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Towards Understanding Mobile Messaging Ecologies

An exploration of the meanings young people attach to instant messaging
channels

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A minor dissertation submitted in *partial fulfillment* of the requirements for the award
of the degree of Masters in Media Theory and Practice

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COMPULSORY DECLARATION

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

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Mobile communications have added an ever present layer to our personal communication through which social dynamics can be reconstructed. In youth culture specifically, instant messaging allows young people to achieve limited autonomy, explore peer groups and an evolving sense of self. This dissertation explores a model for understanding how instant messaging facilitates this. Theories of media ecologies provide useful ways of explaining media environments. Nonetheless ecologies are usually conceptualised in relation to mass media rather than networked media and tend to assume that ecologies are situated in a particular physical space. The theory is nonetheless useful in understanding the everyday experience of young people using media. By extending media ecology theory to account for the personal communicative ecologies of instant messaging, this study extends the notion of ecology to account for a sense of digital social space outside the constructs of physical space. Through taking an interactional epistemological stance, qualitative research was conducted. Two focus groups were conducted to explore how instant messaging channels meet the needs of a group of young people from middle class contexts in Cape Town. The resultant discussions are applied to the framework of a 'layered' communicative ecology, taking technology, social and discursive layers into account and establishing the centrality of social space within a new and expanded model of networked messaging ecologies. The central aim of this research is to explore how relevant the application of media ecologies would be to an exploration of digital spaces of communication and practice.

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Chapter 1: Introduction

Current access statistics from the International Telecommunications Union (ITU) tells us that mobile cellular subscriptions reached almost 6 billion by the end of 2011 (ITU 2012). More than 80% of this growth was driven by developing countries, like South Africa, where there are more mobile-cellular subscriptions than there are people (ITU 2012). 84% of South African adults own a mobile phone while only 18% own a computer (Lanerolle 2012). Furthermore, 1 in 5 South Africans rely entirely on their mobile phones in order to access the internet (Lanerolle 2012).

As smartphones, higher end handsets with internet connectivity and advanced functionality, have developed, their capacity as converged media devices has gradually expanded, so that they now include video, images, games, Internet access and 'app stores' where users can download thousands of applications including perennial favourites such as instant messenger (IM)¹, email, social networking and web browsers. Today, people engage with mobile phones to communicate with friends while watching TV, or use one in response to a number they may see printed in a magazine. While it would be short-sighted to argue that the mobile phone is a replacement for any other channels, the ways in which it stitches together different media and places makes it a hub within larger, networked media ecology. Messaging is perhaps one of the most important functions of smartphones. A large and growing body of work investigates the significance, both positive and negative, of mobile devices but there is as yet limited literature which focuses on internet-enabled messaging applications (Walton 2009, Walton, Leukes 2012, Thurlow 2003, Mizuko et al. 2003, Ito and Okabe 2005).

Messaging applications enable and alter a number of social dynamics for their users. Internet enabled messaging tools combine some aspects of social network sites (such as profile and identity definition). Social network sites provide members with a page to represent themselves, which they can then link up to other people. The site enables connections and the building of a social network around interests, common friends or offline contact. IM also allows for low cost, asynchronous communication channels such as SMS. SMS has been around for 20 years, and has played an important role in the messaging ecology to date, as demonstrated by various studies (Goggin 2006, 2011, Matanhelia 2010). The rise in use of IM applications means that they must be afforded the same focus and investigation.

More South Africans have signed up for accounts on social network sites than have registered email addresses (Lanerolle 2012). The early success of Java-based IM application MXit accounts for this. MXit boasts 9 million active users in South Africa alone. Reportedly, most MXit users connect to the application only via their mobile handset (Lanerolle 2012). Beyond MXit; popular IM application WhatsApp has a significant user base globally and in South Africa. WhatsApp can be installed on any smartphone and has 100 million active daily users (Techcrunch 2012) around the world, and 4.6 million users in South Africa (Lanerolle 2012). Recent market research suggests that WhatsApp is the leading IM tool among South Africans aged 16 and over who live in urban environments (World Wide Worx 2012). While there are no published statistics on

¹ For an introduction to the instant messaging tools discussed in this study, see Appendix A.

the use of BBM in South Africa, some estimates claim that there are 3.3 million registered BBM users in South Africa (Vermeulen 2010).

As access to feature phones (and increasingly smartphones) becomes ubiquitous in South Africa, the specific functionalities and affordances of these messaging applications start to influence messaging ecologies. For young people, the ability to contact people at a low cost, edit their profile information, arrange their contacts according to the nature of their relationships and access the same channels their friends are, influences how their personal communication takes place.

Looking at a well developed theory - media ecologies which conceptualises media as environments (Postman 1970) - assists us in understanding how meaning making is happening for young people on these channels. The first step is to build on theory so that it can usefully account for what is going on. The central aim of this research is to explore how relevant the application of media ecologies would be to an exploration of digital spaces of communication and practice.

Personal interest

The rationale for this study arises from a desire to interrogate some of the assumptions and possible inflated claims about the changes that handsets and other digital devices are bringing to everyday life. The researcher has completed this Masters while working in the digital marketing field, employed in digital marketing for more than five years at Quirk, a digital agency.

The researcher compiles and writes learning materials for working professionals and manages a team of writers who put together courses accessed through an online learning platform. Under her project management, the fourth edition of the textbook *eMarketing: the essential guide to digital marketing*, was published by Quirk.

Theories abound around the role that digital devices are playing in people's lives. Many of them are tied to hype and come from a desire to sell a perspective – "People are now empowered to direct brands through social media". These claims often fail to investigate media use beyond a small group of early adopters and can neglect critical inquiry.

Models for understanding changes in how people engage with media, such as media ecologies discussed in the next section, may be necessary to achieve a better understanding. Without useful models industry practitioners could fail to interrogate their own assumptions. While there is little time, in practice, to interrogate models to the extent that may be necessary, this academic opportunity may assist towards an understanding instant messaging. The reason: IM displays quite interesting layers of communication and interaction in the everyday lives of people.

Why understand the messaging ecology?

A media ecology perspective and ethnographic studies of the domestication of media posits that our media environments play a significant role in how people access the world and negotiate their place within it (Foth 2007, Chiumbu 2012, Silverstone 1994, Nordstrom 1973). Mobile devices present a powerful channel within today's media environment. They offer access to a number of different tools and applications that

mimic, enable and alter face to face relationship dynamics. This study looks specifically at mobile IM, the exchange of messages in real time via the internet. Messaging involves the sending of information from one person to another, or to many other people, through an electronic device. Messages can take the form of text, images or sound clips. Mobile IM is a channel through which young people are engaging with their peers, negotiating their sense of identity, testing autonomy from their parents and experimenting with a growing awareness of their sexuality.

This dissertation suggests that when media ecology theory is applied to mobile IM environments, the current theory accounts for many, but not all the influences that affect meaning making for young people. A need to reconceptualise the relationship between the technology, the social structures, the content of what is communicated and the physical or digital social spaces that exist and adapt existing communicative ecology theories to account for all of these exists. Traditionally communicative ecologies theorists differentiate between distinct 'layers' in an ecology (discursive, technological and social) (Foth 2007). This approach evolved in relation to broadcast and print media and does not adequately account for personal social networks and the complexities of social space that emerge from the messaging ecology. In their current application the layers assume a sense of physical place, but social space exists separately within the messaging ecology. An expansion of the layers of the communicative ecology can be considered to account for this difference.

Applying the media ecology to instant messaging

Media ecologies conceptualise media within a broader set of influences which include, but are not limited to, the social dynamics, the type of technology and the nature of the message that is communicated. This perspective compares media to a biological ecology where many factors influence each other to affect an outcome (Postman 1970).

There are two schools of thought that influence the application of this idea, and understanding these different approaches makes it possible to define more carefully what media ecologies are and why they are so central to this study. The first approach involves a normative account (Postman 1985) of how culture is influenced or grows in relation to specific media ecologies. The second (Silverstone 2007, Foth 2007, Chiumbu 2012) focuses on ethnographic investigation of media as used in everyday life, arguing that there is an interplay between the device and its environment rather than influence in only one direction.

Media Ecology vs. Media Ecologies

In discussing his view of the media ecology, Postman explained that his ideas derived from McLuhan, but that he and McLuhan disagreed on the purpose of study. Postman's overall view was normative – he wanted to investigate whether a new type of media might be good or bad for society, as is suggested by the title of his book *Amusing ourselves to death* (1985). McLuhan believed simply that studying it because it was there, and that a neutral standpoint would help in understand how new media "do their stuff" (2000:11). Irrespective of which standpoint a study may adopt, models for theorising about media ecology exist in order to assist us in reaching an understanding of the effect they have on the media environment. Postman argues that people live in two environments, one 'natural' and the other man made.

The other is the media environment, which consists of language, numbers, images, holograms, and all of the other symbols, techniques, and machinery that make us what we are (Postman 2000:11).

Postman's approach is also somewhat technologically determinist, based on studies of mass media, and focuses on the social, cultural and psychological impact of media and technology. This normative focus on the role that media can play, leading towards a "good" or "bad" outcome, may detract from understanding the complex role it plays in the everyday lives of people. Considering the issue as concerning mass media rather than intimate media can also detract from achieving a useful understanding.

Considering the many influences on young people, and the many media choices they have, an ethnographic media ecologies approach (rather than a normative media ecology approach) offers a more suitable framework for this study.

Silverstone, Foth and Chiumbu are scholars in the tradition of media ecologies. They practice an ethnographic investigation of everyday life, in which an awareness of the interdependence of technological, social and discursive factors aids them in achieving understanding. They follow in a tradition in which Silverstone was a key influence.

Roger Silverstone focused on the study of television and not mobile devices, but his insights cohere with the broad theoretical approach adopted for this study. Rather than focusing on the television as a form of mass communication, "reducing electronic communication to either questions of political economy or textual forms of analysis" he hoped to understand what role it played in the everyday lives of people in domestic settings (Stevenson 2007:529). It was the ethnographic everyday study of interactions between people and television that could help him understand the various influences on the making of meaning. Silverstone argued that media consumption involves both the making of meaning and the taking of meaning. Basset explains the agency assigned to individuals in saying that "the endless circuitry of mediation in which we live might thus produce responsibility, not lack of control" (Basset 2007:45). The technological device, in his case television, does not determine how it is used and what meanings are internalised by its viewers, rather there is a back and forth of interpretation and influence between the many players in the domestic setting – the social (gender and familial) as well as the device itself and what is communicated through it. This negotiation of meaning is present in the way messaging applications are used and adapted by young people, except that they have far more choices available in terms of handset and application, and there are far more influences on what young people eventually have access to than were present in choosing a television set.

There is another key difference. While Silverstone's approach drew attention to the very nuanced and significant influence of domestic settings, this approach to research is defined by a geographical and physical space. All the players were in the same place, often at the same time. Even studies that extend this theory to newer electronic media outside of the home were rooted in a place like a club or a training site (Haddon 2007:28). This falls within an ethnographic legacy where villages or other physical sites were typically the setting for a study. This focus on a physical space can become a disadvantage when the theory is applied to digital social spaces such as IM ecologies. While time and space have been theorised within media studies it is difficult to account

for these concepts and their influence within the current model of communicative ecologies. Understanding the construction of time and space in digital media can assist here.

Place, social space and digital media

Tsatsou, in his paper titled *Reconceptualising 'Time' and 'Space' in the Era of Electronic Media and Communications* argues that rather than making place less important, electronic media have mediated what place means (2009).

Space, time and place have begun to take on new meanings as they are experienced in "multilayered ways" (Tsatsou 2012:12). Tsatsou outlines first that it is important to define the meaning of place and space.

...place 'is a concretion of value ... it is an object in which one can dwell', whilst 'space ... is given by the ability to move' (Tuan, 1977, p. 12) (2009:12).

Campbell argues that the meaning of places changes as they "become regarded and used for their ability to support the flow of networked interaction" (2008:375). Rather than home or school losing importance as places, he echoes Tsatsou's argument that their meaning rather begins to gain significance in their role as "points of convergence" in the networks which people construct around themselves (2008:375).

These networks may also take on a defined sense of space in themselves, as pointed out by Wellman and Rainie in their discussion of networked individualism.

This has changed the point of contact from the household (and work group) to the individual...there is a possibility of a continuous presence and pervasive awareness of others in the network. People's physical separation by time and space are less important (Wellman & Rainie 2012:12).

Within a media ecology for young people, physical place is not irrelevant, rather it plays an important role in an ecology which encompasses physical, social and network spaces resulting in "continuous and pervasive" presence. boyd's theory of social convergence describes how social networks bring different and varied social environments to one central space, leading to a lack of context and a loss of control over private information (2008:18). While boyd focuses on the news feed in the social network Facebook, this theory could be applicable to social space within a broader messaging ecology, of which Facebook is simply one facet.

Tsatsou argues that social interactions become "disembedded from spatial and temporal contexts" and that boundaries of space are "reconstructed" according to technological criteria (2008:14,18). He applies this to the way mobile users think of space in terms of "network criteria" such as signal strength or network coverage (2008:19) but we can extend this idea to his argument, which builds on a tradition of understanding 'places' or the social meanings of physical spaces: "space becomes place as it acquires symbolic meaning and a concrete definition, marking the whole spectrum of identity and a sense of belonging" (2009:12). In the use of messaging applications, space becomes concretised in terms of what users can do with the tools made available to them. Their identity and the boundaries of their relationships are negotiated through functionality and how this is used by people rather than actual physical distance or cues of physical

expression. There is a concretion of space where identity and relationships are mediated.

Given that messaging applications create some of the boundaries within which people's social networks are enacted and mediated, how a sense of space is accounted for within communicative ecologies can be investigated. It is an individual's networked individualism that creates the space in which this specific subset of their communications takes place. This perspective on space and place must be considered within the layers of the communicative ecology.

Three layers of a communicative ecology

Foth suggests that communicative ecologies are the "mix of media through which people connect with their social networks" and that ecologies can be understood in three layers; technological, social and discursive (2007:8).

The technology layer consists of "technologies and connecting media that enable communication and interaction" (Chiumbu 2012:198). The social layer consists of "people and ways of organising those people" and a discursive layer consists of the content of any communication going out to the community (Chiumbu 2012:189, Foth et al. 2007:9). In many studies where this approach is applied the physical space is understood to be the setting for these three layers. Chiumbu and Foth successfully applied the communicative ecology to studies conducted with a defined sense of place in mind, inner city apartment complexes and Western Cape townships respectively.

This model needs updating if it is to be applied to understand messaging, particularly in relation to the conceptualisation of the discursive layer as "content", thus suggesting broadcast rather than interpersonal communication.

A full scale ethnographic investigation of young people's communicative ecology would need to involve being present with them at home, school and in the shared spaces of their everyday lives over an extended period of time. It would also require 'hanging out' with them in online spaces such as BBM or WhatsApp groups. Attaining this level of access was not possible in the time available for this dissertation, and thus this study is not an ethnographic one. Rather it focuses on a specific and narrow investigation of messaging ecologies, as reported by participants, and how best to theorise these.

Nonetheless the three 'layers' of communicative ecology provide a useful starting point for this study:

Technological: At a macro level, parental control and justification determines what handset and messaging software young people have access to. The choice of channel of communication - BlackBerry or other phones - is determined by what young people's friends own and what their parents make possible. The technological layer includes the handset chosen and the affordances of that device. This determines what messaging applications are made available, and plays a role (among other factors) in influencing which messaging applications are chosen and how they are used.

Discursive: The discursive layer includes the ways in which young people present themselves through their profiles, the contents of the messages they send, how many people they send a message to and the way they adapt language for this channel.

Social: The social layer includes young people and their social networks, which includes family but is focused on peer relationships – schoolmates, friends, and boyfriends or girlfriends. Parents in their role of organising young people’s access to social circles should also be considered within this layer.

Social purposes play a central role in the appropriation of media technologies, and this is particularly so in the case of media messaging, which revolves around interpersonal communication. Adoption of messaging applications within the peer group generates important network externalities (the value of a network as ascribed by the number of people on that network) which influence the technology layer, in that messaging is only useful in so far as it can be used to maintain or extend connections in ones social network.

Network externalities account for how a mass of people using a particular channel give it its importance and leads to social inclusion. Conversely, a lack of access to that channel (due to device access for example) can result in social exclusion. Moreover, social network ties are also represented in messaging applications (e.g. in contact lists, timelines, ‘groups’ of contacts in Mxit etc.), and hence such representations also form part of the discursive layer. Thus social relationships and their digital mediation must be considered in all three layers of the ecology. While this makes it difficult to neatly categorise and separate findings between the three layers, it does not discount communicative ecologies as a useful model. Social, discursive and technological influences remain important factors to consider, along with an understanding of how space *and* place influence the ecology. Rather it is necessary to account for the challenge of networked communication and to attempt to adapt the model of communicative ecologies to account for new dynamics of networked communication.

The research questions

The research questions are informed by the goal to determine what meanings young people associate with the use of mobile messaging channels. As discussed above, media ecology theory may prove slightly out of date, given that this approach separates the technology from the social space. Ultimately the question at the core of this study is whether messaging ecologies could be adapted to account for the requirements of further studies into this significant area of mobile use.

In addition, this research paper set out to answer the following questions for a group of middle class teenagers:

- How can the notion of media ecologies be expanded to account for messaging choices on smartphones?
- What is the significance of meanings associated with different messaging applications and functionalities?
- What choices do young people make about messaging applications and tools?
- What role does time and space play in messaging ecologies?

The scope of these questions was narrowly based and applied, for investigative purposes, to only two small groups of young people between the ages of 16 and 19 based in Cape Town.

The structure of this thesis:

This thesis is laid out as follows:

Chapter Two outlines the discussion between an ecologies approach that focuses on the moralistic purpose of media, a la Postman, and those who follow Silverstone's tradition of focusing on the everyday context of media use. It is argued that context and the many influences on how people use and interpret media are far more useful for understanding their role in personal communication. The relationship between young people, their mobile handsets and their personal networks, and existing studies into this arena, are discussed in order to establish that further enquiry into the IM ecology is both necessary and necessitates a further conceptualisation of the layered approach of the communicative ecology.

Chapter Three provides the rationale for the choice of focus groups as a supportive methodology employed in this study. Two groups were conducted in which the experiences and thoughts and a discussion of their messaging use could be explored. It was then possible to apply the concept of messaging ecologies to this discussion, and so assess how well the current conceptualisation of this concept accounted for the areas of discussion raised. This chapter introduces the participants and interrogates the limitations of the study.

Chapter Four presents an analysis of the group discussions. This includes how the young people who took part in these discussions conceptualise and negotiate the relationship between their physical and social spaces plus the affordances of mobile messaging channels in terms of negotiating and exploring intimacy, gender, social convergence and their sense of personal and national identities.

Chapter Five returns to the research questions and focus of this study, to consider to what extent they have been addressed and highlights the importance of further application and investigation of the idea of messaging ecologies for IM. Rather than delivering representative insight into what meanings young people may attach to IM channels, it suggests the need for the expansion of the technology layer of the communicative ecology to include a notion of social space.

Chapter 2: A review of the literature and theoretical approach

Introduction

Studies of mobile phone use have moved from focusing on the perceived transformational potential of this medium towards an understanding of how phones are used within specific social contexts (Broadbent 2012). Rather than focusing on the handset in isolation, a number of studies have considered the mobile phone within larger media ecologies; ones which recognise that people have a choice of various media and media forms depending on their communication needs and context (Madaniou and Miller 2011, Broadbent 2012, Chiumbu 2012, Ito and Okabe 2005). These choices in turn influence the meanings and forms of messages that are communicated and so the context of the message and the channels through which it is communicated take on great significance.

Once the mobile device is chosen, a micro-ecology is established involving choices and interdependencies between messaging applications on the device. Mobile messaging takes on significance for young people as situated within the broader media ecology of social relationships and interpersonal and mass media. In a way that few other media forms do, messaging offers social autonomy and privacy from parental control.

This section reviews studies of handsets in personal communication, particularly for young people. Key theoretical constructs are explored as well as existing studies of mobile messaging in relation to media ecologies.

Ecologies in mass media studies

The study of media ecologies spans a number of schools of thought (Strate 2004), which are not all theoretically compatible in terms of how they conceptualise the relationship between media technologies and society. From one perspective, media ecology has been defined as the study of media as environments in which culture grows, somewhat like a petri-dish (Postman 1970:161).

As Postman's 'petri-dish' metaphor suggests, at the core of media ecology theory in the United States is a perspective on media determining culture:

A medium is a technology within which a culture grows; that is to say, it gives form to a culture's politics, social organisation, and habitual ways of thinking...we were not simply interested in media, but in the ways in which the interaction between media and human beings gives a culture its character (Postman 2000: 10 - 11).

Postman's perspective can be characterised as broadly technologically determinist, in that he argues that not only does media technology profoundly influence society or 'a culture', but it also gives form to particular ways of thinking. So, for example, Postman believes that literacy and reading encourages independent and critical thought, while television reduces everything to entertainment and undoes our "capacity to think"

(Postman 1985). This position allocates greater influence to television, and by implication to technology, and less agency to individuals in society, than is warranted.

McLuhan's approach is more aligned with the point of view that considers context and use. Rather than focusing on the negative or positive effect of media, McLuhan focused on the ways in which different media forms alter each other and exist within a media ecosystem (Strate 2004:4). Interplays between television and radio use were an example of this, where the one medium does not replace the other and use of each is understood within a space where they both operate.

From another perspective, media ecologies are the study of "environments as media" as media are not separate from human experience but are rather an "extension of our human ecology" (Strate 2003:1). Media are thus not separate tools but rather form part of our context and culture and evolve alongside us.

Sociotechnical ecologies and everyday life

Other broadly ethnographic approaches to media ecologies emphasize social factors rather than the determining power of technology. As outlined in Chapter One, the ethnographic tradition investigates mass media and its role in everyday life. Roger Silverstone (1994) studied media, particularly television, in domestic settings, revealing how social factors and personal relationships affect the interpretation of media. Ethnographic work that conceptualises the social, technological and discursive 'layers' in a media ecology help to identify interactions between many different media forms and people's everyday experiences.

A particularly relevant study of young people's use of new media in a range of family and peer group contexts (Ito et al. 2010) applied the idea of broader media ecology to studying how young people make choices about media. The authors argued that youth participation and involvement were evolving alongside technological change and also existed within a broader "social and cultural" ecology (Ito et al. 2010:340). They used the term media ecology to acknowledge that "the everyday practices of youth, existing structural conditions, infrastructures of place, and technologies are all dynamically interrelated" (2010:31).

As discussed Foth and Hearn (2007:9) suggest a framework for understanding the different levels of influence within a communicative ecology. Foth et al. argued that the peer to peer use of communication devices (including email, instant messenger, phones and face to face) create a 'communicative ecology' for the participants of their study. This model allows researchers to conceptualise multiple influences on behaviour and media use, and thus avoid deterministic assumptions.

The spatial metaphor of 'layers' in an ecology is tied to the "infrastructures of place" (Ito et al. 31:2010), thus retaining traditional assumptions about space and place.

Chiumbu (2012) applies the layer metaphor to a study of mobilisation and mobile phones in an anti-eviction campaign in Western Cape townships, including areas of Delft, Hanover Park and Gugulethu. To date, media ecologies theory has emphasized mass media. Hence it may be necessary to incorporate insights from the study of personal communication into the ecologies framework.

Mediating personal communication

Stefana Broadbent (2012) traces the history of studies focused on new technology and communication channels. During the 1990s and the first 'explosion' of the Internet studies focused on the way digital communication channels were connecting people previously unknown to each other across the world. Later, scholars realised that mobile phones were used to reinforce existing relationships. Ito and Okabe (2005), Donner (2006) and Katz and Aakhus (2002) all showed how mobile phones are in fact used by people to communicate with close family and friends.

Rather than enabling substantial shifts in social networks, mobile communication were found to add an ever-present communication layer to existing social relationships (Broadbent 2012). First, digital communication channels such as mobile handsets do not transcend existing social ties or change culture, as Postman might argue. Instead, they enable an alternative channel for rich engagement within existing relationships. Second mobile phones allow "private personal exchanges" in places where they would ordinarily be frowned upon (Broadbent 2012:131).

Hoflich discusses that "the mobile phone openly contributes to a privatisation of the public arena, for instance where private or even intimate subjects are involved" (2006:59). He highlights that mobile handsets contain a list of contacts that are not available publically, but rather must consist of people the owner has actually met. Campbell similarly points out that the use of handsets in public space leads to an "absent presence," where engaging on the handset (whether through messaging or a call) personalises the "communal experience of being in that space" (2008:379). While this is far from the determinist argument presented by Postman, it does suggest that the use of the handset allows some agency in altering public space.

While a conversation held over IM would not allow for eavesdropping in the same way that a voice call would, the idea of absent presence certainly applies. Absent presence describes someone's state of being when they are present physically in one space, like school or a restaurant, but are engaged with conversations through their mobile device which means their attention is diverted away from their physical space. It should be acknowledged that this is not always the case. In a study by Ito and Okabe (2005), it was found that mobile email was used to "circumvent the communicative limitations of the classroom situation", facilitating communication in a way that was nonetheless tied to the physical place.

What emerged from the young people who took part in the group sessions is that IM does sometimes present a social world that operates separately from their physical space. While they may be sitting at home, their attention is often fully absorbed by a social exchange rooted in a chat room.

While messaging conversations do establish a separate space from the physical one in which a person may be, messaging spaces are not entirely private spaces. Young people cannot always control who 'adds' their name or number to a contact list on messaging applications. Indeed many teenagers choose not to ignore connections requested from strangers. Constructing a sense of privacy or control over a messaging network space becomes a slightly more complex negotiation, not simply in an effort by young people to protect their intimate spaces from their parents or guardians, but also from people

outside their immediate social networks. Young people make connections with people through IM before fully being able to predict or identify what the nature of their relationship will be. In this sense, an idea of public and unprotected space exists here separately from physical public space.

Hall's theory of Proxemics suggests some principles to explain how young people make decisions about interacting via messaging. Edward Hall is a cultural anthropologist who studied how people interact and use social space. As an anthropologist he described what the study of personal space would yield for a researcher.

...he is looking for patterned distinctions that transcend individual differences and are closely integrated into the social matrix when they occur (Hall 1963:1006).

He believed that cultural systems contain elements that can be "understood" and "controlled" by someone who is a "normal" member of the group. He initially noticed that different cultures had different notions of what was a comfortable distance from personal space, and so mapped out different identifiers in people's behaviour, like a "voice loudness scale" (Hall 1963:1007). In his work he identified different distance zones, including intimate personal and social zones. He also identified a territoriality people would display over space that they felt was theirs, and that these lines were defined within an unspoken but understood social code. In the IM ecology, young people can divide their contacts into lists according to criteria of their choosing, for example how well they know someone. They can also choose to engage either in one on one messaging or more public conversations via multi-user chats. Young people make conscious choices about who they allow into their messaging space, and can divide contacts between applications according to the intimacy of the connection.

As in the case of Hall's Proxemics, young people defend the boundaries between personal exchanges and more public interactions. Handsets do impact on behaviour in public spaces, but IM is not a purely private space. Instead layered experiences of public and private coexist, as managed via the affordances of application and device.

In studying teenage uses of Facebook for communication, boyd and Marwick discuss that teenagers use not only features made available by the network, but also employ codes, context and different networks in order to construct their own idea of privacy when engaging in this space (2011:6).

Mobile phones, agency and youth culture

To consider agency within the personal communicative ecologies of young people it is useful to draw on Cultural Studies. Within Cultural Studies, youth cultures are often conceptualised as drawn together by a resistance to dominant power relationships, but this may reflect the preponderance of studies which select extreme examples of spectacular youth resistance, and which often focus on white male subcultures rather than on a cross section of society (Williams 2007:580). Bucholtz argues that this has led to the framing of youth as oppositional or in transition rather than recognising youth as a state of being in itself (2002:525).

Identifying youth as a cultural stage that "marks the beginning of lifelong engagement with certain cultural practices" Bucholtz argues that the term applies to many different things in many different contexts (2002:525). Different countries encourage different

perceptions of youth, and in countries such as South Africa, inequality creates many different experiences and identities which fall under the umbrella of 'youth culture'.

To address these concerns, Bucholtz settles on the following description of youth culture:

Youth is a context-renewing and a context-creating sign whereby social relations are both (and often simultaneously) reproduced and contested (2002:528).

Rather than focusing on youth culture as (in part) a response to "social class conflicts" in the cultural studies tradition, Bucholtz (in the anthropological tradition) emphasises the importance of focusing on the everyday practices of youth. Bucholtz acknowledges that the term *youth culture* signifies a space in which social relations are 'reproduced', nonetheless assigning the sense of agency to young people as highlighted in the cultural studies approach (2002:539). This agency is demonstrated in the idea of "post-consumption", which highlights that young people are "spontaneous, creative appropriators of commodities who proceed to edit, revise, repurpose and redirect what they consume" (Broughton 2011:249).

A focus on the everyday agency of young people in reaction to media and societal influence is in direct opposition to the deterministic view of media ecologies put forward by Postman. This study argues that youth cultures are not only sites of resistance or sites of rebellion and that they are made meaningful through everyday interactions of young people and their use of media for personal communication.

Aside from the idea of agency in the appropriation of IM, two additional key concepts in youth cultural studies are relevant to this dissertation, namely *Space and media* and *identity and authenticity* (Williams 2007).

Williams discusses sites of sub-cultural resistance, where working class youths would resist cultural hegemony "on street corners, in the dance halls, on the open road, and in weekend holiday spots" (2007:576). Williams extends sub-cultural space to virtual space as well, in that they allow people who are not in the same physical space to "create a shared identity and culture" (2007:583).

In relation to identity formation, Cultural Studies provides insights into the hierarchies that create insiders or outsiders to a particular group (Williams 2007:585). Insiders have the sub-cultural capital that comes with understanding codes of behaviour for that particular site. Young people can be said to appropriate and revise the tools at their disposal in their efforts to define and assert a sense of identity within fluctuating social power relationships.

Defining youth culture in any normative way is not useful. Instead the term must be acknowledged as a sign of reproduced and contested social relationships. Castells suggests considering the "specific system of values and beliefs that inform a given age group" as distinct from those of other "age groups in society" can assist in understanding what youth culture is (2007:127).

While this study provides insights derived from a group of South African teenagers, there are some themes and concepts that are relevant to the study of youth culture around the world. Young people prioritise their peer groups, and aim to establish autonomy and a sense of their own identities, and the handset assists them in doing so (boyd, Bray et al. 2010, Horst et al. 2010, Thurlow 2003).

While it is hardly accurate to generalise about youth, it seems fair to argue that both the need for independence and finding an acceptable place to belong within a social network are powerful motivating factors for adolescents (Castells 2007, boyd 2011, Thurlow 2003, Wyn 2011). Belonging to a peer group enables young people to explore their own sense of identity within a larger network. The peer group is seen as a method for "understanding becoming an adult", which situates it as an influence outside of the family, and therefore potentially positive or negative (Wyn 2011:92). As is outlined in a recent study of young people in post-apartheid South Africa, parental concern about the dangers of a peer group exerting influence beyond their control often makes peer relationships beyond the immediate physical and social environment difficult for young people to establish (Bray et al. 2010:137).

boyd and Marwick echo this view in a study of teenage privacy and mobile communication (2011). Teens, boyd argues, have little choice other than to use networked media spaces in order to make social connections and defend their own privacy.

A tension between the desire for autonomy and the restrictions placed on young people by their reliance on their parents is present in many of the studies that investigate teen new media use and mobile phone use in particular. While the handset is necessary in the minds of parents as a safety precaution, it also signifies an area that they cannot control (boyd, Marwick 2011).

In studying teenage uses of Facebook for communication, boyd and Marwick discuss the idea that teenagers use not only features made available by the network, but also employ codes, context and different networks in order to construct their own idea of privacy.

What's at stake concerns not just the right to be invisible, but who has the right to look, for what purposes, and to what ends. Finding a way to manage boundaries is just one of the challenges that teens face in navigating networked publics because privacy isn't simply control over the social situation; it also requires enough agency to affect these situations (boyd, Marwick 2011:6).

boyd showed how teens construct coded messages that can only be understood by those receiving these messages. In this way a public space can be made private through resourceful interpretations of what the medium itself offers.

One of the most common strategies that both teenagers and adults use is to separate social context by social tool...For example, teens would argue that Facebook was more public facing, while text messaging was more intimate (boyd, Marwick 2011:20).

Here different options within a messaging or mobile ecology allowed for different outcomes, much as different social codes identified in Proxemics assist in the managing of physical social space. Campbell found that young people set up boundaries between outsiders and insiders for the peer groups they are establishing by keeping messaging for their peer group, and reserving voice calls for adults (Campbell et al. 2008:380).

The affordances of messaging and mobile applications are also used to assist people in negotiating their experience of power hierarchies. Ito and Okabe's description of teens using handsets to circumvent the expected communication patterns in a classroom, for

example, is framed as “challenging the power geometries of space” (2005:11). By sharing their thoughts on the lecture or sending notes to absent classmates, Japanese youths were undermining the classroom hierarchy and the dictates of when and how they could communicate. This may not be the equivalent of working class youth in England forming sites of protest on street corners, but nonetheless demonstrates practical agency for young people as media users. When shared messaging activities connect a number of different physical settings the new “technosocial situation” nonetheless retains “*a coherent sense of location, social expectation, and role definition*” (Ito et al. 2005:5).

The technosocial space affords young people privacy within an accepted set of social expectations and norms, or Proxemics, which govern their use of messaging channels.

boyd, Ito and Okabe allow young people far more agency than is acknowledged by Postman, and these ethnographic studies show that handsets do not determine how young people behave. Rather context, motivations and technical affordances all play a role in determining how the device is used.

In a study conducted in Morocco the appropriation of technology was demonstrated in the extreme (Bowen et al. 2008). In this context, young women were not allowed to speak to men at all. However, through handsets they were provided with a means of simultaneously respecting the cultural norms of their societies while conducting emotional relationships with male suitors and friends. The authors describe how handsets facilitated a “behavioural dualism” that allowed the subjects in their study to conduct private conversations and secret meetings (Bowen et al. 2008:228).

Similarly, studies in other parts of the world, such as India, have demonstrated how handsets are used for romantic purposes when socio-cultural norms in society do not allow young people to date openly (Matanhelia 2010:259).

In a discussion on the uptake and significance of SMS, Goggin discusses an example where teenage women were specifically empowered. In the 2003 airing of the television show *Australian Idol*, an unlikely candidate won on the back of votes by teenage women.

Casey Donovan, a young woman, whose body shape, dress, and attitude did not fit the usual mainstream music industry requirements... However, there was a strong alignment between Donovan and one of the most important audience demographics, namely mobile phone wielding young teenage and pre-teen girls (Goggin 2005:9).

Goggin argues that this example demonstrates not only that mobile messaging can empower an unlikely group, but that the medium itself takes on a new meaning when it is used in context of the codes, interests and motivations of a particular group. SMS itself was not intended to be used as it is today, but rather was adopted because it met a need (Goggin 2005:4).

Goggin acknowledges that the significance of this medium opens up manifold possibilities for the study of mobile messaging platforms.

Moreover, questions of cultural citizenship and new cultural forms for mobiles are really only starting to be widely discussed. What is exercising many minds is what

sort of cultural material will consumers be prepared to pay for, and how much (2005:13).

In a later work he looks at one such tool, MXit. MXit is a channel of particular interest in South Africa, given that it is an application that was created here, and due to its low cost data rates, it has a strong hold on many South African youth.

MXIT offers a package of internet applications that work effectively on a cell phone...this brings the internet into the ken of the many South African users who cannot afford a computer and internet access, and do not otherwise have easy access to internet... (Goggin 2011:161).

Cost is a very real issue in South Africa. While this study reports on young people who have access to smartphones, there are more economically restricted young people still able to access MXit, and even larger groupings that lack access to the most basic handset. For some young people "limited functionality and symbolic meanings of their handsets create difficulties in their relationships with their peers" (Pallit, Walton 2007).

In a study conducted in 2009, Chigona, Chigona, Ngqokelel and Mpofu investigated perceptions of MXit among users and parents. They found that while there was some fear from parents, youths enjoyed the medium as a way to make friends and flirt. They quote earlier studies that supported this idea as well.

"...for girls, social networking sites are primarily places to reinforce ... friendship; for boys the network also provides opportunities for flirting and making new friends" (Chigona, Chigona, Ngqokelel, Mpofu 2009:4).

The m4lit project used MXit to encourage South African teens' leisure reading and writing (2009). They argue for the recognition of mobile literacy practices. The study unearthed examples of specific MXit use that are relevant to this study. MXit is used to create various technosocial situations, negotiate relationships with both known and unknown contacts, accrue cultural capital and play out gender power dynamics.

While teens used MXit to develop existing friendships, the application was also used for exploring newer romantic connections (Walton 2009:57). MXit provides an arena within which adolescent girls can experiment with their sexuality (Bosch 2008).

Teens navigate the dangers of connecting with unknown people by considering carefully what and how they should share and making judgements about their possible agendas (Walton 2009:67). By making lists of different friends and contacts, young people could organise and categorise their relationships, labelling them, as described in the study, "my girls", "hot gals", "older men" or "rich ones" (Walton 2009:52).

In a study conducted in 2002 in California, teenage users who would be seen to have access to more sophisticated technology, were surveyed and studied in order to learn about their media use (Schiano et al. 2002). It was found that IM provided "direct, immediate, casual online contact" sometimes used in order to facilitate flirting, assist with shyness and broach more difficult subjects (Schiano et al. 2002:1).

In a more recent study applying a media ecologies framework, it was found that while Mxit's user base has remained strong in South Africa, the migration of wealthier users to WhatsApp and BBM raises questions around access and how networks are formed and contacts are made (Walton et al. 2012). Nonetheless, a spectrum of choices is available within the messaging ecology.

These studies all highlight the need to investigate a channel in terms of its significance in particular contexts. Motivated by a need to establish independence, establish some level of control over privacy, build peer relationships and romantic ones, young people appropriate mobile affordances. They demonstrate agency in their negotiation of mobile channels, greatly influenced by the context of their daily lives. As argued by Campbell and Russo, "understanding the social construction of meaning requires peeling back layers of context and examining the interactions that take place in daily life" (2003:321).

Many of these interactions are enabled or restricted according to the affordances of the mobile phone. It is in negotiating these that young people practice post-consumption.

Aspects of communication

Affordances describe the possibilities of what technologies can offer to the people who use them (Gaver 1991:1). The functionality and affordances of mobile devices and IM channels can influence communications in a number of ways. Being able to divide contacts into lists, send a message out to a large group of people or conduct a separate one on one conversation all depend on the affordances of the application. Similarly profile information can be displayed, including different information or images depending on what is offered.

Messaging channels offer different benefits. Baym discusses seven concepts which she believes enable the understanding of the capabilities of different media forms and the comparison of these to each other and to face to face interactions (Baym 2010:7). While Baym discusses how the affordances of a device or application influence its use, much as Postman does, she does not extend this to a determinist argument where the technology dictates people's thinking, use, or culture.

Baym's discussion considers the role of various aspects of communication, namely interactivity, temporal structure, social cues, storage, replicability, reach and mobility.

Interactivity refers to the ways in which media offer people the ability to interact socially, and also refers to technical interactivity, which allows people to interact with a technical interface. Baym describes interactivity in this context as a continuum rather than a "condition" (2010:7).

Within *temporal structure* asynchronous and synchronous communications are considered. The former refers to interactions that occur out of synch with each other, while the latter refers to communication that is instantaneous or happens at the same time. Instant messaging is synchronous, in that it allows for instant response. Should someone be away from their phone or simply decide not to respond immediately, communication can also be asynchronous. This quality makes messaging far less invasive than other forms of synchronous communication. Nonetheless, Baym describes

how synchronous communication can transcend a sense of “placelessness” by making people feel closer to each other across greater distances (2010:8).

Different forms of media provide more or less limited *social cues*. Mobile IM, for example, provides no insight into body language or physical context during a conversation. Baym points out, however, that relational contexts exist between those who already have a relationship and then communicate through these channels (2010:9). These can include a shared history or knowledge.

Baym groups *storage* and *replicability* together, and these terms refer to the way various devices offer different means for storing and sending on messages. In IM it is often possible to copy, paste and save various conversations. Storage and replicability also influence *reach* in that digital media offer different affordances in terms of how many people can take part in the communication (2010:9).

The final factor discussed by Baym is *mobility*. Mobile devices offer mobility in that they can be used to move around and not be tied to a sense of physical space unlike desktop PC or fixed line telephones (2010:9).

To bring the discussion back to IM, all of the above factors influence how successfully a person can control the timing, intimacy, privacy and Proxemics of their own interactions.

Messaging affordances

The possibility of intimacy and levels of control over relationships and their public display depends on the affordances of the various messaging channels available via internet-enabled mobile phones.

Instant messaging applications offer a range of functions, or affordances for communication. These are important because they contribute to the messaging ecology and young people adapt to or use these functions in order to achieve their personal and social goals. The following key affordances are worth singling out:

Broadcast: When a person may send the same message to all of their contacts.

Profile: Someone’s description of themselves. This can include an image and personal description.

Status: A line of text that accompanies a photo in someone’s contact list. This can either be a humorous line or a description of what someone is currently doing.

Group conversations: This is when more than one person is included in a thread of messages.

Lists: This allows the user to separate their contacts according to criteria they can decide on, and then to organise them in this way for easy access.

These specific affordances of IM interact with Baym’s seven concepts and contribute to young people’s command of relationships and social interactions. The results of the everyday context and the agency afforded to young people in the layered public and private spaces which they engage can be seen in how the affordances of a channel are negotiated. Access to the devices and applications where their peers are present

determines whether or not a young person can gain any social capital or will be excluded from this sphere of social development.

Networks and youth culture

Networks are a key concept in relation to the study of personal communication. Castells outlines the important relationship between individual identity formation and the building of a social network through mobile phone use:

When a network is common to a number of its members, it becomes a peer group. In other words, networked sociability leads both to an individual-centered network, specific to the individual, and to peer-group formation, when network becomes the context of behaviour for its participants (2007:140).

Castells looks at networks from a macro and global scale and the ways in which they interact with more micro and personal networks. Micro interactions and new patterns of networked sociality are explored by Wellman, who presents the idea that personal networks have become organising entities in contemporary society (Wellman et al. 2009). Wellman discusses how distance and other forms of separation become far less important, as global ties, existing relationships and new relationships are mediated by social rather than spatial accessibility, giving rise to 'networked individualism' (Wellman et al. 2009:2).

These personal networks look very different depending on life stage, and clusters or groups of ties within networks may be used for different purposes. Wellman establishes that communities have not necessarily declined as they become embedded within networked individualism, but rather that networks have "complex structures and processes" (Wellman 2009:17).

These beliefs informed the evolution of social network analysis.

...a perspective on society built on the premise that "social life is created primarily and most importantly by relations and the patterns formed by these relations" (2009:11).

Rather than focus on any inherent qualities of the players in a network, social network theory looks at how the relationships between these players and their positions within the network influence their behaviour and their access to resources. When the value of a network increases due to the number of other people on that network, this is termed network externality (Katz, Shapiro 1985). Here the concept of 'network externality' allows several important insights.

While the participants in this study make choices within an available ecology, the ecology also adapts as a result of their choices. Their own sense of empowerment is very much determined by where they find themselves within a network of peers. What phones they have, and what messaging applications they use also have some influence on what networks they have access to. Network externalities play a key role here in either providing someone with access to certain networks based on their position within a larger network, or, alternatively, blocking their access. Access or lack of it can take on great significance for young people trying to find their way through social relationships. While social networking theory is not entirely applicable to this study, the idea that

access to resources (in this case social contact) is determined by someone's position within a technological network is a necessary concept when looking at the technological layer of the messaging ecology. This notion is returned to further on in this dissertation.

The structure of the networks which young people have access to and through which they communicate either support or limit their ability to make connections. In studying social networks danah boyd applies the idea that a list of contacts can be a signal of validity. She discusses honest signals and conventional signals, describing that the former is costly to acquire while the latter is less costly but also less reliable (Donath, boyd 2004:73). Teens gain status by displaying their social connections, and thus question whether someone legitimately has many social connections, or whether they have merely collected contacts or current IM conversations, revealing an overly instrumental approach to friendship. Signifiers of popularity, while perhaps not on display in the same way as in a social network site, (where 'Friends Lists' are navigable), is nonetheless important in a messaging ecology.

The number of connections possible and the ease with which you can make more connections and gather information about people with whom you have weak ties influences how people control their social identities. boyd discusses the concepts of social convergence and social divergence to account for these phenomena. In her paper entitled 'Facebook's Privacy Trainwreck' (2008), she investigates the impact on privacy of Facebook's news feed, which displays people's social activity in a central space for all users. She labelled the resultant experience 'social convergence' or a phenomenon where "disparate social contexts are collapsed into one" (2008:18).

As a result of social convergence, information is shared separately from the contexts in which certain norms may make behaviour acceptable. Social convergence "requires people to handle disparate audiences simultaneously without a social script" meaning that there is a loss of control and the structures that protect privacy in an offline environment are undermined (2008:19).

The third person effect (Davison 1983) which describes how people believe media messages have more of an effect on other people than themselves, and therefore leads them to edit or restrict their media use, also has an effect on how young people engage with their communicative ecologies. While the third person effect was originally conceived in relation to mass media use, it has been applied successfully to digital media as well (Li 2008:570).

While boyd was investigating the Facebook news feed in her discussion, this idea is relevant to many forms of digital media, and definitely to IM, where information or bits of information can spread easily and quickly through a social network, removed from the original context or situation. Images, sound recordings or video can make this effect even more powerful.

Technicity: technology as a part of being

The vexed question of technological or social agency extends far beyond messaging ecologies, and has also been considered in relation to identity. The concept of "technicity" suggests to what extent technologies have become integrated with or essential to individual and social identities:

Technicity names something which can no longer be seen as just a series of prostheses or technical artefacts – which would merely be “supplemental” (or supernumerary) to our nature – but the basic and enabling condition of our life-world (Armand, Bradley 2006:3).

Technology or tools are not external threats as Postman might argue, but rather are inextricably tied up with “internal thought and action” (Armand and Bradley 2006:13) and “the development and training of specific habits of users themselves” (Ash 2011:188).

Conclusion

This study explores the idea of a communicative ecology in relation to choices made by young South Africans about mobile messaging applications. As has been discussed, young people engage with mobile phones owing to a number of influences, including their need for autonomy, the desire to connect with or conform to peer groups and to explore their own identities. They engage in building their own networks, tying a sense of community to their networked individualism rather than a sense of physical place. They rely on the complex array of affordances of the mobile devices that they carry in their pockets. Within these broad constraints, they go about selecting devices and channels, exercising agency, and reshaping their ecologies.

The term messaging ecologies can include the choice of application as well as the social meanings arising in the interplay between different messaging applications and the ways in which they are used together. Through an initial investigation into the feelings, concerns, functionality and practicalities that are encountered by young people, this study applies the concept of an ecology to a messaging environment, and in relation to three ‘layers’ of communicative ecologies - technological, social and discursive.

Within the social and technological layers of messaging as communicative ecology lies considerable complexity. First, the economy that affects access to resources (such as handsets, airtime or applications), second, the device and its affordances, third, technicity, or the device as a part of someone’s habitual and considered processes, not external but internal and fourth, the concerns which must be managed, like social convergence, self presentation and Proxemics. By describing a structure of concepts and influences within each of these layers, one can explore how boundaries are constructed within social digital space and how they relate to physical and social reality.

Chapter 3: Methodology, sample and context

Introduction

Let us return to the core question at the centre of this study. How can the notion of media ecologies be expanded to account for messaging choices on smartphones? Given the significance of mobile messaging, and the various influences and applications for to young people, can the idea of messaging ecologies adequately address the relevant questions?

In this chapter the design of the study is presented: a core investigation into the theory of media ecologies as applied to mobile messaging, probing a small group of randomly accessed middle class young people living in Cape Town. The context in which these group discussions took place is explained. The limitations of this methodology and sample are discussed here as well.

The setting for this study included two areas in Cape Town. One is a theatre school in the central business district (CBD), the other a suburb called Sun Valley on the outskirts of the city. Participants were all members of relatively privileged socio-economic groups. In this chapter the participants for this study are introduced, both in terms of their lives and in relation to the broader South African context.

First, it is necessary to describe the broader paradigm in which the study takes place.

Taking an interactional epistemological stance

Paradigms act as perspectives that provide a rationale for the research and commit the researcher to particular methods of data collection, observation and interpretation (Terre Blanche 2006:40).

Outlining the paradigm for this study assists us in understanding the framework within which the research question is constructed and the question is coherently answered.

Taking the media ecologies approach highlights the significance of the everyday realities and influences on people and their media environments. For this an interactional epistemological stance is adopted. Ontology specifies the "nature of reality that can be studied, and what can be known about it" (Terre Blanche et al. 2006:6). By recognising that the ontology here is interpretive, it is stated that the nature of reality is different for different people, acknowledging the presence of subjective experience.

The epistemological stance, the "relationship between the researcher and what can be known" is interactional because it is also identified that as the researcher, an experience of what is learned is subjective and empathetic (Terre Blanche et al. 2006:6). An interactional epistemological stance relies on qualitative research. Qualitative research involves observation and the study of "written or spoken language" (Terre Blanche 2006:47). Rather than focusing on predefined categories and statistical types of data analysis, as with quantitative research, qualitative research is useful for "understanding phenomena as interrelated wholes" (Terre Blanche 2006:47). There are many factors at play within personal communicative ecologies, and qualitative research will assist in understanding these. An open interpretive process is necessary for achieving this.

This is basic research as it hopes to advance our fundamental knowledge of the world as opposed to having an immediate practical application as with applied research (Terre Blanche et al. 2006:45). It is also an exploratory study as it hopes to make a preliminary investigation into a relatively unknown area of research (2006:44). As outlined in chapter one, IM is only starting to be investigated, and the purpose of this study is to develop a framework for such analysis, similar to the "layers" in the interpersonal communicative ecologies.

It has been established that a focus on the lived and subjective experiences of the research participants is being instituted by "making sense of people's experiences by interacting with them" (Terre Blanche et al. 2006:274). The qualitative research technique, or methodology that is best suited to do this, is focus groups.

Given the need to explore the application of a messaging ecology and areas for further investigation within the context of specific media use, implementing focus groups was a natural fit for the methodology of this study. The methodology creates a setting for peer culture and allowed for the investigation of "the process whereby young people create shared meaning and understandings" (Heath et al. 2009:90). Given the need to establish the context within which teenagers are engaging with messaging ecologies, focus groups offered three fundamental strengths, "1) exploration and discovery 2) context and depth and 3) interpretation" (Morgan 1988:12,13). This occurs because people are presented with ways in which they are different from and similar to each other (Morgan 1988:12).

It is necessary to introduce the research participants.

Participants: Cape Town, the theatre school and the valley

When investigating the application and interpretation of media forms in Cape Town, access to devices and tools is not equal or even expected across different groups. As described by Bray et al.

Material inequalities persist and the distribution of income has probably become even more inadequate after Apartheid than during it (2010:23).

There is a huge difference between the experiences of the "haves" and the "have nots", and this is reflected in provision of schooling and delivery of services such as housing, sanitation and electricity across the city. The Apartheid's legacy is thus still very present in the reality of the experience of Cape Town citizens. The 2011 census established a number of interesting realities about the country:

- The average South African is 25 years of age, and most of the population is under the age of 29.
- 7% of the population in the Western Cape has no access of any kind to electricity for lighting.
- More people in South Africa have fridges, TV's and handsets than radios.
- Only 35.2% of South Africans have internet access, with nearly half of these connecting to the internet via mobile phone.
- Mobile phones play a significant role in South African households, given their presence in 88.9% of these, while only 21.4% of households have a computer in the house (Census 2011).

With only 67.9% of the population of the Western Cape employed, it is safe to say that the participants included in the groups for this study come from households with a higher than average standard of living compared to many others. In addition they enjoyed easy access to global perspectives in the media derived from the relatively privileged financial situation of their parents. The participants in this study are all of school going age, attended private or semi-private schools, and all had access to "extras" such as extra-mural activities.

Within the two group discussions, one with young men and one with young women, the participants shared broadly similar socio-economic backgrounds. The participants in this study have all grown up in Cape Town. The common ground of the five female participants, aged thirteen to sixteen, was that they all attend the Waterfront Theatre school, an extra-mural activity that requires substantial additional fees apart from their normal school commitments.

Various indicators of their experience will be discussed in the research results, but it is worth pointing out here that these participants displayed international perspectives as well, having travelled much themselves, and being very aware of contrasts and comparisons between their own experiences and elsewhere in the world, particularly with regards to technology and its use in their global peer groups.

The young male group included three young boys aged 18, and are all from the Sun Valley area in Cape Town. The demographic of Sun Valley learners is more varied than with the Theatre School girls, but all fall comfortably in higher income groups (Bray et al. 2010).

Sample

A purposive sample was chosen because it was necessary to find teens who had easy access to smartphones and enough airtime to be able to use mobile data extensively.

Participants in the group discussions were reached through two different methods. For the group of young women a central access point was determined for them to converge across Cape Town.

The Waterfront Theatre School

The Waterfront Theatre School was launched in 1978 and currently offers full time and part time training in theatre, dance and music. The part time training fees for those of a school going age, which applies to the young women in this group, ranges between R1 200 and R3 600 per term. A teacher at the school approached teenagers between the ages of 13 and 19 to establish if they were willing to partake, and a group of five young women across the different streams of dance, drama and musical theatre volunteered. These youngsters were expected to be more confident as a group and outgoing in public forums, given their interest in and proclivity for performance. The young women attend the school once a week on a Saturday, except during formal school exam periods. They attend of the following private and 'model C' (fee paying) schools across Cape Town:

- Herschel
- Westerford

- Fairmount
- The American School
- Springfield

While two of the teenagers attended the same school, most of them maintained contact with each other primarily through the Theatre School. Their social circles overlap somewhat, as will be discussed in Chapter Four. The schools listed above are considered to be excellent schools in Cape Town, with rigorous admission requirements, both financial and academic.

Sun Valley

The second group was held in Sun Valley in the Cape Peninsula. This area was chosen by Bray et al. for another study, given the close proximity of areas as diverse as Fish Hoek, Masiphumelele and Ocean View, of youth growing up alongside each other, but from widely different socio-economic conditions in South Africa.

..the spatial impress of apartheid remains: the majority of the coloured and African residents live within the narrow confines of Ocean View and Masiphumelele while the richer, white residents live in lush suburbs and smallholdings that have developed across the area, from one coast to the other (Bray et al. 2010:1).

The sample was a snow ball sample (Terre Blanche et al. 2006:564). The initial contact and entry point for reaching participants was an 18 year old boy living in the area who assisted in making connections with the other boys and their parents. A room was secured in a local religious centre for the discussion to take place in. While the room was sparse, private and neutral, and follow-up questions with the boys suggested that the religious setting did not influence their answers, it should be acknowledged that this is not the ideal and neutral space for a discussion of this kind to take place.

The groups included five young women and three young men respectively. Three is not an ideal number of participants, but not all of the recruited participants attended (Terre Blanche et al. 2006:304). Nonetheless, it was still worth considering the results of the focus group discussion in relation to the girls' focus group, where recruitment was more successful. There were various points of comparison and difference between the two, which are by no means conclusive, but do allow for points of discussion from an exploratory perspective. The participants are listed in the table below.

Pseudonym	Age	Gender
Sarah	16	Female
Tracy	16	Female
Lauren	16	Female
Lindiwe	13	Female
Evelyn	15	Female
James	18	Male
Simon	18	Male
Peter	18	Male

Table 1. A list of the focus group participants, names are pseudonyms.

Structuring the groups

While some groups may benefit from the participants having had no previous contact with, or knowledge of one another, this study required a certain level of comfort and definitely a shared context or experience. In this way the participants could discuss their common experience of networks of people and the messaging applications that they all use. In order to learn about the meanings that are absorbed in the sharing of media and messages, it is important to understand the context within which this takes place and how these meanings are negotiated and interpreted by a group of peers. A group which attempts to recreate some of the context under scrutiny would not benefit from the recruitment of strangers (Morgan 1988:49). Recruitment should occur

...on the bases of similar demographics, psychographics, buying attitudes or behaviour ... Its goal is to delve into attitudes and feelings about a particular topic, to understand the "why" behind the consumer behaviour (Greenbaum 2000:3).

It was thus also necessary to separate the groups by gender, ensuring that young women were in one group and young men in another. Certain topics, especially concerning sexuality and romantic interest, could be affected in different ways by the presence of the opposite sex. By arranging the groups based on gender, an attempt was made to mitigate any restrictions participants may share in this respect.

In order to discuss the relevant topics, a list of discussion topics was designed that were then introduced to the group. Wherever possible the natural flow of conversation was not disrupted, but rather encouraged and at times guided towards certain topics in order to establish a level of comfort and sharing among the participants.

This dual ability both to direct and to follow can be especially useful for topics where people are not in touch with or are able to articulate their motivations, feelings or opinions (Morgan 1988:58).

Investigating shared context and experience

An ethnographic approach is recommended for further research into the contextual meanings of messaging ecologies. Nonetheless the value of focus groups should not be underrated. The focused results, and "concentrated data" benefit from the unique environment created in a group and what can be learned from the ways in which participants react to each other (Morgan 1988:32). As outlined by Greenbaum:

The strength of the focus group technique is that it enables a group of individuals to share their views in a non threatening environment, with the goal of learning about the factors that dictate a particular action or attitude (Greenbaum 2000:6).

This point is particularly relevant considering that this research focuses on a group of adolescents. It has been suggested that group discussions should be the "default option when interviewing young people" (Heath et al. 2009:90). Given the group dynamic, the assumption is that the power dynamics between a somewhat older researcher and the participants could be favourably affected by the support and presence of peers. Of course the dangers of peer influence are also relevant here.

Group discussions assist the researcher in learning from this group, if not necessarily only about the individual.

"Focus groups sacrifice details about individuals in favour of engaging the participants in active comparisons of their opinions and experiences" (Morgan 1988:32).

Greenbaum argues that this contributes to group discussions being the only research technique in which unintended reactions from participants contribute just as much to identifying areas of focus or investigation as intended reactions do (*Greenbaum 2000:10*).

Indeed, given the focus of this study, the group setting may offer a more familiar setting in which participants can discuss their experiences. As discussed by Heath et al.

The group interview is a more 'natural' context for exploring young people's lives, given that young people 'acquire social knowledge through interaction with others as they construct meanings through a shared process' (Heath et al. 2009:90).

Krueger points out, for example, that "silence does not imply a lack of opinion" (1988:20). Insight can be gathered by looking not only at what is actually discussed but also at contradictions or different reactions. Through "emotions, ironies, contradictions and tensions" the researcher can look at what lies behind or influences the responses given (Grudens-Schuck et al. no date).

It is very important to acknowledge the role that peer influence can play in a group setting. The fear that participants will choose to conform rather than share their own views is a disadvantage and a concern in using the focus group methodology. In an attempt to mitigate this affect, it was established firstly that there are no wrong answers within the discussion itself, and secondly that the context and influences that participants encounter negotiating a shared reality are exactly what this study aimed at exploring. Careful consideration and attention was given to this possible limitation within the group setting. Heath et al.'s argument concerning the role of peer influence as a potential weakness of focus group discussions is nonetheless pertinent:

...a focus on the processes whereby young people create shared meanings and understandings may reveal just as much about peer pressure and the influence of dominant individuals in shaping those 'shared' meanings (2009:91).

In considering this reality, it may be valuable to look at this shaping constraint as data in itself. As Heath et al. explain:

...interview data may be treated as a topic in their own right, rather than viewing the data as a resource providing an 'objective' account of young people's lives (Heath et al. 2009:92).

Ultimately however, an awareness of peer influence is essential as its presence is a given in this context.

Focus Groups Analysis

Group analysis, much like any qualitative analysis, can fall prey to human subjectivity and error. The process “involves a more subjective process of listening to and making sense of what was said in the groups” (Morgan 1988:30).

Krueger discusses how the necessary systematic steps in the analysis can “force the researcher to question his or her own assumptions” (Krueger 1998:11). Krueger outlines a number of steps, not all of which could be followed for this study (access to an assistant researcher, for example, was not possible). The following steps were followed, however, in order to assure a robust analysis process:

1. The questions were sequenced carefully in order to allow participants to become familiar with the material.
2. Notes were taken during the focus groups, which were also recorded digitally. These audio recordings were then transcribed.
3. Participants were given the opportunity to summarise their own thoughts and feelings within the focus group.
4. Finally, the transcribed data was coded.

(Krueger 1988:11)

Axial coding was employed in this analysis. Krueger describes this method of coding as follows:

As the researcher comes across an idea or phenomenon, a label is attached. When the idea or phenomenon reappears, the label is once again attached. ...the researcher can selectively retrieve and review information pertaining to certain codes, combination of codes, or related situations...This process, which is called axial coding, allows the researcher to fracture the data and to reassemble them in new ways (Krueger 1988:11).

In this way the raw data was broken down into a form that allowed for the comparing and contrasting of the views shared within the focus groups. As discussed by Tesch, comparing and contrasting are essential steps in analysis. “The goal is to discern conceptual similarities, to refine the discriminative power of categories, and to discover patterns” (Tesch 1990:96).

The labels used in this analysis included the following:

- Gender
- Intimacy
- Parents
- External forces
- Danger

These discussions could then be analysed and coded and ultimately they lead to an understanding of the validity of an idea of messaging ecologies, as well as the identification of various areas that would inform such a study.

Youth Studies and Ethical considerations

The question of ethical conduct of research and informed consent in youth studies is an important point of discussion. Unequal power dynamics between the youths and their guardians (parents or teachers) and between youths and their peers can all have an impact not only on the research results, but importantly can also affect the lives of those it aims to understand. Heath et al. discuss the tricky dynamic present in a discussion of academic youth research. They point out that this discourse, "even in seeking the promotion of a better understanding of their worlds, is as complicit in the objectification, control and governance of young people as any other expert discourse" (Heath et al. 2009:14).

The interests of the research participants must be defended as far as possible. Heath et al. discuss the importance of informed consent, while simultaneously questioning how truly informed consent can be achieved based on the experiences and points of view of those being included in the research. Nonetheless, they insist that the onus lies on the researcher:

... to ensure that young people are as fully informed as is possible about the nature of the specific research project in which they are invited to be involved as well as the uses to which their involvement may be put. (Heath et al. 2009:24).

It should be noted that the group discussion conducted with a group of young women involved a gatekeeper during the initial recruitment phase. By establishing contact through a central school, the involvement of a teacher was solicited who assisted in the recruitment process. Heath et al. point out that this can be problematic. While gatekeepers "have a legitimate and important role in protecting their charges" they also have a certain authority and influence over those placed in their care. It is then even more important to establish with participants at multiple points that their involvement was voluntary (Heath et al. 2009:31).

This was well understood and implemented in the design of this research. Consent forms outlining the nature of the study were delivered to parents, and once they and their child had agreed, the research was once again fully explained to the participants, as was their right to participate or decline to participate. Here the teenagers could assent to their participation in addition to the parental consent. It was also clearly conveyed that there were no wrong ways to answer, and that all discussions would be relevant and useful for the research study.

Guarantees of anonymity were also outlined and implemented in the analysis and presentation of this research.

Alongside the principle of informed consent, guarantees of anonymity and confidentiality are two other key strands of a rules based approach to research ethics (Heath et al. 2009:34).

Finally, the power dynamic between the researcher and the participants was considered as far as possible, given the age difference and its possible affect on the results. Caputo discusses this challenge and some practical steps that can be followed to minimise this effect:

Moreover, it is important to understand the relationship between the researcher and her informants. Children experience much of their contact with adults in subordinate positions of power. I kept this in mind when I designed the

methodology for my fieldwork. As a result, I made several choices including 1) the choice of dress, i.e. flat shoes, casual and colourful clothes, and 2) physical proximity with the children, i.e. sitting on the floor with the children rather than on a chair above them (Caputo 1995:33).

Limitations of the study

There are a number of limitations that must be considered for this study. The focus on very specific groups of young people means that the study is in no way representative of broader groups of youth or an entire nation, nor is it possible to claim comprehensive representation of the participants' experience. It is only through continued research into and discussion of different experiences that one can hope to provide fuller insight into the role that media forms adopt in the use and interpretation in our everyday lives and those of any youth grouping.

Focus groups present the best method for what is being investigated here as they allow for exploration around a focused topic in the context of shared experiences in a short amount of time. Having said this, it is important to acknowledge that they also present significant inherent limitations and flaws. As is the case with any research methodology, the validity of the results must be interrogated. This study allowed for two groups to be conducted, which produced results that could be contrasted and compared as an investigation. As the number of participants was too small to be treated as true focus groups, the study instead concentrated on determining further valid avenues and analysis for a media ecologies theoretical approach incorporating the notion of social space. To this end, the limited study was useful, as social space emerged clearly as a determinant.

In an ideal situation a larger or repeated number of focus groups would have been conducted. This study aims only to identify areas of focus and investigate the application of the concept of messaging ecologies. Next steps and further investigation, as demonstrated as necessary by the results of this study, would require a far larger and more systematically selected research sample.

Ideally the participants should also view the final report and contribute additional views on the validity of the results. Bearing in mind the adolescent age group concerned, it is perhaps not entirely surprising that neither the parents nor the participants evinced strong interest regarding further involvement with the study such as discussing the interpretations of the final paper.

Finally, it must be acknowledged that while careful steps have been taken to ensure the validity of the analysis and research results, the researcher's subjectivity and own context and bias must always be considered in the consideration of any research results. Nonetheless, the researchers own background is rooted in a similar middle class experience, with access to the same technology as used by the groups. This shared background was helpful in interpreting and understanding the relevant issue clearly.

Chapter 4: Findings and discussion

Introduction

As outlined in previous chapters, the size and nature of the focus groups mean that they do not offer representative data and therefore do not comprehensively answer the question of what meanings most young people attach to their mobile IM experiences or ecologies. Instead, the young people's discussions of IM use was considered in relation to the media ecologies approach and to what extent the media ecologies framework could account for their major concerns. By shaping and viewing the discussions in light of this theoretical approach, it was possible to identify to what extent these young people occupy social spaces, albeit not necessarily physical ones. The intricate interconnections between technology, social relationships, and discourse which they reported are not adequately accounted for by current theorisations of media ecologies theory, which may require further adaptation and updating.

In this chapter the young people's perspectives on intimacy, gender and social convergence and divergence are discussed and the significance of these findings in relation to media ecologies is considered.

This analysis does not claim to be the last word regarding the significance of young people's messaging ecologies. Instead, ways to expand current notions of media ecologies to account for messaging choices on smartphones are proposed.

Key themes which emerged from the focus groups have been organised in relation to the existing three 'layers' of media ecologies theory; namely technological, social and discursive. Each of these are considered in an attempt to reach a greater understanding of what was discussed in the groups. Across the various areas of discussion it became apparent that there is a social space at play in messaging, as discussed by Tsatsou (2009), which (perhaps more so than with previous generations of media) does not allow for the easy separation of the layers of the communicative ecology.

Within each 'layer' of the ecology there are recurring themes and existing theoretical frameworks, and the results have been organised accordingly. It could be useful to conceptualise that within each layer lies a set of concentric circles, allowing for the considerations in the social and technical layers that are related be organised similarly.

In an outer layer one finds the questions of environmental influence and technicity, while internally it seemed that affordances impacted on social ability. Finally self presentation and social convergence influenced the choices that young people made when interacting within these spaces

A note on young men and women

As discussed in the methodology section, the focus groups were divided according to male and female participants. In this way it was hoped that the participants would feel more comfortable discussing subjects in relation to gender differences or sexuality.

This appeared to be an appropriate strategy, since the two groups not only displayed an interest in different types of phones, but their explanations for this interest varied as well. The group of young women displayed an awareness of practicality and responsibility, feeling the need to acknowledge the cost of both their phones and the airtime or data they use in communicating through them. The young men focused instead on status-related issues, such as what they considered, in their words, 'cool' functionality and their opinions of the latest phones.

The young women also spoke more openly about emotional attachment and their sentimental reasons for using applications and sharing and saving media on them. There was far more discussion among the young women about negotiating complexities around relationships over these mediums.

There is a danger in making assumptions in the interpretation of results according to gender stereotypes however. Given the small samples, the apparent differences between groups may have involved more than gender differences, and the focus group format may have smoothed over differences between participants.

In a group setting, participants may find themselves adhering to beliefs or ways in which they feel they should present themselves. In the male group, for example, it appeared that the young men were less likely to admit that they stored sentimental messages or images on their phone than the young women were. It could be that these young men were less likely to admit to the practice in front of their male peers. Similarly, the group of young men may have had similar concerns to the women regarding relationships and intimacy, but may have had difficulties expressing them in a group of their peers. Individual interviews might have been a better way to allow them to drop their guard and open up about such personal issues. These caveats should be kept in mind when considering the following discussions and analysis.

The Technology Layer

The technology layer consists of "technologies and connecting media that enable communication and interaction" (Chiumbu 2012:198). This study is focused on IM on smartphones specifically. These are higher end phones that offer internet connectivity and run operating systems that offer ease of use and applications for communicating via the internet. Even within this broad category of handsets however, there are a number of devices and applications that can affect the experience of the device user. The value of handsets, the associations they carry in terms of self presentation for their owners, and their affordances will be discussed in this section.

Cost and social pressures influence what device a young person has access to and the device in turn influences what messaging applications a young person has access to. The resulting network externalities mean that the social and technology layers are challenging to consider separately. In order to assess the communicative ecologies approach, the discussion has been separated between the two layers, but the overlap will become apparent.

Young women, responsibility, technicity and phone choice

The girls displayed a distinct awareness of the responsibilities and implications of ownership of phones. The first phones owned by girls were typically “hand me downs”, or in some other way determined by the handsets used by their parents. The point of having a phone, especially when they first received one, was clearly to allow them to stay in contact with and have access to their parents.

There was consensus in the group that BBM made it possible for them to communicate at negligible cost with most people in their social circles, and that a BlackBerry was therefore not simply a popular choice, but a practical one.

The language used to describe their current handsets and the phones they would want to own in future was further framed in terms of ideas of utility and cost. As Tracy expands below:

I just can't justify carrying that around. I'd just have to wait till the costs came down cause I just like don't need that. BlackBerry serves my purposes just as much as an iPhone would.

Tracy, F, 16

This difference was apparent in the comparison they offered at various points in the discussion between a BlackBerry and the latest, but more expensive iPhone models.

It is likely that the girls had internalised opinions shared by their parents here, but nonetheless an awareness of the cost of not just the phone itself but also of the cost of communication was very present in descriptions of which phone they owned.

The young women stated priorities all related to staying in touch with parents, but another interest emerged through the discussion. Cheap internet access, not call rates, was regarded as essential to their handset experience. This is because they prioritised IM and ongoing conversations with their peers. While choice of phone and their (often outspoken) justification of this choice needed to make sense to their parents, the more intimate world of IM is just as important by implication, even if not discussed as openly.

Their need for BBM and social contact was considered a basic need that didn't have to be justified. Where Tracy refers to “her purposes” above, she is pointing out that free chat access via BBM is what she needs.

Technicities

The language around being given a more expensive phone centred on justifying the ownership of this phone in terms of cost and an innate interest in “technology”. The attitude suggested that advanced phones seemed more than communication devices, but rather tools that take on significance for being examples of advanced technology. The handsets that allowed for the functionality the girls found necessary in their social contexts formed part of their technicity, in that their identities were intertwined with the social interactions made possible by the BlackBerries. By contrast, phones that were

associated with advanced functionality that they did not use were not, and consequently held less value.

The only reason if everyone had an iPhone I would want one. But at the moment everyone has a BlackBerry. An iPhone is just a phone.

Lauren, F, 16

Here Lauren expresses that without social connection, the phone is “just a phone”. Its value lies in the access to social connections it provides. In discussing the pitfalls of touchscreens not working, Tracy in her comment below, expresses that she would be “lost” just like her friend was without access to her phone. The ‘advanced’ tech that a touch screen offers is a risk if it isn’t reliable, and would simply block her from her social circle and so her sense of orientation.

I know that’s why my friends don’t use them, cause it stops working and you are pretty lost...Ja, I had a friend and she was lost without her phone and I was like, I told you not to get a touch screen.

Tracy, F, 16

The young women would need to justify the purchase of expensive smartphones (such as iPhones) to their parents, and they acknowledged that they would have difficulty in doing so. They spoke as if an expensive phone was more of an indulgence that they would be able to justify. Thus their technicity depended on the social interactions made possible by a BlackBerry, but it did not extend to gratuitously acquiring expensive technologies for its own sake.

They were aware that certain trends and fashions might dictate a choice of phone, and also that an interest in ‘technology’ might help young people to justify owning more expensive handsets.

I went on exchange to America last year, and everyone’s like, no one has BlackBerry’s, and when I went the transition was happening, you could see more people getting iPhones and stuff but their contracts meant that the phones weren’t that expensive. I just can’t justify carrying that around. I’d just have to wait till the costs came down cause I just like don’t need that. BlackBerry serves my purposes just as much as an iPhone would. I’m not particularly technologically advanced; I don’t have an interest in that kind of thing, so why do I need to carry around something that costs 8000 rand.

Tracy, F, 16

This underscores another theme, namely awareness that dependence on their BlackBerrys was a trait that related to being in South Africa. For the young women, their nationality meant that their device of choice excluded them from the “cool” handset in another country.

Nationality and “Everyone had an iPhone”

When one considers the technicity that these young participants are experiencing, it is interesting to note that the device is not just a form of personal identity, but also one

tied to a national identity. Even in travelling in foreign countries, the handset that the young lady below used formed a part of her South Africanness.

I think like here we are technologically delayed. Cause my stepdad is American, and I have step siblings and my step sister has this huge like touch screen slash iPad slash whatever it is. She was like you need to add me on this thing. And I was like I have a BlackBerry and she was like you still have that and I was like what do you mean do I still have that. BlackBerrys are so old here and I was like sorry it's not my fault.

Sarah, F, 16

The young women were aware that their choice of BlackBerrys was distinctly 'South African', and that it marked them as different to smartphone users in wealthier countries such as the USA. In fact, most South African users do not have access to BlackBerrys, but basic and feature phones, which are cheaper. Hence the teens presented their middle class social circles as representative of South African experience. Being from privileged backgrounds (in relation to the majority of South Africans) meant that these girls travel internationally, and they had little social contact with South Africans who were not members of the middle class. There was a distinct sense that the popularity of BlackBerry was uniquely associated with where they lived.

I just went recently to LA to like the States for an acting course. Everyone had an iPhone. People from Russia, from Mexico all iPhone everywhere, There were like 10 people out of 100 who had BlackBerrys.

Lauren, F, 16

A sense of national identity thus played a significant role. Thus while technicity is often seen as gendered, it is also associated with national identity.

This notion of a South African technicity manifested for them on two levels. They were responding to a perception of South Africa's position on the technology adoption curve, phrased ideologically as how 'advanced' the nation appeared. Another dimension of South African technicity related to safety. The young women were also very aware of crime and safety, and the risks posed by owning an expensive phone.

Young men, data cost, technology fashions and phone choice

The focus group for young men centered on an interest in the latest technology as well as on a practical sense of responsibility.

This suggests the centrality of technological features to masculine identities, and a different technicity emerging for young men. Unlike the young women, they did not discuss practicality and affordability of handsets in relation to cost and personal responsibility. Instead, willingness to spend on a phone but not on data became evident. In the discussion excerpted below it is difficult to ascertain what truly makes a phone "really nice" or "cool". Nonetheless the importance of advanced features, such as a good camera or usable email override the 'status' associated with the expensive but less than functional iPhone.

Interviewer: So your friends have a range of phones?

James, M, 18: My friends all have really nice phones.

Simon, M, 18: Most of my friends have either BlackBerries or iPhone.

Peter, M, 18: Everyone's starting to get really p'd off with BlackBerry cause the network keeps crashing. Nokia N8 is cool. But the iPhone is cool.

James, M, 18: Ja you've got a holographic screen and stuff.

Interviewer: If you could pick what phone you could have?

James, M, 18: I'd pick a Galaxy.

Simon, M, 18: It's a whole lot bigger ja. iPhone is just for the status, if you are rich and powerful. My uncle had it, and he drives around a lot and he doesn't have time to download apps and he says it's hell because it's basically like a toy. Like a gadget. Pretty useless for email.

Interviewer: What makes the galaxy better?

Peter, M, 18: 12 megapixel camera which is what professionals use, big screen, it's thin, and the thinner it is the better it is.

Simon, M, 18: It's cheaper than an iPhone. With an iPhone you have to spend a lot on downloads or whatever. With that you get WhatsApp and talk to your friends easily.

Interviewer: So people are spending money on the phone but they won't pay for data?

All agree

"The thinner it is the better it is" connects to the teleological notion that an evolution in technology leads towards ever-thinner phones, making the latest the most valuable and therefore the most desirable for Peter.

This exchange also implies that, for this group, high data cost is a factor that can decrease the value of the phone, irrespective of its ability to access applications. Limited utility makes it appear to be more like a "toy". This is an interesting choice of words for this young man, who has bought into his uncle's set of values, when they might be expected to be quite different to his own given the difference in age and need for a phone for work. The iPhone is also associated with being "rich", not only because of what the handset costs, but because of the cost of data downloads.

Across the two groups, a sense of responsibility, data cost and context thus played a role in determining which phones these young people wanted and could access. The externalities determined whether or not they would have access to something "all their friends" have.

Network Externalities

Yeah I think iPhones are big there cause everyone there uses WhatsApp for like everything and then there are so many different apps that you can actually download like Snap chat for like free you don't even have to pay like R60 rand for a month.

Lindiwe, F, 13

By using terms like "everyone", the young woman was acknowledging that a mass of people using a particular application or phone would lead to enhanced network externalities, with the consequence that other members of that group do the same.

The handset thus influences to what extent the user can contact people, while the handsets used by friends influenced which messaging network they could connect to. For example one male participant had recently dropped and broken his smartphone and had had to start using a basic phone. The costs of communicating with his basic phone shrunk his conversational abilities, although he could still communicate about essential matters via relatively expensive SMS:

Ja, I'm stuck in basic necessity SMS, cause I don't have a lot of airtime to like, waste, so I can only say meet me here, or I can't really have a conversation cause I just have SMS.

James, M, 18

Nonetheless using a basic or feature phone did not entirely cut them off from their friends, and participants agreed that they would tailor message channels to specific friends based on what handsets they used. Friends still on MXit for example, were there because they "did not have smartphones".

Network externalities such as these imply that choices such as handsets are not entirely an individual choice. This echoes the transcript at the beginning of this section, where the young woman expressed the need to defend herself for this. "It's not my fault". In a debate around agency and control over the interplay of devices with one's social circles and communication access, she positions herself here as having no agency in the choice. In the USA context, the Blackberry as phone of choice for contacting her South African network in fact excludes her from access to social interaction in another network. Hence a nationally-inflected technicity also affects her perception of her own sense of agency.

"WhatsApp and BBM is to hold constant conversations"

The young men discussed strategies for remaining in touch by tailoring the channel choice for messaging to available handsets. The questions which preoccupied the young women were focused on establishing the nature of the social and romantic relationships they were building through IM. Instant messaging allowed them a space to meet new people, but one that was often frustrating as well. The affordances of the different messaging channels allowed the girls to negotiate these frustrations in different ways:

I think for me BBM is like for people that I know have BlackBerrys so I know I can talk to them. WhatsApp is for people that don't have BlackBerrys and Facebook is for 'we went to a party together and I'm going to add you so I can tag you in the photo', and Twitter is like #teenageproblems. Twitter is voicing your opinion; Facebook is adding people so you can tag them. WhatsApp and BBM is to hold constant conversations.

Evelyn, F, 15

Much as the Internet has not simply replaced television, but coexists with it, meeting different needs, a messaging ecology has evolved in the lives of adolescents. One participant from the female group, quoted above, describes how the different forms of messaging available to her through her mobile phone also offer her different functionalities. Notably, they are all available to her from one single device, and

therefore selecting between them is neither inconvenient nor challenging. Rather, as will be demonstrated, she can use these different channels to reach either different social groups or to drive her chosen contacts from one channel to another depending on the purpose and Proxemics of her communication.

This quote above warrants further elaboration. Knowing who has the same handset determines who can easily be chatted to. This suggests an intimate personal network she is close enough to, to know what devices they own. In relation to network Proxemics, sharing the same handset creates further intimacy in that it gives her the ability to “talk” rather than sending more restricted communications. “I know I can talk to them”.

WhatsApp, as far as Evelyn is concerned, is for “people who don’t have BlackBerrys”, which implies that these contacts are held at arm’s distance since she cannot talk to them for free. WhatsApp nonetheless allows a certain closeness with those who do not fall within this circle.

“Facebook is for ‘we went to a party together and I’m going to add you so I can tag you in the photo’”. This line of reasoning suggests an instrumental approach to relationships, displaying one’s social life, collecting contacts by tagging people in photos. Having gone “to a party together” places someone in her social life, her visible social life, rather than within a sphere of personal communication. The instrumentality of tagging hence implies a sense of distance that is different to talking to someone.

Such tagging and collecting also allows social convergence to come into play, in that overlapping social circles function to demonstrate publically which social circles overlap and reveal how someone is behaving in very different contexts.

“Twitter is like #teenageproblems. Twitter is voicing your opinion.” Here Evelyn suggests that Twitter is a space for sharing an opinion, in a public broadcast.

Facebook is adding people so you can tag them. WhatsApp and BBM is to hold constant conversations.

In this final sentence she summarises her own point of view, namely that the different tools within her communication ecology meet different needs – intimate conversations in her space of choice (BlackBerry), conversations that must adapt to the affordances of her friend’s phones (WhatsApp), a space displaying her social life (Facebook) and a space for broadcasting her experiences (Twitter). The affordances of the different channels suit her needs in different ways. Some are sites of display for her personal online identity while others present more intimate spaces.

While she doesn’t mention it in this quote, SMS, which has been central to the study of mobile communication, is used by these young women only as a last resort in reaching and directing their friends to one of the other channels. It is the most dependable channel, but more costly than instant messenger and more restrictive in many ways. Facebook is not experienced as a conversation channel to the same extent (via handsets) because the mobile version of Facebook chat is often seem to be lacking in functionality. Facebook is also used as a way to recruit contacts for conversations in the more private and controlled space presented by chat clients. Privacy and the ability to conduct an ongoing conversation both play an important role in this regard.

*Interviewer: So will someone send you an SMS to tell you to go onto BlackBerry?
Evelyn, F, 15: No, they Facebook. Or they send me a please call me. That's how I know. That person knows I don't have airtime, I know I need to log onto Mxit it's like a code.*

It's also interesting that that MXit was not mentioned in her choice of channels, although it did come up in general conversation.

"It's seen as uncool"

MXit, which is a popular channel in South Africa, was described as less relevant than it had been a year before for the participants in both groups. While they had all used it, there was a general feeling that this messaging application was out of date, and even slightly embarrassing. The young women associated a number of negative things with the channel, the words "addiction" and "embarrassing" were frequently used and the language one uses on the channel was raised, as if dictated by this channel.

I was in grade 6 when I was at the climax of my addiction ... now if someone asks me I'm like, it's seen as uncool. And people are like you were on MXit back in the day!

Tracy, F, 16

These teens certainly moved along with their crowd, but seemed unconcerned with what makes their friends move in terms of larger external factors, such as parental choice, economics or technological trends. Nonetheless, their comments about "coolness" reveal the ways their technicities are deeply implicated with fashion and consumer culture.

Also implied in the quote above is that "people" see MXit as uncool, by implication, *other* people. Here one sees the third person effect (Davison 1983) demonstrated in Tracy's concern with how other people see MXit, as more 'uncool' than she sees it herself.

One male participant noted that he sometimes went on MXit to see who was around, as he missed the idea that people were always present and logged in on MXit, something which didn't happen as much on other IM channels, according to him. Comments from three different participants below highlighted this idea.

The thing about WhatsApp and BBM is you can't see if the person is there or not. You can send it and they can take the whole day and not reply. Whereas on MXit you can see if they are on or not.

Peter, M, 18

This suggests a heightened synchronicity or presence on MXit, enabled by its presence indicator, and exacerbated by the social pressure to respond immediately.

Ja I like do sometimes go for conversation gets really long, so just go on Mxit quickly.

James, M, 18

For James then, the nature of the conversation dictates what channel can best meet his needs.

I just miss having all of those people online. If you went online you at least had 15 people online, but now you have 3 or 4.

Simon, M, 18

His use of the word "have" is interesting here, as it suggests that he enjoyed owning or possessing a personal network and a resource for entertainment and connection in his pocket when MXit was the main channel used by everyone. As users migrate from channel to channel however, the affordances of those channels affect his perception his personal network.

The affordance of the messaging channel had an impact here in terms of the synchronicity of the conversation – frustration with the idea that an instant response was not granted is expressed in Peter's comment. James, on the other hand, was discussing the idea that the channel does make it easier to have longer conversations than a more bitty SMS exchange would enable.

An application provides varying levels of access to social interaction. This could arguably be discussed in relation to both the technology and social layers. The affordances of different channels allow young people to negotiate the ideas that they find challenging. In the discussion of the social layer of the communicative ecology, however first to some larger social factors that influence the relationship these young people had with their phones must be discussed.

The Social Layer

The social layer consists of social relationships, such as, in the case of an activist organisation, "people and ways of organising those people" (Chiumbu 2012:189, Foth et al. 2007:9). Given the discussion of the technology layer it becomes evident that often, the messaging application (the technology) provides the means for organising social networks. Nonetheless, it is also necessary to discuss social forces that the participants experienced and negotiated. The first of these are larger economic factors that lead to a very high crime rate in South Africa, and the implications that creates for young people carrying around expensive personal items such as mobile handsets. Here ownership of an expensive device might lead to the owner playing a role in an unsolicited relationship of thief and victim.

'People steal here, it's what they do'

As discussed above, a distinctively South African technicity includes an awareness of crime. Ownership of expensive phones poses a danger. As described by the young ladies, this is a factor that influences what phone gets chosen because it places the owner of that phone in physical danger. The young women discussed that they needed to behave in a fashion that would keep them safe. While they live in an unsafe environment, they have some agency in how they deal with these situations, to make themselves feel safer. Not putting a phone on display is thus, a means of asserting some agency over the dangers which they face.

Two accounts by girls in the group focused on the impact of crime. One girl describes her experiences in comparing Kuwait to South Africa below:

I got my first BlackBerry when I was out of the country. And because I was living in a Muslim company it's illegal to steal, and the penalty for stealing there was to have your hands cut off. So I could literally leave my phone on the McDonalds counter, go to the bathroom, go to another store and come back when my food was ready and my phone would still be there. After coming back to South Africa like the mindset like people steal here, it's what they do, I had to quickly adjust that and realise that I can't carry around my phone in my hand in public cause somebody will run past and grab it and then it's gone and you aren't going to run after that cause you'll get stabbed or shot or something and it's true though. The transition for me to like having to change my mindset of what I was doing.

Evelyn, F, 15

A sense that crime is expected behaviour in South Africa comes through clearly in Evelyn's comment. Also that there is a difference between those who steal and herself – *They* steal here. Danger, especially in relation to her phone, is an element of the South African environment. This shapes this teen's relationship with her phone and influences her choice of phone.

The second poignant example came about when Lauren told the story of a friend of hers being robbed at knife point when she was present, because according to her he was a foreigner and didn't understand that there was a more cautious way to behave in South Africa:

But the thing is this guy was like American and he only came to SA like 2 years ago. And we were all like how can you be so stupid to just take out your phone.

Lauren, F, 16

Here again the discussion suggests a tension between powerlessness and a sense of agency. "It's not my fault" that we use BlackBerrys, but a stranger is "so stupid" if he or she does not know better than to avoid risking a mugging. The girls did not want to own iPhones, as it posed risks. At the same time they failed to acknowledge that even a 'lesser' BlackBerry placed them at significantly greater risk than owning any other feature phone or a basic phone. This no doubt speaks to the social contexts in which they spent their time. Either their own basic requirements of the phone far outweighed any danger it may place them in, or BlackBerrys were taken for granted in their general environment, and so could not be seen as a risk. It is also worth noting that a technology that can often carry so many implications around your personal status and what you have access to, must be hidden in certain contexts. Also, there is cultural capital in behaving a certain "streetwise" way, in relation to your handset, and thus technicity also depends in this way on one's country and socio economic status.

Understanding this broader context of phone use and access is important, as it frames the tension between these girls using messaging platforms in ways that suits them, and the factors that influence what messaging tools they actually have access to. The messaging ecology is one they control, while the larger question of accessing that

ecology is dictated by a number of outside forces that need practical justification (even where their logic is at somewhat skewed). The ecology reflects social and economic forces as well as influences coming from social pressure and access.

As will be demonstrated in the next section, behaviour and actions on and in using IM channels also need to be justified, but the goals are somewhat different. Here the young women are seeking to demonstrate their sense of identity and to display and experience authenticity in their relationships. At this juncture they are accountable to themselves and their peer group.

Affordances, intimacy and negotiating friendships

The idea of intimacy, and how intimacy can be identified, managed, expressed or interpreted through digital and IM channels was discussed in both groups. The properties or affordances of IM, as discussed by Baym (2010), include tools that could be used for managing intimacy and uncertainty in different relationships. Participants in both groups felt it was important to be in control, not necessarily over the IM space, but rather over the way relationships unfolded and the way their own presence was presented to others. boyd's theory of social convergence is relevant here, as well as an understanding of the young person's need to establish their own peer relationships.

The affordances of the different messaging channels allowed for the negotiation of relationship dynamics as well as self-presentation.

A point of discussion that engendered lively response from the young women was the way in which relationships – both with potential romantic partners and with friends – were established on these channels. They communicated a frustration with the differences in behaviour between online channels and offline channels. This manifested both in making new friendships and in the way that the distance of online channels influenced the ways in which people behaved. While the literature confirms that digital messaging channels are used more often to reinforce existing relationships than establish new ones, the teens seemed to feel that a difference in behaviour between the digital social space and the physical social space presented unpleasant challenges. Where the digital contact point is the primary one a lack of consistency in person undermines and invalidates that.

I think that these cyber networks are hiding in a cupboard. Because if they... there's this one girl I used to be best friends with her or whatever and then I never want to fight over a network, but she was like "F U, you effing this". It was like ok, you would never speak to me like that in real life, so I'm not even going to reply to that.

Sarah, F, 16

Sarah is clearly aware that people behave differently on these channels than they would elsewhere, not in subtle ways, but in direct, even aggressive ways. The phone nonetheless afforded her the option of ignoring this form of communication by not responding to it. Two of the young women further explained that they often stored or recorded aggressive messages or any communication that they felt put them at risk.

Digital evidence, or storage in Baym's terms, plays into a sense of security they have over these communication channels that they can otherwise control only to varying degrees. In a discussion of technology affecting behaviour or behaviour affecting technology, one can consider here that the messaging ecology makes it possible for people to behave in more aggressive ways, but also offers these young women with agency in that they have strategies for dealing with aggression.

However, there are subtle ways as well in which behaviour is described as differing between messaging and offline channels. The act of adding someone as a friend, or of being added as a friend, signals an interest in communicating. Often this is not followed up however, and the young woman expressed frustration with this. As a signal of intent, adding someone on this channel can be a weak one.

While someone may add you to their contacts on a social network, this did not necessarily mean that they would talk to you in "real life". Coping strategies have been developed for negotiating this. These strategies once again relate to the nuanced sense of Proxemics and functionality of the different messaging channels. Certain channels were made available only to close or secure friends, while others offered listing functionalities, making it possible for the girls to segment and organise contacts according to their relationship standing. While there was a difference in the ways the girls used the different spaces, the common theme in determining their choices rested on protecting their privacy, establishing levels of intimacy, controlling social Proxemics and controlling what information went where. This is a clear example of young people appropriating a media channel for their needs.

The young women also made choices around which application could be used for different social needs, reconstructing their offline social experience.

WhatsApp is more personal, cause you actually need someone's phone number.

Tracy, F, 16

Tracy explains why one messaging application that she uses feels more personal. Providing someone with your phone number means they have access to call you as well, making it a uniquely identifiable code.

I find that very different to like how I am because for BBM it means that I trust them. If I don't know them I won't give them my BBM. I'd rather give them WhatsApp cause it means they don't see me changing my status and updating profile picture and all that. All these kinds of things. Like sending a broadcast about an event or something like that.

Lindiwe, F, 13

Here the profile options available on one messaging channel made it seem more personal for one girl, while the existence of a BBM pin made BBM seem less personal to another. Privacy here is debated in terms of providing someone access to contact you, and providing someone access to information about you – two elements that pose threats in varying degrees to these participants. The affordances of the applications mean that these young women will use them in different ways. If one uses the profile features, she feels the space is more personal, for another the application requires a cell

number, an affordance which also makes it personal. In this case, it depends on how they choose to appropriate a certain channel. The idea of the profile will be discussed in the next section, where it ties in closely with how they represent themselves.

Of further interest was a debate between the young women surrounding authenticity of friendship in this online space. While the youngsters themselves arranged their friends on different channels according to the closeness of the friendship, they judged the practice of others who abused the idea of a "friendship add" with severity.

I have a guy on my BBM who has, cause you know you can make categories, he has 635 girls who he doesn't know. Cause you know girls add guys when they are hot. When people are sad and they see they have unnecessary people on their chats so they aren't going to start a chat with someone cause the people they do talk to they are already talking to. Well what am I going to do now? So they make their status "chats anyone?" Why are they so sad?

Tracy, F, 16

In the quote above, Tracy describes someone she knows who adds as many people as he can and then makes the line of text next to his contact profile, a request to everybody and anybody who wants to talk. She judges this as a sign of him being needy and not discerning, making his interest in talking have less value to her. A general need to connect with anyone is seen as a problem, whereas specific communication is accepted and required. The authenticity of communication, someone's motivation for communicating, is really important in a space where the girls feel unsure of the relationships they are negotiating and the strength of the bonds that are being established. Signs of insincere interest in this messaging space help the young women discern between promising connections and ones that do not suit their needs. A few quotes from various participants in the young women's group illustrate this point below.

If it's someone coming up to me in person and start a conversation then I'll be fine with it. But on BBM if they are like you're cool lets chat, not so keen.

Lauren, F, 16

Lauren places different weight on face to face contact vs. one initiated through this IM channel.

I hate people like that, I hate like you know that you know each other but they'll never say hi. It's like they hide behind.

Sarah, F, 16

In this quote Sarah expresses her frustration at people hiding behind digital communication tools. There seem to be a different set of rules for different spaces. Inconsistency in behaviour demonstrates a different set of rules for digital social spaces than physical social spaces.

Nonetheless, the teenagers themselves behaved in this way, and so some contradictions were apparent here as well. A "stalking rampage," for example, consists of following

someone on every possible network, perhaps because you have a crush on them. Facebook was described as specifically useful for this given the images available there. They described that a “stalking rampage” was fine, and that adding people on these channels first allowed some privacy and control over who could know about their interest in another person, and secondly made it possible for them to hide their own level of interest.

You feel more safe hiding behind the fact that he can't see you and he doesn't know that you feel like a complete idiot cause you stalked him.

Lindiwe, F, 13

Here a communication space like Facebook allows Lindiwe to source information about someone she would chat to on IM, without having to ask him directly for more information, or make her level of interest obvious. She is getting the information which satisfies her interest without risking rejection or judgement. While Lindiwe could empathise with feeling vulnerable or at risk in person, or more personal IM chats, but not on Facebook, she supported the general disapproval of someone acting in that way towards her.

Gathering information and making connections places these young women on the other side of the convergence discussion. Information is available, and it's not just the risk of people knowing things about them, but also the risk of people knowing what they are interested in or how they use data in these spaces that feed into this risk.

Negotiating Friendships – “Ja, Mack is always sending please call me's cause he never has airtime”

The discussion in the focus group with young men focused less on frustrations and more on interactions with friends. Sending “please call me's” for example, was often used as an amusing standoff between friends in terms of who did not have enough airtime to make a call. Peter describes how his one friend will send him one, and he'll send one back, and so it would continue with no actual communication taking place.

The young men also drew some very clear lines between what kind of media you would share with a young woman or man over what channel. WhatsApp made it possible to share images, especially from popular joke website 9Gag.com, with other boys. When it came to young woman however, their perceived gender differences would make the young man tailor how information was shared. Jokes that were more risqué or perhaps “sexist” could not be shared. The discourse of sharing with girls seemed to be riskier, as explained by James below.

You wouldn't want to send that and then damage the relationship.

James, M, 18

One participant introduced a conversation centring on how miscommunications can occur when talking to a girlfriend over an IM channel, and how a direct phone call would be a better channel through which to negotiate any relationship challenges.

Throughout the day I'd WhatsApp her, and in the evening I'd phone her. WhatsApp is much more personal and also someone might misread what you are saying.

If I was talking to this one girl and we are good friends, and then you get a girlfriend and she's like who is this person. So to explain stuff rather phone than SMS.

Simon, M, 18

Simon explains that it is easier to respond to and understand the tone of a voice conversation than it is to ensure that you are expressing delicate messages clearly over instant messenger.

Representations of self

Instant messaging combines two elements not often considered in studies of messaging channels. SMS provides a communication space for back and forth messaging, while IM channels allow various forms of functionality that allow teenagers to represent their idea of themselves as suits best. The extra information and personalisation have an influence on the faces that they present to the world. The number of friends they add to their profiles, as well as how they describe themselves in that profile tells something to the world about who they are and how they interact.

The number of friends someone has again lent itself to this question of authenticity in relationships, as one girl felt the need to justify why she had so many contacts when the other girls discussed that having many is a sign of insincere relationships.

*Can I just justify why I have so many.
(general laughter)*

So I have all my friends from my old school that I still keep in contact with, I still talk to them and make plans with them. And then my news friends from my news school, there were 180 people in that grade and 100 in the other grade. And then I have all the people from Waterfront that I need to talk to, and then drama and all the other friends from all my other schools. Cause my grade is quite a social grade, and so was my one from my other school, and they both socialise with different groups. So it's like, I know SACS, and BOSCH and those people.

Lauren, F, 16

While Lauren was initially quite proud of her many contacts, she later needed to "justify" those numbers in terms of "real social" relationships. The IM channel, it seems, can only carry contacts with value for these young women if it is actually used for making contact.

I was like "thanks Tayla" I mean it was obviously a hack.

"Hacking" has emerged as an interesting practice in the social circles of these young women. By not password protecting their phones, the young women can leave themselves vulnerable to attacks that alter how they would choose to present themselves in their social relationships. While this is not hacking in the traditional sense of the word, these girls have appropriated the term to describe what happens when someone accesses their phone. One participant described her experience when she was hacked:

So yesterday we are at a school hockey tournament and my hockey coach is like quite intimidating and she's a lesbian. And that's like not a big deal, but ...I'm head of Hockey for next year so I have to have quite a close relationship with her and my friend hacked me and she was like oh I'm a Lesbian. And I have her on BBM and I've never been so embarrassed in my life. So I just changed it I was like "thanks Tayla" I mean it was obviously a hack. They are usually very obvious. You get harmless ones and then you get ones like that.

Tracy, F, 16

The difference here between a hack that is harmless and one that is not seems to rest in offending someone but also in crossing the line between behaving in a way that is not socially acceptable. A vulnerable list of contacts brings together people from different spheres of these girls' lives, and there is a great risk in any loss of control there. As boyd discusses, the codes of behaviour with friends are very different to the codes expected with an adult like a teacher. Tracy experienced here how a digital tool like IM could bring those social worlds together, and also how her digital representation of herself represented her in this social space.

Gender, social convergence and the representation of self

There was one scandalous story that all the girls were aware of, irrespective of which school they went to. Some of them knew the girls who featured in the story as well. Below a transcription from this discussion:

Interviewer: Has anything bad ever happened as a result of sharing a photo?

Tracy: There's the whole Nutella thing as well.

(most girls say yeah)

Lauren: Which was like really awkward cause the girls are at my school and I was like really really good friends with the one since like pre-primary so I'd known her forever and it kind of just happened.

Tracy: So these girls were in Plett on the holidays and they went out and had a good night and got a little tipsy and came back to a hotel room. And these two girls and they like covered themselves in Nutella.

Lauren: Yeah so there were two girls and two other guys both at different schools in different grades and they both took a video of the girls covered in Nutella and it got distributed.

Evelyn: and it like ruined these girls' reputation. It was everywhere. Like teachers heard about it.

Sarah: During assembly at school the one day they had to like apologise.

Lindiwe: Even at my school we heard about it.

Tracy: Everyone heard about it. Nothing happens at my school.

Sarah: The guys who filmed it got suspended. For like a week. Rudi and Sacs boys. It doesn't change the way I feel about them cause I know they aren't those kind of people.

Tracy: My mom has always warned me like don't send these kinds of photos. But this just demonstrates, like the one girl their reputations are ruined.

Sarah: Ja like the one girl was not allowed to go on exchange. As a result of that.

Lindiwe: Everyone's heard of them there is a chance when they apply to University that someone on the board of admissions will be like, we don't want these girls at our university. What happens if they want to apply for stooge on their gap years?

Tracy: So this girl got her cousin to take a picture of her sitting naked on the toilet and had her arms up and everything and sent it as a file to everyone on MXit and it was like a chain reaction and she expected to boost her popularity at school and everyone looked at her and couldn't even see her the same.

Interviewer: Would a guy get in trouble the same way?

Sarah: No everyone would be like you are so cool, whereas with girls they'd be like what are you doing.

There are a few themes that are important to pinpoint here. The first is a sense of camaraderie among the young women, but a sense that the results were inevitable. The implications of reputation loss because of the dangers of social convergence posed by these channels seem enough to make the responsibility lie firmly on the shoulders of the teens in question.

This 'horror story' seems to have brought home the warnings that their mothers had shared with the teenagers previously, suggesting that there are known dangers that the young women needed to be aware of. The comment about them not being "those kinds of people" suggests that there are types of people who would behave in that way and that it can be an indicator of poor character or morals, although not in this case.

Two clear dangers are suggested by this discussion. The one is the idea of social convergence, where contacts from different spaces come together, and no context is allowed for visual evidence of a social interaction. Here the teenagers fear what would happen with regards to a university selection board, for example. There is also a clear difference in power relationships. The young women seem conscious that they need to play the role of sexual gatekeepers, and that there are some significant double standards in what happens to young men vs. what happens to young women.

In this social layer organising socio economic forces within the country in which these young people live affects their relationships with their phones, and an interplay between the borders of their digital social space and their physical social spaces is clear. The affordances of the channels they use greatly influence how they interact in their social world and how they make new contacts or build on existing relationship. It is difficult to separate these interactions from the technology that makes them possible.

The Discursive Layer

Within the discursive layer the actual contents of media forms that are communicated can be discussed. Across these focus groups the elements that can be considered here included images, sound clips, links and text messages.

There was a major difference between the ways in which the young women discussed image sharing and storing and the ways in which this was approached by the boys.

The young men in the group discussion seemed to focus mainly on WhatsApp as a messaging tool, as they did not own BlackBerrys. They were far more comfortable using image sharing tools with their friends, and focused on sharing amusing user generated content from the site 9gag, a popular aggregator of cultural production.

On this channel images are edited and shared that offer jokes or comment on teenage experience. The images are self referential and focus on humour or amusement, expressing a joke in as succinct a way as possible, also making these images convenient for storing on a handset.

The teenage women seemed to store more personal and sentimental images. The young men were most likely just unwilling to share similar feelings in a group discussion. It also seems that the young women kept images for themselves rather than to share with friends, again as objects of close and personal relationships.

Particular language forms seemed to be specific not only to certain mobile devices, with the format of the keyboard or touchscreen influencing how people communicated, but also as associated with different IM applications.

In discussing the language use on MXit the young women noted that the way language was manipulated on the channel was incorrect and embarrassing. They felt the need to distance themselves dramatically from a form of communication they all took part in.

Sarah: Go on to Facebook and look on your timeline, and go back to when you were in like St. 8 or whatever. And it's so embarrassing. Like LOL and...

Tracy: 'Fwends 4eva'

Lauren: For evs for evs.

Evelyn: Why did we spell friends like that?

Sarah: And all of your O's have to be zeros.

Tracy: And like capital letters normal letters, toggling.

Lauren: I feel dyslexic when I read like that. They'd spell the world sumthing.

Such a simple word to read but not when your o is a 0 and your 3 is lower case. I is an exclamation mark I don't understand that.

Interviewer: Do you see that as something you did when you were younger? Like MXit is not something you use anymore?

All: Ya.

This is quite different to the attitude displayed in the study of MXit users conducted by Walton (2009). In Walton's study understanding MXit language meant that you were an insider. Whereas (a couple of years later and in a wealthier social context) these young women see it as outdated, and being outside the current understood social code. A move from MXit was also associated with a move towards fuller keypads on BlackBerrys that no longer restrict the ease of writing. Maturity for these teenagers seemed to equate with writing full sentences and moving away from channels like MXit.

The young men seemed to focus far more on keeping media in order to keep themselves entertained. Rather than asking what they keep, one would focus on what these participants delete, given that storage and memory makes it possible to store a lot of media on their mobile devices.

I usually just keep them till I run out of space. Then I delete them. But I have a lot of memory on my phone, so it's usually not a problem.

Simon, M, 18

Here Simon expresses that what he keeps, the content of his phone, is determined to some extent by the affordances of the device, how much storage space is available.

There was also a big difference for the young women in terms of how men and women behave on social channels, especially in the sharing of media and photos of themselves. In discussing the sharing of images, there was a general agreement that young women do it to get attention, and were one of them asked to share something, they would share photos "dressed in jeans or whatever". There seemed to be a feeling that anything beyond this would be tantamount to putting themselves on display.

The young women commented that no one who has "strong self esteem" would share images like that, perhaps borrowing a pseudo-psychological discourse from their parents. Beyond these ideologies, young women wanted to control their sexual self-presentation. A group is a limited space in which to explore feelings around a sensitive topic like sexual self representation, as self presentation in front of their peers would influence the answers provided here.

Theoretical Implications for the Study of Youth Culture

In relating these discussions to theories of youth culture, there are some key themes that are both confirmed and contradicted. The general consensus that adolescence presents a time within which young people hope to establish peer relationships is confirmed. These young people do not necessarily strive for autonomy from their parents, but they do wish to establish a separate space for social relationships to be explored and facilitated. In the process of doing this they practice post consumption – reappropriating affordances to their needs – but not necessarily in an act of rebellion as is discussed in the Cultural Studies tradition. Rather these acts present a "spontaneous redirection" of tools at their disposal (Broughton 2011: 249).

The choice of these tools is influenced both by practicality and a sense of peer pressure, but the two are interlinked. Access to a network is determined by the device used, and so attaining subcultural capital is both a practical and a social decision (Williams 2007).

Adolescence as a phase to be understood in terms of itself, rather than in opposition to other life phases, and drawn together by shared motivations, proves useful for understanding the resulting discussions of this investigation. The implications from a broader perspective demand the consideration of instant messaging in identity formation influenced by peers and affordances rather than acts of rebellion or definition in opposition to other forces.

Conclusion

While these young participants are still figuring out their sense of self in relation to other people, and using the tools at their disposal in order to establish relationships, it is clear that a choice of phone and a choice of messaging application have implications in terms of how relationships can be acted out through them. While these applications cannot completely mirror the relationship dynamics that one may experience in real life, they do add a social layer to the experiences of these young people, and certainly form a significant section of their social lives as they grow up. Their reconstructed social spaces have boundaries that are affected by the affordances that their mobile devices allow them.

In applying the layers of the communicative ecology it becomes apparent that the findings do not sit neatly within the different layers. Within the technological layer there is a social aspect that is not quite accounted for in the social layer. Equally a choice of phone and application is influenced by parental and economic forces that can dictate what phone an individual may use. Moreover, social networks, identities and relationships are represented, thus connecting the social layer to the discursive dimension of phone use. This dissertation suggests that the social and technological layers must consider the role a technology can play in someone's choices, and that the affordances of the phone play an important role in influencing both social convergence and discursive representations of self, social networks, and relationships with a widening circle of others.

Conclusion

This paper has argued that the handset and IM play a significant role in the lives of young people. These young people, as a significant section of society, are negotiating, expressing, learning and forming a large portion of their own identities and social networks through messaging ecologies. Given a need to understand, as McLuhan would put it, how the media “do what they do”, it is necessary to establish a robust and applicable theoretical framework through which to access and understand the experiences of young people. Young people are both adapting and adapting to the subtler functionalities available to them through acts of post-consumption through the technology made available to them. While there is a growing body of work investigating the significance of the handset, a smaller body of work exists looking specifically into mobile messaging. This paper has argued that in order to grow this necessary area of investigation, it is necessary to expand the concepts available to media ecologies theorists.

The paper set out to answer the following questions:

- How can the notion of media ecologies be expanded to account for messaging choices on smartphones?
- What is the significance of meanings associated with different messaging applications and functionalities?
- What choices do young people make about messaging applications and tools?
- What role does time and space play in messaging ecologies?

Ultimately the question at the core of this study is whether messaging ecologies are a valid theory and concept to apply to further studies into this significant area of mobile use.

Communicative ecologies are indeed a valid concept for investigating these questions, but that there is a further layer of complexity embedded within these ecologies. Social communities are not restricted by boundaries of physical place, but rather take on significance as areas of belonging through every individual’s network. In order to account for the idea and experience of space which is established through the networked individuality that exists today, a concept of social space must be incorporated into the technological layer of the communicative ecology, and technical affordances must be included in the social layer.

This study is limited in terms of its definitive results regarding how social meanings attach to young people’s experiences of messaging ecologies. Instead it suggests a framework through which further studies can reach these meanings. A next step for further investigation might include investigations into the social space which exists within messaging ecologies, and how well these apply to broader and more representative groups of individuals. As new messaging applications appear, these theories and frameworks need to be reconsidered in terms of their application to an ever-evolving set

of media tools and constantly changing techniques and fashions which influence how they are used and adopted by people.

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Bibliography

Altheide, D.L. 1995. *An Ecology of Communication: Cultural Formats of Control*. New York: Aldine de Grueter.

Armand, L. & Bradley, A. (eds). 2006. *Technicity*. Prague: Litteraria Pragensia.

Ash, J. 2012. Technology, technicity, and emerging practices of temporal sensitivity in videogames. *Environment and Planning*. 44: 187-203.

Basset, C. 2007. Of distance and closeness: the work of Roger Silverstone. *New Media & Society*. 9:42.

Baym, N. 2010. *Personal Connections in the Digital Age*. Cambridge: Polity Press.

Bray, R., Gooskens, I., Kahn, L., Moses, S., & Seekings, J. 2010. *Growing up in the new South Africa*. South Africa: HSRC Press.

Broughton, J. 2011. Cultural Production. (In Lesko, N. & Talburt, S., (eds.). *Keywords in Youth Studies: tracing affects, movements, knowledge's*. New York and London: Routledge. p.124-139.)

Bosch, T. 2008. Wots ur ASLR? Adolescent girls' use of Mxit in Cape Town. *Commonwealth Journal of Youth Studies*. 6(2).

Bowen, L., Green, A. & James, C., 2008. Globalisation, mobile phones and morocco. *The Journal of North African Studies*. 13(2):227-241.

boyd, D., Marwick, A. 2011. *Social Privacy in Networked Publics: Teens' Attitudes, Practices, and Strategies* [Online]. Available: <http://www.danah.org/papers/2011/SocialPrivacyPLSC-Draft.pdf>. [1 October 2012]

boyd, D. 2008. Facebook's Privacy Trainwreck: Exposure, Invasion and Social Convergence. *The International Journal of Research Into New Media Technologies*. 14(1):13-20.

Broadbent, S. 2012. Approaches to Personal Communication (In Horst, A. & Miller, D., (eds.). *Digital Anthropologies*. London: Berg Publishing. p.127-145.)

Bucholtz, M. 2002. Youth and cultural practice. *Annual Review of Anthropology*. 31:525-52.

Campbell, S., Park, Y., 2008. Social Implications of Mobile Telephony: The Rise of Personal Communication Society. *Sociology Compass* 2(2):371-387.

Caputo, V. 1995. Anthropology's silent 'others': a consideration of some conceptual and methodological issues for the study of youth and children's cultures. (in Amit-talai, V. & Wulff, H., (eds.). *Youth Cultures: a cross cultural perspective*. London: Routledge.)

Castells, M., Fernandez-Ardevol M., Linchuan J. & Sey, A. 2007. *Mobile Communication and Society: A Global Perspective*. London: MIT Press.

- Castells, M. 2009. *Communication Power*. Oxford: Oxford University Press.
- Chiumbu, S. 2012. Exploring mobile phone practices in social movements in South Africa – the Western Cape Anti-Eviction Campaign, *African Identities*, 10(2):193-206.
- Davison, W. P. 1983. The third-person effect in communication. *Public Opinion Quarterly*, 47(1).
- Deacon, D., Pickering M., Golding P. & Murdock, G. 1999. *Researching Communications*. Oxford: Oxford University Press.
- Donath, J., boyd, D. 2004. Public displays of connection. *BT Technology Journal*, 22(4).
- Donne, J. 2006. The use of mobile phones by microentrepreneurs in Kigali, Rwanda: Changes to Social Business Networks. *Information Technologies and International Development*, 3(2):3-19.
- Drotner, K. 2005. Media on the move: personalised media and the transformation of publicness. *Journal of Media Practice*, 6(1)
- Edmunds, H. 1999. *The Focus Group Research Handbook*. Chicago: NTC Business Books.
- Foth, M. & Hearn, G. 2007. Networked Individualism of Urban Residents: Discovering the Communicative Ecology in Inner-City Apartment Complexes. *Information, Communication & Society*, 10(5).
- Gaver, W. 1991. Technology Affordances. *Proceedings of the ACM CHI 91 Human Factors in Computing Systems Conference*. April 28 - June 5. p. 79-84. USA: New York.
- Garton, L., Haythornthaite, C. & Wellman, B. 1999. Studying On-Line Social Networks. *Doing Internet Research*. CA:Sage.
- Goggin, G. 2006. *Cellphone Culture: Mobile Technology in everyday life*. London: Routledge.
- Goggin, G. 2011. *Global Mobile Media*. London: Routledge.
- Goggin, G. 2005. Mobile Phone Culture and the Love of Text Messaging. Presented at *The Annual Meeting of the Australian and New Zealand Communication Association* Christchurch, New Zealand 4-7 July 2005.
- Greenbaum, T. 2000. *Moderating Focus Groups*. California: Sage Publications.
- Grudens-Schuck, N., Allen, B. & Larson, K. (no date provided). *Focus Group Fundamentals*. [Online]. Available: <http://www.extension.iastate.edu/Publications/PM1969B.pdf>. [5 October 2012]
- Haddon, L. 2007. Roger Silverstone's legacies: domestication. *New Media & Society*, 9(1).
- Hall, E. T. 1976. *Beyond culture*. New York: Anchor Press.

- Hall, E.T. 1963. A System for the Notation of Proxemic Behavior. *American Anthropologist*, 65(5).
- Hodkinson, P. 2005. 'Insider Research' in the study of youth cultures. *Journal of Youth Studies*, 8(2):131-149.
- Heath, S., Brooks, R., Cleaver, E. & Ireland, E. 2009. *Researching Young People's Lives*. London: Sage Publications.
- Höflich, J. 2006. The Mobile Phone and the Dynamic Between Private and Public Communication: Results of an International Exploratory Study. *Knowledge, Technology, & Policy*. 19(2):58-68.
- International Telecommunication Union. 2012. *Key statistical highlights: ITU data release June 2012* [Online] Available: http://www.itu.int/ITU-D/ict/statistics/material/pdf/2011%20Statistical%20highlights_June_2012.pdf. [28 November 2012]
- Ito, M. & Okabe, D. 2005. Intimate Connections: Contextualizing Japanese Youth and Mobile Messaging. (in R. Harper., L. Palen., & A. Taylor. (eds.). *The Inside Text: Social, Cultural, and Design Perspectives on SMS*. New York: Springer.)
- Katz, J. & Aakhus, M. (eds.). 2002. *Perpetual contact: Mobile Communication, Private Talk, Public Performance*. Cambridge: Cambridge University Press.
- Katz, M., Shapiro, C. 1985. Network Externalities, competition, compatibility. *The American Economic Review*, 75(3): 424-440.
- Kim, R. 2011. *WhatsApp bucks convention, quietly builds a messaging titan*. [Online] Available: <http://gigaom.com/2011/11/11/WhatsApp-bucks-convention-quietly-builds-a-messaging-titan/>. [2 February 2013]
- Krueger, R. 1998. *Analysing & Reporting Focus Group Results*. California: Sage Publications.
- Lanerolle, I. 2012. *The New Wave: Who connects to the internet, how they connect and what they do when they connect*. Wits Journalism, University of Witwatersrand, South Africa.
- Li, X. 2008. Third-Person Effect, Optimistic Bias, and Sufficiency Resource in Internet Use. *Journal of Communication*, 58(3):568-587.
- Lunden, I. 2012. *What's Up With WhatsApp? Facebook Might Want to Buy It, That's What*. [Online] Available: <http://techcrunch.com/2012/12/02/whats-up-with-WhatsApp-facebook-might-want-to-buy-it-thats-what/>. [3rd December 2012]
- Matanhelia, P. 2010. *Mobile Phone Use by Young Adults in India: A Case Study*. [Online] Available: http://drum.lib.umd.edu/bitstream/1903/10255/1/Matanhelia_umd_0117E_11079.pdf. [6 December 2010]

McKay, S. Thurlow, C. 2003. Profiling "new" communication technologies in adolescence. *Journal of Language and Social Psychology*, 22(1). Sage Publications.

Mcluhan, M. 1984. *Understanding Media*. New York: Ginko Press.

Mizuko et al. 2009. *Hanging Out, Messing Around, and Geeking Out: Kids Living and Learning with New Media*. MIT Press.

Morgan, D. 1998. *The Focus Group Guidebook*. California: Sage Publications.

Muller, R. 2012. *MXit numbers: Impressive despite incorrect info*. [Online] Available: <http://mybroadband.co.za/news/internet/43391-MXit-numbers-impressive-despite-incorrect-info.html>. [3 December 2012]

MXit. 2012. *MXit Statistics October 2012*. [Online] Available: <http://site.mxit.com/files/MxitStatistics.pdf>. [27 February 2013]

Nystrom, C. 1973. *Toward a Science of Media Ecology: The Formulation of Integrated Conceptual Paradigms for the Study of Human Communication Systems*. Unpublished. New York. New York University. (PHD theses.)

Postman, N. 2000. The humanism of media ecology. *Proceedings of the Media Ecology Association 1*, 10-16. [Online] Available: http://media-ecology.org/publications/MEA_proceedings/v1/postman01.pdf. [12 December 2012]

Postman, N. 1985. *Amusing Ourselves to Death: Public Discourse in the Age of Show Business*. USA: Penguin.

Rainie, L., Wellman, B. 2012. *Networked*. London: The MIT Press.

Schiano, D., Coreena, P., Ginsberg, J., Gretarsdottir, U., Huddleston, M. & Isaacs, E. 2002. Teen Use of Messaging Media. [Online] Available: <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.98.513>. [4th December 2012]

Silverstone, G. 1994. *Television and Everyday Life*. London: Routledge.

Statistics South Africa. 2012. *CENSUS 2011*. [Online] Available: <http://www.statssa.gov.za/census2011/default.asp>. [1 December 2012]

Stevenson, N. 2007. Roger Silverstone (1945 – 2006): An intellectual appreciation. *European Journal of Cultural Studies*, 10(4).

Strate, L. 2004. A Media Ecology Review. *Communication Research Trends*, 23(2).

Strate, L. 2002. Media Ecology as a Scholarly Activity. *Proceedings of the Media Ecology Association 3*. [Online] Available: http://www.media-ecology.org/publications/MEA_proceedings/v3/Strate03.pdf. [6 February 2013]

Terre Blanche, M., Durrheim, K. & Painter, D. 2006 *Research in practice: applied methods for the social sciences*. University of Cape Town Press: Cape Town.

Tesch, R. 1990. *Qualitative Research: Analysis types and software tools*. New York: Falmer.

Thurlow, C. 2003. Teenagers in communication, teenagers on communication. *Journal of Language and social psychology*. 22(1):50 -57. Sage Publications.

Tsatsou, P. 2009. Reconceptualising 'Time' and 'Space' in the Era of Electronic Media and Communications. *Journal of Media and Communication*, 1.

Vermeulen, J. 2010. Biggest social networks in South Africa. [Online] Available: <http://mybroadband.co.za/news/internet/44061-biggest-social-networks-in-south-africa.html>. [8th December 2012]

Walton, M. 2009. *Mobile Literacies and South African Teens: Leisure reading, writing, and Mxit chatting for teens in Langa and Guguletu*. [Online] Available: <http://www.marionwalton.com/publications-and-links/>. [29 January 2013]

Walton, M., Leukes, P. 2012. *Prepaid social media and the mobile internet in South Africa: patterns in young people's mobile discourse*. Unpublished.

Wellman, B. 1988. Structural Analysis: from method and metaphor to theory and substance. *Social Structures: A Network Approach*. Cambridge: Cambridge University Press.

Wellman, B., Vincent, C. & Madej, J. 2009. Personal Communities: The World According to Me. [Online] Available: <http://homes.chass.utoronto.ca/~wellman/publications/index.html>. [26th November 2012]

Williams, J. P. 2007. Youth-Subcultural Studies: Sociological traditions and core concepts. *Sociology Compass*, 1(2):572-593.

World Wide Worx. 2012. *Social Media breaks barriers in SA*. [Online] Available: <http://www.worldwideworx.com/socialmedia2012/>. [3rd December 2012]

Wyn, J. 2011. Peer Groups. (In Lesko, N. & Talburt, S., (eds.). *Keywords in Youth Studies: tracing affects, movements, knowledge's*. New York and London: Routledge p. 93-97).

Appendix A - Introducing instant messaging options

Thus MXit, WhatsApp and BBM all play an important role as popular IM applications currently in use in South Africa. These applications all offer different affordances, which are discussed briefly below.

MXit

MXit is available as a free download. The application can run on a wide range of GPRS-capable and Java enabled feature phones, as well as on smartphone platforms. Users can also access desktop chat clients such as MSN or Google Chat through the application. MXit was launched in South Africa, where there are reportedly 9 million active subscribers, but has a presence in Africa in countries like Kenya, Lesotho, Nigeria and Swaziland as well (MXit 2012).

MXit requires someone to have your phone number in order to add you as a contact. Users can have usernames on the platform as well. Users can set their own status, meaning that they can share some thoughts about where they are currently. The application also offers group chats, in which a selection of contacts can chat at the same time, and friend lists that allow you to categorise those you are using. Users can have one on one conversation with other contacts or they can chat in chat rooms for a small fee, paid in MXit's virtual currency, 'moola'. MXit has a presence indicator, and users tend to stay logged in to the MXit application. Consequently users who have logged in are immediately visible and can be easily contacted through this channel. Users can send image, text and sound files over this application. The application also offers downloads of different branded backgrounds and features like MXit music which allows you to buy music on the platform, among some other features.

WhatsApp

WhatsApp can be installed on feature phones and smartphones on different platforms. As in the case of MXit, WhatsApp is not restricted to one kind of phone. Use of this messaging application is free for the first year on most devices, after which a small subscription fee is required for the next year. WhatsApp founders claimed to be delivering one billion messages per day over a year ago, and have a growing user base suggesting this would have increased today (Kim 2011).

In order to install the application users download it to their phone. Phone numbers are either shared with specific contacts, or they can automatically be loaded from the user's phone address book. Features include status messages, broadcast messages sent to all contacts, or individual chats. It is also possible to send image and music files via WhatsApp.

BBM

BBM is a chat client developed by BlackBerry (then RIM) exclusively for users of BlackBerry handsets. Users need to pay a monthly fee for access that is then not data limited. Messages are sent over the internet and each user is assigned a pin, meaning

that only BlackBerry users can use this service. The service offers users the ability to share files, images and audio clips as well as locations on a map and various emoticons.

Facebook chat

Facebook chat was added in 2008 as a feature to the social network Facebook. Users are able to chat, as with most IM clients, with the contacts that they have added as friends on Facebook. While the feature allows video chat and some voice call features, it is not as popular via mobile phone as applications that are designed to be used on the phone. Contacts are pre-imported from contacts already added on the social network site rather than added separately as they would be on other applications.

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