

This is the author-manuscript version of this work - accessed from <http://eprints.qut.edu.au>

Satchell, Christine and Singh, Supriya (2005) The Mobile Phone as a Globalising Artefact. In *Proceedings HCI International : The 11th International Conference on Human-Computer Interaction, Las Vegas.*

Copyright 2005 Lawrence Erlbaum Associates

The Mobile Phone as the Globalizing Icon of the Early 21st Century

Christine Satchell

RMIT University/Smart Internet Technology
Cooperative Research Centre
GPO Box 2476V, Melbourne 3001, Australia
christine.satchell@rmit.edu.au

Supriya Singh

RMIT University/Smart Internet Technology
Cooperative Research Centre
GPO Box 2476V, Melbourne 3001, Australia
supriya.singh@rmit.edu.au

Abstract

This paper presents the findings from a qualitative study of mobile phones and youth culture in Melbourne, Australia. The focus is on how the social dynamic resulting from the use of such communications tools has created a paradigm shift that has changed the nature of inter-human relations. Mobile facilitated interaction is driving a fundamental change in social mores with respect to engagement and commitment, to notions of fluid time versus fixed time and ultimately to urban mobility. Connectivity is becoming central to what it means to have a social identity and users are responding to this by merging bits of data to create their 'ideal digital self' through which they communicate socially. This calls into question the nature of 'digital identity', indicating it is not only about how much information can be restricted, but rather, what is revealed. While the results are based on a localized study, it is proposed that this phenomenon is happening across societies and that mobile phones themselves are becoming the globalizing icon of youth culture in the early 21st Century.

1 Introduction

In the early 21st century, Westernized young people are growing up in a time that sees a paradigm shift from post industrial to digital society. This results in a society that is not only obsessed with being in constant contact with each other but where the idea of interconnectivity actually defines the culture. Furthermore, mobile phones are having a unique impact on young users in that the artefacts themselves are becoming a force that shapes cultural flows (Satchell, 2004). This is supported by Myerson who stated, "The mobilization of the phone isn't really a technological process – it's cultural" (2001, p.7). When looking at the phenomenon of the mobile phone as a cultural artefact it can be seen that it has transcended its initial functionality as a communications device and has become a global defining symbol of the users' sense of style and taste. There are, of course, different nuances in use across cultures, such as the greater use of the mobile phone by young users to access the Internet in Japan (Ishi, 2004). More e-mails are sent in Japan via the mobile phone than the PC, though it is to fewer addresses. This mobile communication in Japan, as in Korea, enhances time spent and sociability with friends. Plant (2001) proposes that there are some broad distinctions that can be made at a global level. She argues that in the Asia Pacific, where open communication is already in place culturally, the mobile phone is more readily embraced. In China, where there is

already much noise, users talking loudly into their phones are tolerated, whereas in other places in the world it is not accepted. In the United States, Plant finds that mobile phone use is at times, perceived like smoking, something not to be tolerated in a public place. Tjongg et al, in their study of mobile phone use in Australia and Singapore, argue that Singaporean youth are more likely to personalise their phone and be heavier users than Australian young people (2003). Ultimately though, it is the similarities which are notable (See Licoppe & Heurtin, 2001 for a study of French users; Taylor & Harper, 2002 for UK users). Pankarez notes, “a global youth culture is being driven by technology, rather than by fashion, music, and sport as in previous generations” (2002, p.1). While Gesser argues, “As they are used literally by everybody, cell phones create a new aspect in which all human beings are equal, i.e. irrespective of age, gender, cultural background, wealth, income or hierarchical position” (2004, p.6).

The user study consisted of a qualitative analysis of 35 users living in Melbourne, Australia aged 18-30 (Satchell, 2003). An open-ended interview method was used (Minichello, 1995). The data was analyzed using NUD*IST 4, a computer program for the analysis of qualitative data.

The findings can best be thought of in terms of the four main themes that emerged from the user study.

1. Archetypes
2. Spontaneous social networks
3. Connectivity and privacy
4. Identity

The first theme relates to distinct user archetypes that emerged from mobile phone driven sub-cultures. These archetypes, the nomad, iconic, updater and resistant user, provide metaphors for understanding the process through which technology and youth culture meet.

The second theme looks at how young people are using their mobile phones for the spontaneous formation of social networks and examines the emerging hybrid of digital/real-time relationships, what Ito and Okabe (2003) call the ‘augmented fleshmeet’. This behavior has led to the emergence of ‘passive scheduling’ as a form of social communication and as means for maintaining presence.

The third theme reveals that the mobile phone is creating a generation of conflicted users trying to balance the need for connectivity with the desire to be at times, uncontactable. This results in users putting in place mechanisms to exercise more control over digitally constructed mobile space. The need to be able to convey meaning without real time interaction was the most commonly cited improvement that users wanted for their mobile phones.

The fourth theme is concerned with how the social dynamic resulting from mobile phone interactions is driving the notion of identity, leading to a youth culture where connectivity itself has become a defining part of what it is to have a social identity. This results in a culture where interpreting or reading other peoples’ digital identities provides a means of establishing what a person is like. This calls into question the nature of identity itself.

2 Emerging User Archetypes as Metaphors

Four distinct archetypes of users (Satchell, 2003) emerged from the mobile phone driven subcultures of youth culture:

- Nomads
- Iconic
- Updaters
- Resistant

These archetypes provide useful metaphors for understanding youth culture and the central role technology plays in it. As Sawhney points out, “We have to accept the fact that although the use of metaphors is not a particularly elegant or sophisticated technique, it is perhaps the only conceptual tool that we have for understanding the development of a new technology” (1996, p.293). The archetypes will also be useful when translating the emerging themes from the user study into design (Cooper, 1999).

2.1 Nomads

The 26 nomadic users in the study were characterized by always being on the move between different groups and activities. Furthermore, they were nomadic in that unlike previous generations they did not have centralized meeting places where they could get together. They were disconnected physically, leading fragmented lifestyles as discussed in Carroll et al (2002) and were often without a consistent home base. However, because they are connected virtually via their mobile phone handsets and networks, they can seamlessly map their own journeys through a continual series of activities and events. This is in keeping with Deleuze and Guattari's ideal of the nomad who is characterized by freedom of movement and is not constrained by time and space: "One can rise up at any point and move to any other" (1987, p.xiii). For these users, the handset becomes like a surrogate home base or virtual lounge room from where the nomad can maintain a continual virtual presence, summoning, or joining real and virtual groups at will. This is significant because it represents a paradigm shift in urban mobility, not seen since the car liberated a generation of teenagers on the 50s.

2.2 Iconic

Thirty-three of the 35 users customized the look and/or sound of their mobile phones to reflect their taste and style. For these users the mobile phone has transcended its functionality as a communication device and has become an icon or status symbol. Hulme and Peters (2001) draw on Baudrillard (1983) to look at the **process** that enables the mobile artefact to be appropriated by youth culture as a defining icon for their generation.

Jean Baudrillard notes goods have meanings that are generated within the system of signs and symbols, which engage the attention of the consumer. Consumption is never a process of a purchaser trying to satisfy a basic pre-given human need in response to biology. Mobile phones meet no biological need. Baudrillard sees the consumer as always actively creating a sense of identity, both individually and collectively. In this sense the mobile can create or reinforce identity, the status of the device is much more meaningful than the actual device itself (Hulme and Peters, 1983, p.2).

Essentially, the mobile phone had become a free-floating signifier, where the meaning that is produced by the artefact has come unmoored from what it traditionally symbolizes (Barthes, 1977). Hence, the mobile phone no longer just represents communication. Rather it has become symbolic of the owner's status, social acceptance and popularity.

Finally, it is significant that two users in the study deliberately shunned new developments in mobile phones in the favor of 'old school' or 'brick' models. "I don't want my technology shiny and new, I want it organic or at least a brick." (Nina, 18, Student)

This choice of the mobile phone as the site for an anti-aesthetic statement, illustrated that whether it be in celebration or rejection of its form, the mobile has become an artefact for the expression of taste for every user in the study.

2.3 Updaters

Plant likens mobile driven phrases such as 'on my way' or "on the bus" to global dance tracks. She proposes that "Where are you?" is the perfect mobile question and "On the mobile" is the perfect mobile answer (2001, p.29). This question is fundamental to mobile telephony, and distinguishes its difference from land line based communications by providing the possibility, that the caller could, indeed, be anywhere! This has not only created a need for users to position and re-position themselves at the start of every phone call, but given way to a culture of use where the dominant part of the message relates purely to the activity or location and no further information is supplied. This is the 'updater' – representing 26 users, (22 nomadic) for whom mobile phone ownership goes hand in hand with a need to regularly update others of their actions. This archetype highlights the way technology is allowing users to maintain virtual presence in each other lives, creating a new generation of 'always on' friends. This is also related to m-bogging, though it is also subtly different. Updaters only broadcast within a strictly walled network of users, while m-bloggers disseminate the digital account of their lives on the Internet.

The updater places a lot of importance and derives much pleasure from documenting, circulating and consuming digital accounts of day-to-day experiences. This may best be thought of in Baudrillan terms of the 'hyper real' user, for whom the distance between the 'event' and its re-creation' has imploded (Baudrillard, 1995). Unlike Baudrillard's nightmare of a society reduced to a state of hyper-reality by images that seduce us into consuming, the 'hyper real updaters' are using their technology to produce and share their own experiences. They are becoming active content producers rather than passive consumers of technology, using their own experiences to create new consensual meaning.

Finally, mobile technology is rapidly converging with other technologies such as digital cameras and the Internet. This coupled with the advent of 3G networks and handsets sees 'updaters' creating increasingly sophisticated home produced multi-media content to share their experiences.

2.4 Resistant

The archetype of the resistant user revealed that while 33 users expressed affection, attachment, and identification with their mobile phones, this did not translate into an unqualified embrace of a lifestyle generated by mobile technology. Twenty-six users indicated they had a love/hate dynamic with their mobile phones. These users are resistant to ubiquitous mobility, desiring connectivity but then not satisfying their need for being unreachable. This was encapsulated by one user's attempts to resist the mobile presence of her friends.

I turn it down so I can't hear it ringing, but then I can see it flashing. I try and look away but I can still sense it and I just stop concentrating on what the person (I'm with) is saying. I usually even know who it will be on the other end – and they know that I know. Then they hang up, it stops flashing and I can go back to being part of the conversation. Then 30 seconds later it starts flashing again. After about five missed phone calls I actually start to worry, maybe it's some sort of emergency, so the next time it flashes I look at the screen to see who it is and sure enough it's the person I thought it was – just being demanding and wanting my attention right now. (Holly, 23, Student).

For two of the participants, resistance to mobile phone ownership was purely financially driven. These two users rarely used their phones for social purposes; rather connectivity was inextricably lined with security. This resulted in the reluctant financing of a mobile phone as if it was a health or travel insurance policy; thus indicating social interaction is more important than security.

3 Spontaneous Formation of Social Networks

The use of mobile phones in the formation of fluid social interaction has accelerated urban mobility. Users once restrained by pre-made plans are now able to spontaneously traverse the city and suburbs, swarming between groups and activities. This mobile facilitated social networking has also seen the blurring of the boundaries between real and digital interaction and lead to the emergence of the act of scheduling as an activity in its own right.

3.1 Mobile facilitated fluid interaction (swarming)

Technology has increased my intimacy with my friends. It gives me the power to be part of the group whenever I want. I never turn my phone off. (Holly, 23, Student)

Mobile phones provide a fluidity of interaction through access to a digital, networked, social world. For 26 users in the study, this resulted in a reality where technology and friendships are inseparable from each other. For these users the main reason to own a mobile phone is for the formation and maintenance of social networks. Long term plans are rarely made giving way to spontaneous encounters. Twenty-seven of the participants in the study rarely planned to meet up, rather they gathered spontaneously on a minute-by-minute basis. This was only achievable because of the user's mobile phones. "I couldn't live without it because then I would have no friends. I mean I would have friends but how would I find them?" (Lucie 18, Student)

This sense of always being connected and immediately available has brought about a huge cultural shift. Connectivity frees users from the constraints of the need for a physical locale as the mobile phone becomes the user's virtual home base - "the one place that you can always find me." (Callum, 27, IT Consultant)

3.2 Blurring the boundaries between real and virtual interaction: the 'augmented flesh meet'

Twenty-two users who state that they are always connected with each other also have the ability to switch seamlessly between real and virtual environments. One user says,

I will usually send a text saying that I am on my way, even when my friends would know that. Often we start our conversation (via text) before we physically hook up...I don't mind how I catch up. I would probably prefer to catch up virtually because I can do so from the comfort of my place. But then again usually one sets up the other. (Andrew, 25, Musician)

Furthermore, frequently a group of friends gathered in real life will be joined by via mobile, by someone that is known to the group. The incoming call or text then becomes a new focus for the conversation. This indicates that the mobile phone lends a new dynamic, opening the social space up to include those not present. Ito and Okabe call this the 'augmented flesh meet'.

...mobile phones have become devices for augmenting the experience and properties of physically co-located encounters rather than simply detracting from them. Teens use mobile phones to bring in the presence of other friends who were not able to make it to the physical gathering, or to access information that is relevant to that particular time and place. The boundaries of a particular physical gathering, or flesh meet, are becoming extended through the use of mobile technologies, before, during, and after the actual encounter (Ito & Okabe, 2003, pp.17-18).

It can be seen that rather than alienating other members of the group who are there physically as Plant suggested, the 'augmented flesh meet' can create new sites for enforcing intimacy.

3.3 Interaction only occurs in the context of regular face-to-face contact

The high level of comfort users experienced moving between the virtual and real world of mobile facilitated interaction exists only in the context of pre-made, real life friendships. This makes mobile phone supported interaction very different to that of other virtual worlds, such as gaming or internet communication, where, at least in some cases, users traverse time and space in order connect with people they have never meet in real life. Of the 22 users who reveal that, there is an almost equal satisfaction to be got from virtual as there is from real life interaction, **all** point out that this communication is only with people that they see regularly in face-to-face situations.

At least when I'm texting my friends (as opposed communicating with them on the Internet) my parents know that I'm not talking to people I don't know because nobody would use their mobile phone to talk to stranger. (Genevieve, 18, Student)

This conception of the mobile phone as a private mode of communication provides users with a barrier between them and those outside their network.

3.4 Scheduling – as an activity in itself: the aproximeeting

The nature of mobile technology is such that it lends immediacy to the formation of social networks, and the outcome of this is that the act of scheduling itself becomes an important and pleasurable activity. So rather than just meeting a friend, the physical meeting is anticipated with a series of text messages and mobile phone calls.

There is no such thing as an organized get together, or if there is the time and location will invariably change. Even something like going to the movies cannot happen without 20 text messages - three changes of cinema and five different possible movies. (Bart, 28, Sign Writer)

Eighteen participants used what they consider 'dead time' to engage in scheduling. Definitions of dead time included being on public transport (17), waiting in queues (8), lectures (3), and driving (15). This was supported by Ito and Okabe who noted:

The 'mobile text meet' happens in any location (although mostly in transit) and is unique in that "it is particularly amenable to filling even small 'communication voids', gaps in the day where one is not making interpersonal contact with others, particularly in settings such as public transportation where there are prohibitions on voice calls (Ito & Okabe, 2003, p.12).

Rather than finding this type of interaction an intrusion, 22 users found the scheduling based dialogues rewarding.

Even at work I'm constantly organizing to do things with my friends. I go back and forth between windows at work, its like work document, email, work document, text message, work document, mobile phone call. Then I leave work, double check my mobile messages, send a few texts. (Indigo, 24, Event Manager)

The intense mobile interaction is creating a new genre of social communication, with five users stating that they prefer the scheduling to meeting.

Sometimes the actual meeting is not as good as the planning – and even when you do meet, you're too busy organizing to meet with another group of friends to pay attention to the people that you are with. (Manny, 23, Part Time Student)

It can be seen that the 'aproximeeting' is significant in that it embodies a huge cultural shift, challenging traditional ideas of the nature of engagement and commitment.

3.5 Maintaining virtual presence

Ito and Okabe use the 'ambient virtual co-presence' explain the way in which users maintain a continual presence in each other's lives via text messages.

These messages are predicated on the sense of ambient accessibility, a shared virtual space that is generally available between a few friends or with a loved one. They do not require a deliberate "opening" of a channel of communication, but are based on the expectation that someone is in (virtual) 'earshot' (Ito & Okabe, 2003, p.14).

This was in keeping with 26 users in the study who report that there were times when they were so regularly exchanging scheduling orientated text messages, that they were providing a continual update of their day- to day activities. It is significant that that nature of the exchange is such that the message does not necessarily require a reply; rather it becomes a way for friends to maintain a presence in each other's lives. Their data revealed that this sort of communication is often of quite a mundane nature, like a sort of virtual 'small talk'.

4 Control: maintaining boundaries of virtual spaces

Mobile phones provide for users a sense of reassurance that connectivity gives. With this comes the consequence of vulnerability against which people try to protect themselves – this creates the seemingly contradictory dynamic of openness vs. isolation. Essentially, this results in the mobile phone creating a generation of conflicted users trying to balance the need for connectivity with the desire to be at times, uncontactable. This means that while users desire the fluidity of social interaction that mobile phones afford them, they also resent their intrusion in their lives and are seeking new ways to exert control over digital space, and reduce unnecessary contact. One of the ways in which they are doing this is to use their mobile phones to convey meaning.

4.1 Connectivity versus contactability

Plant talks of the culture of mobile phone users and labels them as ‘innies’ ‘outies’ or a combination of both (2001). This relates to the way users deal with an incoming call in a social setting in that people either leave the group to take the call, or stay where they, are or both. She states that “even a silent mobile can make its presence felt as though it were an addition to a social group, and many people feel that just the knowledge that a call might intervene tends to divert attention from those present at the time”(p. no?). This was a re-occurring problem for users in the study with 26 participants responding that their own mobile phone was a regular intruder in their life. Eighteen users responded to this problem by carefully policing the boundaries of the digital world. For example, not answering a call if they did not recognize the caller. “I would rather let it go to message bank then call whoever it is back even though it means I have to pay twice, once for the message bank call and then again to call the person back.” (Bridget 19, Student) Furthermore, 23 of the participants said that there were times when even if they recognized the caller they would rather let the phone deal with it and let it go through to message bank.

It is significant that these complaints about mobile intrusions were mostly in regards to incoming calls; the less intrusive text message was only cited by three users as a source of annoyance. This indicates that users want to be able to use mobile phones to maintain a subtle, disembodied, presence in each other lives. Users want their connectivity tempered by a buffer, or protective zone that mediates the need for commitment to real time interaction.

This was encapsulated by a participant in the study who explained that her ideal interaction with friends is improved through the barrier of technology.

If I have a friend over, we will both sit here doing exactly the same thing except that then I have to make concessions as to what we do. I would prefer to have a friend online, then I could just keep them in a minimized window most of the time. (Lucie, 18, Student)

4.2 Conveying meaning without Communicating

Twenty-four of the participants in the study agreed that even when a phone call is not answered the status of the phone itself reveals a lot about the current availability of the user. For example, a phone that is switched off indicates the person is not in social interaction mode. A phone that is turned off mid-ring indicates either that the person is engaged in an activity where it is not appropriate to talk, or may indicate a deliberate rejection of the caller. A phone that rings out or goes to voice mail is seen to mean that the person is willing to be contacted but cannot get to the phone at that particular moment. It is an indication to try again soon. One user stated,

Sometimes it is nice to just go out of circulation. When I want to do that I just turn my phone off and people see that and can tell that I am not interested in catching up. The problem though, is sometimes my phone goes flat and I end up sending the ‘out of circulation message’ when really I am just out of battery. (Lucie, 18, Student)

Twenty participants responded that they would like this concept of conveying meaning without having to directly communicate to be developed further. Currently the act of turning the ringer down or rejecting a call are unpleasant relative to the message we are trying to convey, and there is a need to fluidly be able to change between these states or modes.

5 Identity

The social dynamic resulting from mobile phone use has driven and redefined the notion of identity. Connectivity itself has become a defining part of what it is to have a social identity. An extension of this is that users' place a great deal of importance on constructing their own digital representations. This relates not just to what they say but the modality they choose to convey the message.

5.1 Connectivity

On a practical level the mobile phone facilitates communication - however, for 26 users in the study, mobile phone ownership also provides a sense of social and cultural identity, connectivity being an integral part of what it is to be a social individual in the early 21st century.

We are like bees who need to communicate. It is a defining part of what we are like. We need to communicate and will become even more like this as the technology improves. (Andrew, 25, IT Consultant)

This urgency for connectivity in youth culture was noted by Ito and Okabe.

While mobile phones have become a vehicle for youths to challenge the power-geometries of places such as the home, the classroom, and the street, they have also created new disciplines and power-geometries, the need to be continuously available to friends and lovers, and the need to always carry a functioning mobile device (Ito & Okabe, 2003, p.15).

One participant in the study noted “there is just no excuse for not being contactable” (Andrew, 25, IT Consultant) embodying how connectivity is becoming ‘perceived’ as a fundamental day-to-day need. As Hulme and Peters explain, “The mobile has many functions, not only as a communicator but also as a signifier for identity...Connectivity will not only influence their patterns of mobility but will also influence their identities and how they see themselves (2001, p.3).

The natural extension of users’ desire for connectivity was for 20 users, a fear of being disconnected. “I cannot bear to be out of the loop even for a minute.” (Lucie, 18, Student) This was supported by the DoCoMo No.10 study (2001) which found that the main criticism young people have in regards to their mobile phone is that they are not able to offer truly ubiquitous mobility. The most desired improvement for the users in the DoCoMo study was that their phones could allow them to “call from anywhere” and have batteries that didn’t need to be continuously recharged “so they wouldn’t be stranded” (2001, p.1).

5.2 Creating dynamic digital identities

For 24 users in the study interpreting or reading other peoples’ digital identities provided a means of identifying what the other person was like. As a user stated, “Their synthesized persona is quite revealing” (Callum, 27, IT Consultant). Furthermore, users indicated that they derive pleasure from creating a digital identity that reveals the persona they wish to convey. Users want to use technology to create certain types of identity that has certain characteristics that satisfy psychological needs and desires. This indicates that creating a digital identity is not only about how much information can be restricted but rather what is revealed.

5.3 Choice of technology as an expression of identity

The study reveals that for young people their choice of how they send and receive a communication message is one of the most potent means by which they can express their identity to their peers. For 24 users, the choice of technology could convey as much as the content of the message itself. “The way I use technology or bits of it is dictated by what and how I want to communicate things and how I want the message to get across” (Evan, 28, Environmental Scientist) Another stated, “The type of message you send says as much as what’s in the message” (Callum, 27, IT, Consultant). For these 24 young people the use of different modes of technological communication is not just to facilitate different activities; their choice of the technology is an expression of their

identity. Furthermore, because identity is multiplicitous and shifting rather than singular and static, the way in which the users want to express themselves relates to the context of the exchange, the environment they are in and the nature of the relationship with the person with whom they are communicating.

6 Conclusion

It can be concluded from the study that mobile phone is **the** defining cultural icon for the digital generation: the one item that young people can possess to represent their status as a participating member in early 21st century society. “If you want to assure yourself that you belong to the new century, this is the object to have in your hands” (Myerson, 2001, p.3).

Mobile phones play a big part in helping young people achieve their social goals and this is a global rather than a local phenomena.

As it responds to such deeply ingrained and universal social needs, it is no surprise to see the mobile phone expanding worldwide at breath-taking speed. In fact, there are reasons to assume that it would have been equally welcome in all human societies and cultures in the past: that is, under all imaginable specific cultural or socio-economic conditions (Gesser, 2004, p.3).

This indicates that designers of future mobile devices will not only be creating an artefact that will have a functional purpose for the end user but one that will respond to a strong, unifying set of social and cultural expectations.

7 References

Barthes, R. (1977). *Image-Music-Text* (S. Heath, Trans.) London: Fontana.

Baudrillard, J. (1983). The Ecstasy of Communication. H Forster (Ed.) *The Anti Aesthetic Essays on Post Modern Culture*. Seattle: Bay Press.

Baudrillard, J. (1995). *The Gulf War did not Take Place* (T. P. Parron. Trans.) New South Wales: Power Publications.

Carroll, J., Howard, S., Vetere, F., Peck, J., & Murphy, J. (2002). *Just what do the youth of today want? Technology appropriation by young people*. Paper presented at the Proceedings of the 35th Hawaii International Conference on System Sciences (HICSS-35) Maui, Hawaii.

Cooper, A. (1999). *The inmates are running the asylum*. Indianapolis: SAMS.

Deleuze, G., & Guattari, F. (1987). *A Thousand Plateaus: Capitalism and Schizophrenia*. Minneapolis: University of Minnesota Press.

Gesser, H. (2004) *Towards a Sociological Theory of the Mobile Phone*. Retrieved Jan 17th, 2005 from http://socio.ch/mobile/t_geser1.pdf

Hulme, M., & Peters, S. (2001). *Me, My Phone and I. The role of the mobile phone*. Paper presented at the CHI 2002 Workshop, Seattle.

Ishii, K. (2004). Internet use via mobile phone in Japan. *Telecommunications Policy*, 28(1), 43-58.

Ito, M., & Okabe, D. (2003). *Technosocial Situations: Emergent Structurings of Mobile Email Use*. Retrieved May 27, 2004, from <http://www.itofisher.com/PEOPLE/mito/mobileemail.pdf>

Licoppe, C., & Heurtin, J. P. (2001). Managing One's Availability to Telephone Communication Through Mobile Phones: A French Case Study of the Development Dynamics of Mobile Phone Use. *J Personal Ubiquitous Comput.*, 5(2), 99-108.

Myersen, G., (2001) *Heidegger, Habermas and the Mobile Phone (Postmodern Encounters)* Cambridge: Icon Books Ltd

Minichello, V., Aroni R., Timewell, E., Alexander, L. (1995). *In-depth Interviewing: Researching People, 2nd ed.* Melbourne: Longman.

Pankraz, D. (2002). *The Power of Teens Online*. Retrieved January 27th, 2003 from http://www.brandchannel.com/papers_review.asp?sp_id=102

Plant, S. (2001). On the mobile: The effects of mobile telephones on social and individual life. *Motorola Inc.* Retrieved July 17th, 2004 from http://www.motorola.com/mot/doc/0/234_MotDoc.pdf

Satchell, C. (2003). *The Swarm: Facilitating Fluidity and Control in Young People's Use of Mobile Phones*. In Proceedings of OzCHI 2003: New directions in interaction, information environments, media and technology. Brisbane, Australia.

Satchell, C. 'Design, Mobile Phones and the Digital Generation'. *The Telecommunications Journal of Australia*, Spring 2004.

Sawhney, H. (1996). Information Superhighway: Metaphors as Midwives. *Media, Culture and Society.*, Vol. 18: pp.291-314. Sage: London. Thousand Oaks: New Delhi.

Sheryl, H., Weber, I., Strenberg, J. (2003) *Mobile Youth Culture: Sharing Telephone Use in Australia and Singapore*. Anzac Conference: Designing for Diversity. Brisbane. July 2003

Taylor, A. S., & Harper, R. (2002). *Age-old practices in the 'new world': a study of gift-giving between teenage mobile phone users*. Paper presented at the SIGCHI conference on Human factors in computing systems: Changing our world, changing ourselves, Minneapolis, Minnesota, USA.