

CHILDREN AND MOBILE PHONES

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CHILDREN AND MOBILE PHONES: ADOPTION, USE, IMPACT, AND CONTROL

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About the Author

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Chapter 1

Introduction

The mobile phone has emerged as one of the most pervasive technologies of the twenty-first century. It has been adopted widely across developed and developing countries around the world. The evolution in sophistication and reliability of the technology combined with dramatic reductions in the cost of purchase and use have played integral parts in boosting its uptake among rich and poor alike. Its ubiquity in developed countries, where for many people, it may be their first encounter with telephony of any kind, has benefited local economies by providing relatively cheap and easy to install communications networks in environments where prohibitively expensive landline infrastructures have been limited or non-existent (Kwaku Kyem & LeMaire, 2006). Mobile phones have opened up new channels for local and national businesses and enhanced social cohesion in communities accustomed to many of their numbers migrating to other countries in search in employment (Goodman, 2005; Garley, 2007; Madianou & Miller, 2012).

In the developed world, the mobile phone has brought many commercial, social and a host of other functional benefits to users (Katz, 1997, 2008; Tully, 2003). Mobile technology, which today includes a suite of distinct devices which embrace not only traditional voice-call telephony among their functions, has changed the way businesses operate. Portable computers have grown smaller while mobile phones have become increasingly computerised. The result is technology spectrum of mobile devices that are largely overlapping in their basic functions and mainly distinguishable in the relative sizes of their visual and manual interfaces with the user.

The countries of the developing world have lagged behind developed nations in terms of the establishment of effective communications infrastructures that cover their entire populations. Nonetheless, mobile telephony has been rapidly adopted in these countries during the twenty-first century as the pricing of products and services have become locally more competitive and a public and private demand has grown.

In countries that have lacked a landline infrastructure, wireless communications have proven to be a more economical option in terms of the establishment of communications networks to facilitate business growth and development. Even during the pre-mobile era, there was recognition that telephony can create greater efficiencies in making business deals and conducting transactions and enables businesses to expand their networks of suppliers and customers (Aronson, 1977).

Such efficiencies have been promoted in developing countries through the rapid roll-out of wireless telecommunications services (Jagun, Heeks, & Whalley, 2008).

Considerable evidence has emerged from around the world that mobile communications technologies have not simply altered but become integral components of children's lives. According to Twenge (2017) today's children are growing up in a 'super-connected world' in which a range of communications technologies are made available to them and have become an integral part of their everyday lives which they take for granted.

The technologies of greatest importance to today's kids are their mobile phones (or smartphones), with their tablet and laptop computers also representing highly valued if not essential items. Many children have multiple 'techie' devices beyond these, including portable music players, game consoles and interactive TV sets. Their smartphones are critical devices among this suite of technologies. These devices have great versatility in terms of their applications and functions. They are also easy to carry around (Twenge, 2017). This book follows the observations of Twenge but, while recognising the diversity of technologies that are used by kids today, focusses on their use of mobile phones.

Mobile technologies have a range of different functions, but the dominance of one form of mobile behaviour over another can be conditioned within families and vary with socio-economic class (Clark, 2013). Mobile phones can have an important social role to play in keeping families connected to each other (a perspective found to be strongly associated with lower-income families) or they can play a significant role in the delivery of educational experiences to children both in those parts of the world where schooling is limited and educational resources receive little government investment (Druin, 2009a), as well as in developed countries, where parents encourage their children to utilise their mobile phone for constructive self-betterment purposes (Clark, 2013).

Since the beginning of the twenty-first century, mobile communications have emerged as a distinct field of scholarly research. While research into the use of telephones can be traced back several decades earlier, much of the early research focussed on voice-to-voice communications. The latest generation of mobile phones are defined by complex and increasingly powerful computer technologies and a broad range of applications. There are multiple modes of communicating available through these devices using text formats, audio and video modalities (Livingstone, Haddon, Vincent, Mascheroni, & Olafsson, 2014). Mobile phones serve as information storage devices. They can function as mini-television and radio receivers. They incorporate camera equipment for still photography and video shooting. They can store music and games. The prevalence and importance of these devices in people's lives across the developed and developing world has understandably attracted a rapidly growing volume of research activity and a burgeoning research literature (boyd, 2014; De Souza e Silva, 2017; De Souza e Silva & Frith, 2012; Goggin, 2006, 2011; Goggin & Hjorth, 2014; Hjorth, 2008; Hjorth, Burgess, & Richardson, 2013; Ito, Baumer et al., 2010; Ito, Matsuda, & Okabe, 2005; Katz, 2003; Law & Peng, 2006; Ling, 2004; Ling & Pederson, 2005; Ling & Donner, 2009; Ling & Horst, 2011; Twenge, 2017).

It is not simply the complexity of the technology and the applications underpinned by it that has made mobile phones so significant in modern societies.

It is the extent to which this technology has been adopted as an essential accessory that for many people operates as a central controlling hub of all or most of their everyday activities (Livingstone et al., 2014; Twenge, 2017). The ubiquity of mobile phones, however, and their ever-presence regardless of social settings has also meant that it can alter social dynamics in the face-to-face world in ways that are not always beneficial or welcome (boyd, 2014; Clark, 2013).

One critical way in which mobile technology has transformed social situations is in its blurring the separation of what is 'private' and what is 'public' (Leander & Kim, 2003). Users can lose themselves in their mobile devices, for example, in crowded settings such as public transport, bars and cafes, especially when they are on their own. They can create their own social 'cocoon', sometimes referred to in this context as 'telecocoon' (Geser, 2004; Habuchi, 2005). Then, there are occasions when mobile users are in the company of other people and they take calls or other messages, abruptly breaking off from face-to-face conversations in the process (Gergen, 2002). On other occasions, mobile users take calls in public settings and have private conversations which in that setting become very public, often to the discomfort of others present (Ling, 2004). Despite these irritating aspects of mobile phone behaviour, the technology has enriched the lives of most users around the world in a multitude of ways (Lenhart & Madden, 2007; Livingstone et al., 2014).

These technologies enable users to stay constantly connected to their social and business networks. They enable greater flexibility in the planning of meetings and appointments, allowing arrangements to be changed on the move when fresh circumstances demand it. In this respect, mobile phones have altered users' concept of time with time becoming more fluid. Mobile phones have also affected people's concept of space. This technology enables users to carry on their socialising or business activities remotely with others. This means that close proximity is no longer essential for many kinds of interpersonal interactions. Mobile technology lives up to its name in a sense by introducing greater 'mobility' to activity spaces in which we conduct our social and occupational interactions (Adey et al., 2014; Bauman, 2013; Cresswell, 2012; Sheller & Rendon, 2017).

Life-Changing Effects of Mobile Phones

It would be misleading to presume that the introduction of mobile technology alone will bring many economic and social benefits. This crude concept of technological determinism misses the important mediating role of the way any technologies are interpreted and reconstructed by users in discovering how new communications devices might be utilised within their lives. Where good business communications already exist, what additional commercial benefits will mobile technology bring about for their users? Where cohesive social structures and networks are already well formed, how much additional interpersonal contact benefit can mobile phones produce for users?

According to some theorists, the value and usefulness of new technologies are determined by the social contexts in which they are used (Anderson, 2006). Theoretically, debates have occurred over whether a new technology can dictate through

its design and functionality the way people use it and then triggers changes in their social behaviours or whether it is defined by social contexts and must adapt to these contexts to have real meaning and relevance for its users. Proponents of actor-network theory have sought a negotiated position whereby technological determinism and social determinism are rejected in favour of a middle ground position (see Brown, Green, & Harper, 2002; Wajman, 2004; Woolgar, 2005).

In other words, while users must learn how a new technology operates, the eventual pattern of use will be determined by whether the device brings applications of genuine social value to the user and by whether the technology can be accommodated to social constraints on those applications (MacKenzie & Wajman, 1999). The evolution of mobile technology – in particular, the emergence of the smartphone – has created opportunities for more imaginative and sophisticated applications in the educational sphere. While many schools in developed countries have limited or prohibited their use in the classroom, there is mounting evidence that this technology can bring great benefits to disadvantaged students (Ching, Shuler, Lewis, & Levine, 2009). Mobile phones can bring students into direct contact with increasingly valuable interactive learning materials in the classroom as well as in settings outside of school (Ching et al., 2009).

Other writers have advised that new technologies must be, in a sense, ‘domesticated’ by their users who determine the value of specific technologies to their everyday lives (Haddon, 2001; Silverstone & Hirsch, 1992). With mobile technologies and especially those through which users can communicate with other people in a range of formats have also altered concepts public and private and of time and space (Kim, 2001; Ling & Yttri, 2002). The always-on modality of mobile phones has blurred the lines between work and leisure and time and space that can be deemed to be public or private. Phone calls can be received in any location, whether at home, at work or in transit. Work-related calls are no longer restricted to the privacy of the office or personal calls to the home but they can occur in public locations in bars and restaurants, in the street and on public transport.

Children and Adoption of New Communications

This theoretical backdrop to the interpretation of new communications technologies and the ways they eventually come to be used applies also to the adoption of technologies by children. Children may be very open to the adoption of new technologies, but both acquisition and patterns of use will be sensitive to their social circumstances at home (boyd, 2014; Clark, 2013; Livingstone, 2002). Although new communications technologies have been accused of altering the social fabrics of societies, there has also been a resistance to the passive adoption of technological determinism as a primary model for explaining the significance of these technologies.

The initial emergence and spread of fixed, landline telephones enabled their users to extend their social communications far beyond the boundaries of their usual physical movements. Such community extensions were seen by some as a threat to traditional forms of social cohesion, but eventually became accepted primarily as a new form of reaching out to and strengthening ties with an individual’s existing social networks (Fischer, 1992; Marvin, 1988).

With the emergence of the networked computer systems culminating in the Internet, the idea that social communities could exist online as well as offline became established. These 'virtual' communities were believed by some commentators to provide both supplements to everyday communities and new forms of social aggregation that brought their own distinctive benefits and risks into their users' lives (Horn, 1998; Rheingold, 1993). The communities furnished with these new digital communications technologies could alter people's behaviour patterns in their everyday lives but have tended to do so in ways that pre-existing and emerging social conditions and constraints determined (Dutton, 1999). Some scholars have argued that among the most profound social change wrought by new interactive technologies is the exposure of children to material that is targeted and designed for adults, thereby bringing 'childhood' to a abrupt and premature end (Valkenburg & Piotrowski, 2017).

Children were once regarded as 'miniature adults'. This changed in the eighteenth century when philosophers such as Locke and Rousseau began to re-classify children as a group or 'pre-adults' in need of special protection. Since then, the idea of childhood has conventionally been imbued with the attribute of vulnerability. Children came to be conceived as 'innocents' who were different from adults in their maturity and ability to cope with different risks that the world might throw at them.

Childhood therefore came to be seen as a period of development of human beings in which they were accorded special rights and privileges including being freed of the requirement to work as adults did. Instead 'childhood' emerged as a period during which young humans were prepared for 'adulthood' which they attained once fully grown. During childhood, juvenile humans were educated in the ways of the world. This meant teaching them basic skills that would serve them in later life. Childhood also came to be seen as a development period during which children should be allowed to explore the world through play.

As such 'children' and 'adults' came to be defined differently and accorded different rights and freedoms. The protection of children meant keeping certain life experiences hidden from them until they were 'old enough' to understand them and deal with them. Children should therefore be shielded from 'adult concerns' such as sex and also kept safe from violence. Of course, these aims were not always met with success, but there was a protectionist intention that underpinned the way young people as 'children' were treated.

The evolution of media technologies changed 'childhood' in that they gave children access to material from which they had formerly been protected. Exposure to sensitive subjects such as 'where do babies come from' or what is 'sexual orientation' and to profanities, adult nudity and death could occur beyond parental or societal control. The emergence of digital interactive media in the twenty-first century, where the limited controls of mainstream media regulations are missing, meant that children were being shown things they otherwise would have been kept sheltered from. The result was a generation of young people who were being encouraged to 'grow up' or at least to be confronted with 'adult issues' before they had formerly been deemed ready (Valkenburg & Piotrowski, 2017).

Social Appropriation of Mobile Devices

There have been further theoretical frameworks that encourage the view that new communications technologies such as mobile phones are adapted to the social settings in which they find a use and that the ideas that users develop about those technologies can be shaped by the social conditions under which they are normally used. Drawing also upon adaptive structuration theory, for example, when a technology is adopted within a social group context, the group assesses the technology and its functions and potential effects, and then determines whether a functional set of rules can be established for its operational use that cohere with the existing structures, needs and activities of the group. A technology can present a number of distinct applications to a social group but the group must then decide whether these applications have relevance to its intrinsic *modus operandi* and can be utilised without creating tensions to group structures and codes (Poole & De Sanctis, 1990).

In effect, technologies are appropriated by social groups and, in consequence, new styles or forms of application can arise that may even feed back into future design modifications. In fact, two groups might adopt the same technology in disparate ways where their social needs differ and create distinctive social constructions of the technology in terms of its eventual day-to-day use (DeSanctis & Poole, 1994).

A further group-related theory that has some resonance with the way mobile phones are used by young people is complexity theory (Arrow, McGrath, & Bergdahl, 2000). Although developed primarily to explain the performance of formal groups with specific organisational objectives and structures designed to facilitate their attainment, this theory can also shed insight on the attraction of adolescents to mobile phones even in their looser social group structures. Complexity theory has been informed by TIP (time, interaction and performance) theory which is concerned with the ways groups organise themselves to ensure they achieve their objectives, fulfil their members' needs and finally maintain group integrity (McGrath, 1991).

Mobile phones are also 'containing' technologies. When a person is walking through a public space while talking or texting on their mobile phone they create a private world around themselves which partitions them off from the public world, despite still being visible in that public world. At that moment, however, for the mobile phone user, the outside public space does not exist as all their attention is directed towards their mobile device. Young people have been found to use their mobile devices deliberately to separate themselves off from public spaces they pass through (Haddon & Vincent, 2009).

As we will find out later, the adoption of mobile phones by adolescents has been underpinned by these same needs albeit in looser social group settings. The technology can enable social group objectives to be achieved and often in a more flexible way by allowing members of the group to arrange meetings and also to change times and venues at short notice without causing widespread inconvenience. It is adopted to enable social group members to remain in more regular contact with their social support systems and enables them to do this in a more private way. It can also play a crucial role in defining the identity of a social group

by tightening links between members and by enabling them to develop distinctive communications codes (e.g. through coded use of language).

Children have been enthusiastic adopters of new communications technologies (Buckingham, 2006). The eventual boost they gave to mobile phone markets reflected the already popular use of landline phones among adolescents for whom keeping in contact with friends was of paramount importance even when physically apart from them. The mobile phone had the added benefits that it was more personalised than the traditional fixed phone and could be taken into private spaces where conversations with friends could not be overheard by other members of the family. It, therefore, made an extremely good fit as far the emerging social needs of the teenager were concerned.

Another important social contextual aspect of mobile phone use has been explained by life history theory. According to Twenge, a risk-averse generation of parents has created a generation of youngsters who are reluctant, in some ways, to grow up and yet, as teenagers, seek some independence and privacy away from the prying eyes of mum and dad (Twenge, 2017).

Twenge writes about the post-millennial generation of 'i-Gen-ers'. This is the generation that follows the Millennials. The latter have been regarded as those individuals born between 1980 and 1994–1999. For Twenge, if the Millennials birth era is presumed to be the same as that for Generation X, the generation that preceded them, then the Millennials birth cut-off point would be 1994. The iGen-ers therefore would begin in 1995. It might also be assumed to end around 2012. The generational time-periods can all be regarded as somewhat arbitrary. Nevertheless, the Silent Generation, Baby Boomers, Generation X-ers and Millennials represent population cohorts born into different social settings. These situations in which they entered their lives differed as a result of changing economic circumstances and whether the world was at war or at peace, and also differed in terms of the advancement of technology.

The parents of i-Gen-ers encouraged their offspring to believe they can be successful in life in any way they want, but they did not imbue this generation with any sense of urgency over doing so. Certainly, in countries that place a premium on individualism (as compared with collectivism), youngsters generally took longer to mature to a point where they fully flew the parental nest. iGen-ers are less likely than older generations to have been encouraged to take on adult responsibilities as early in their lives. This delayed essential brain development, especially in the frontal cortex, which meant children were simply not yet programmed to branch out on their own.

This iGen-er attribute is shared with Millennials who have also been observed to be anxious about growing up. Adult responsibilities scare them. They want desperately to hang on to their childhood status in regard to so many aspects of their lives. Yet, these youngsters displayed great competence in their use of portable technologies. Among these, the smartphone is predominant. These devices accompany i-Gen-ers everywhere. Most of these youngsters will not leave home without them. Many would even sleep with their smartphone under their pillow. Smartphones infiltrated every aspect of their lives rendering them constantly switched on to their social circle (Twenge, 2017).

Mobile Phones and Personal Image

As the technology has advanced and the range of models expanded, the value of mobile phones to their users is not determined simply in terms of its functionalities. It has become a branded commodity that is selected and displayed by users as an integral aspect of their personal identity and social image. In this context, the design and external appearance become critical factors as important to the choice of mobile phone as are its internal engineering and applications (Simay, 2009).

This concept of personalised ‘branding’ of mobile phones in relation to adolescent use will be examined again later in this book. It reflects the tight integration of the technology with the social fabric of adolescents’ lives and becomes part of a wider social identity adopted by teenagers when they join particular social cliques. This phenomenon underlines again the importance of the social construction of new technologies in users’ lives in determining how the technology is functionally defined and the value that is attached to it.

A mobile phone can take what Goffman (1959) called the ‘back stage’ aspects of a person’s life and bring them forward more prominently and visibly into the public domain (Fortunati, 2003). A mobile can give meaning to the identity of the user through the way it is utilised to reach out to others (Fortunati, 2001; Lobet-Maris, 2003). While voice calls made in public spaces can convert private into public conversations available to be overheard by others, mobile phones also have the ability to provide parallel private channels for through text messaging and access to email accounts (Ellwood-Clayton, 2005; Garcia-Montes, Caballero-Munoz, & Perez-Alvarez, 2006; Pertierra, 2005).

Gender and Mobile Phones

The history of telephony has also been characterised by a gendered aspect. Men and women have tended to use telecommunications in different ways. We have already noted that technologies are adapted to the social conditions in which they are used. These conditions can not only differentiate between technologies but also between different users of the same technology. Hence, the use of the telephone has been characterised by the social circumstances of different users in different eras. During the earliest days of mass telephone penetration, the workplace was still dominated by men and most women remained at home, especially after they got married and had children. Thus, the telephone for men became an extension of their working lives while for women it evolved as an instrument of their private lives.

These different social constructions of the technology among men and women resulted in different orientations towards telephony on the part of females and males (Fischer, 1992; Silverstone & Hirsch, 1992). These gender differences persisted in the use of mobile phones (Lemish & Cohen, 2005). Moreover, and as we will see later in this book, these different gendered orientations towards mobile telephony have shaped the way the technology has been utilised and its different emergent functionalities adopted by males and females around the world (Chiu, Hong, & Chiu, 2013; Igarashi, Takai, & Yoshida, 2005; Lemish & Cohen, 2005; Rakow & Navarro, 1993).