for use (Perterra and Koskinen 2006)? If we understand that at various levels theories may be culturally specific, then we cannot assume our ideas about cell phones, conceived in a particular configuration, will travel across cultures without requiring translation, transformation, challenge, disavowal, or abandonment.

There is much scope for cross-referencing, borrowing, and dialogue between Internet studies and mobile studies, in regard to understanding the international character of these technologies and the cultural specificity of their construction and the theories developed to understand these. There is also much urgency in thinking from the point of view of cell phones and mobile technologies, at this historical moment of their framing, about some of the cultural concepts, attributes, and agency crystallised in important concepts in Internet and new media cultures and studies (Goggin 2004; Lovink 2002; Manovich 2001; Marshall 2004). I am thinking here about much meditated, and sometimes much maligned, ideas such as: interactivity, the creative commons; the politics of code; open platforms and software; the consumer-as-producer; peer-to-peer models of cultural exchange; any-to-any communication. With mobile telecommunications being positioned for even greater strategic influence subtending questions of communications, culture, and media, the resources of critical Internet and new media studies have much to offer inquiry into the cultural politics of mobile media.

Setting the scene

My discussion of cell phone culture in what follows is broadly set within the framework I have indicated above. I think it is worthwhile retaining the sense of multiple, connected perspectives in the 'circuit of culture' approach, as it reminds us of the inescapable articulations among spheres that jointly bring a cultural artefact to life. The 'circuit of culture' needs to be opened up, and combined with some important other approaches necessary to understand cell phone culture –

namely, social studies of technologies, Internet and new media studies, and non-Anglophone traditions of cultural and media studies.

Before I give an overview of the book, just two prefatory remarks on style. First, throughout this book I tend to use the term 'cell phone', but sometimes will instead use the description 'mobile phone'. For my purposes I regard these terms as interchangeable but it is important to note that both accent slightly different aspects of this technology (as do the many other terms for cell phones and mobiles in other languages, some of which, for instance, associate the technology with mobility while others associate it with its portability, convenience, or status as an extension of the hand). I will also speak of 'mobile' and 'wireless' 'technologies' and 'devices' to indicate the proliferating range of wireless connected telecommunications, Internet, and indeed media and communications devices that are now often articulated or affiliated with cell phones. Secondly, given the nature of the topic, I have thought it important to summarise key technical features of cell phone and mobile technologies as clearly and concisely as possible, in order that the reader will have the requisite basic information. Hopefully, the non-technically inclined reader will not find such overviews too daunting (or will skip through them), and the technically well-versed reader will forgive me for unavoidable simplifications.

That said, the book contains four main parts: part 1, 'Producing the cell phone'; part 2, 'Consuming the cell phone'; part 3, 'Representing and regulating the cell phone'; and part 4, 'Mobile convergences'.

In part 1, chapter 2 outlines the important features of the early history of the cell phone, and what was significant about making voice communications portable. It looks at the early, commercially oriented deployment of the cell phone in the 1980s, then explores the range of ways that cell phones are routinely used in everyday life now: how the mobile has moved from being the preserve of business people, realtors, builders, and tradesmen, to becoming the prized possession of teenage girls (and boys). Chapter 3 considers the role of image-creation, advertising, and design in creating mobile culture. Here I look at two key case studies that illustrate the cultural design and production of mobile telecommunications. First, I review the role of one of the most important cell phone handset manufacturers, the celebrated Finnish multinational firm Nokia, exemplary in its creation of the mobile as an object of desire. Second, I evaluate the development of mobile networks, their identities and those of their consumers around the world – focusing on the internationally active firm Vodafone.

Part 2 opens with chapter 4, and a discussion of the defining phase of cell phone culture. Text messaging was conceived as a minor aspect of the second-generation digital cellular system, but it was enthusiastically adopted, and created new cultures of use. This chapter provides an overview of text messaging and elucidates the role it plays in cell phone culture. In doing so, I explore text messaging as an intriguing case study in cultural consumption and user experimentation. Chapter 5

looks at how the needs, expectations, and desires of possible users are factored into the design of cell phone technology. It does so via the important case study of people with disabilities. Often overlooked as media users, people with disabilities number approximately half a billion people worldwide. Drawing on critical disability studies, this chapter looks at the consumption of cell phones by people with disabilities and the responses to this by technologists.

In part 3 of the book I turn to the representation and regulation of the cell phone, an important component of the development of cell phone culture. In chapter 6 I chart the various ways in which cell phones have been a subject of public fascination because of their perceived danger. My case studies here include panics around the effects of mobiles on health, cultural values, and literacy and grammar, as well as the 'happy slapping' panic in which deviant young people again figure. In chapter 7, I suggest that cell phones, like the telephone before them, have been associated in popular culture with new possibilities, licit and illicit, for making connections and expressing intimacy. I look at some celebrated instances where unintended effects of cell phones for celebrity romance have captured the popular imagination, such as the British cell phone tapping royal scandals of 'Dianagate' and 'Camillagate', footballer David Beckham's and cricketer Shane Warne's text message affair scandals, and the hacking of Paris Hilton's smart phone.

In the fourth part of the book I survey and interpret new developments in cell phone culture associated with the convergence of technologies. Mobile photography, camera phones, moblogging, and new visual cultures are the subject of chapter 8. Here I theorise this new, culturally significant technology and its appropriations, looking at how camera phones allow anyone to create photographs, edit them, and quickly and easily distribute them across communication networks. I look at how mobile photography is another step in a long, contradictory process of making technologies democratic, or at least demotic. In chapter 9 I chart the mobile's implication in new sites of cultural consumption and production, borrowing and reconfiguring features associated with television and Internet cultures. This is followed in chapter 10, with a discussion of the new area of the development, design, and deployment of 3G and 4G cell phones, and associated technologies, and what their implications are for mobile culture.

As the book documents, the cell phone has recast established communications technologies, but also holds the key to the future of network cultures. In the conclusion, I reflect upon the status that cell phones have as *mobile media*, discussing their centrality for media today and in the near future, and also considering what the implications of this shift are for cultural research and theory, as well as design, policy, and regulation.