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EDITORIAL

The evolution of mobile technology is increasingly affecting broad aspects of contemporary human life. Access to both voice and non-voice applications on these handheld devices has given way to a multitude of social opportunities and engagements, impacting both the most advanced as well as marginalised societies globally (Ling and Donner, 2009). This peer-reviewed issue, coordinated by the Singapore Internet Research Centre, stems from the 2010 International Communication Association's Mobiles Preconference "Innovations in Mobile Use", which brought international and Asian scholars together. The ensuing cross-pollination fostered discussions within both developed and developing contexts, advancing arguments that counter existing narratives about their respective alignment along the respective dimensions of innovation and social development. The resulting seven articles showcase recent scholarship in innovation and the social impact of mobile telephony in Australia, Singapore, South Korea, Thailand and the United States.

At one end of the spectrum, innovations in mobile use offer an extended range of integrated functions and applications such as social networking, entertainment, Internet surfing, and political participation. Crawford and Goggin find the convergence between mobiles and online social networks as a significant communication mode for young Australian's relationship maintenance. They argue that mobile devices serve as a portal to access many spaces. Saitanoo and Benjarongkij examine the perception and use of media convergence technologies, which merge mobile, Internet, voice and non-voice applications for new-generation Thai ICT users, such as smart phones' adopters, and find significant differences versus non-users. From a political perspective, Lim and Lee consider how voter mobilisation, street gatherings and other political moves in South Korea have been impacted by the use of mobile phones, garnering great public interest, and encouraging political participation and action.

At the other end of the spectrum, the rapid adoption of mobiles, both organic and planned, offers opportunities such as livelihood generation, education, and health, yet perspectives on socio-economic marginalisation, such as gender and age gaps, are often overlooked (Chib, 2009). Orit Ben-Harush suggests that mobile phones are used to offer emotional support among adult women in Australia, but are not perceived or used as a primary medium for facilitating emotional needs, because of cost and

privacy issues. Kathleen Cumiskey investigates American women's perception of public safety, finding that mobiles can act as weapons of self-defence, allowing for more risk-taking and empowerment in public spaces. Lin and Sun focus on female foreign domestic workers in Singapore, examining mobile usage patterns within co-located and remote instances. They find distinct social relationship patterns, with usage more for connecting with distant family and local friends than for communicating with employers, and as a form of resistance. Paragas et al. explore the emotional, cognitive and behavioural inclinations of the Singaporean elderly towards mobile phones, finding that age is inversely related to level of use, utility of functions, and perceived ease of use.

This special issue encompasses some of the latest communication scholarship related to mobile phone use by specific social groups for affective and relational purposes, and the convergence between mobile, social media, and other Internet functions for innovation. The potential and impacts of mobile phones are context-specific and multi-directional, as this communication technology has been adapted by different societies and communities to suit their varied needs. As *Media Asia* devotes a second issue (see *Media Asia* Vol. 36, No. 4, 2009, "Mobile Telephony in Asia") to mobile scholarship, the exploration of multifaceted trajectories and innovative uses of mobile communication across the globe continues to intrigue, especially in the culturally heterogeneous Pan-Asian region with its rapidly evolving technological advancements, and concomitant social impacts.

Arul Chib and Trisha Lin

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NOTE

We thank the reviewers for making the extra effort to critically evaluate, and provide feedback on the manuscripts. We are particularly pleased that these papers here went through double-blind peer-reviews at both conference and journal stages.

Connection as a Form of Resisting Control

Foreign Domestic Workers' Mobile Phone Use in Singapore

Domestic workers toil in situations akin to "total institution" (Goffman, 1961) where mobile phones emerge as a new vehicle for resistance against employers' control and social isolation (Sun, 2006), as well as maintaining distant relationships and local social networks (Thompson, 2009). Through a survey and interviews with 68 female foreign domestic workers (FDWs) in Singapore, this study further investigates FDWs' mobile phone usage for professional and personal communication with employers, family overseas and local friends. The findings show that FDWs have distinctive patterns for professional and personal use, including topics, time, and length of communication. They tend to use mobile phones more for connecting with family and friends than communicating with employers. Text messaging is the most popular function while voice calls are used only for emergencies or special occasions. Finally, cost, ease of use and attractive packages are key factors affecting FDWs' selection of mobile services.

LIN, TSUI-CHUAN TRISHA
SUN, HAISSO-LI SHIRLEY

The use of mobile phones affects the personal and professional lives of users directly and indirectly (Katz and Aakhus, 2002), thus providing a window of opportunity to examine the complex interplay between technology, social groups and social control (Katz et al., 2004). Foreign domestic workers (FDWs) belong to a special social group who mainly use mobile phones for work and personal communication with local communities and families in home countries.

In 2008, one in six families in Singapore hired a foreign domestic worker and about 170,000 women, mostly from the Philippines and Indonesia, were employed here (Wong, 2008). Most of them are live-in maids whose domestic work only allows limited interaction with the host society and have strong constraints on mobility, living status, and social activities. Sun (2006) described FDWs' working conditions as similar to Goffman's (1961) notion of total institution. However, the use of mobile phones may have made distinctive changes to their previously isolated working lives (Sun, 2006; Thompson, 2009). As

mobile phones and services became more affordable for the low-income FDWs, they shifted from being a marginalised group into potential mobile customers. Various mobile phone schemes are currently offered by Singapore's telcos to cater specifically to FDWs.

Previous studies have highlighted two inter-related dimensions of FDWs' mobile usage: control and connection. Some regard mobile phones as a new vehicle of FDWs' resistance against employers' control and social isolation (Sun, 2006). Others view using mobile phones as a crucial communication mode for this social group to maintain the connection to home and reach out to other migrant co-nationals to develop local social networks (Thompson, 2009). The availability of mobile telephony makes it possible for FDWs to manage and maintain long-distance and local relationships through instantaneous voice communication and asynchronous text messages.

Affordable mobile telephony provides opportunities for Singapore's FDWs to achieve temporal and spatial simultaneity (Paragas, 2009), such as playing the distant mothering role (Hicks, 2009). However, only a small but increasing number are allowed to carry mobile phones, as most Singapore employers think mobile phones are counterproductive to maids' work because of unnecessary distractions from FDWs' homes or local communities (Sun, 2006). This study aims to investigate Singapore's FDWs' mobile phone usage for professional and personal use and their strategies to maintain connection and resist control. We conducted a survey and structured interviews with 68 FDWs during December 2009 to March 2010 in order to have a more nuanced understanding of migrant domestic workers' routine use of mobile phones. This

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study contributes to the emerging literature regarding the impact of mobile phone use on specific social groups and their social relations. The empirical data also reveals the patterns and reasons for mobile phone use among migrant domestic workers.

LITERATURE REVIEW

FDWs' mobile phone use in Singapore

Since the 1980s, the level of labour migration within and from Asia has increased tremendously (Huang and Yeoh, 2003) and has kept growing in recent years. Asia's low-skilled migrant labour constitutes a substantial proportion of the workforce and contributes to capital accumulation in many countries (Thompson, 2005). Southeast Asia is home to the world's largest low-skilled migrant labour surplus nations (Indonesia and the Philippines) and large labour-receiving countries (Singapore and Malaysia) (Huang and Yeoh, 2003). In the Asia-Pacific region, transnational labour migration is a multi-faceted issue and an evolving phenomenon. The export and import of domestic helpers is not simply a market-driven economic transaction but also has impact on socio-cultural relations between individuals, households, and societies (Yeoh, Huang, and Gonzalez, 1999).

The number of foreign domestic workers in Singapore has grown dramatically from 5,000 in 1978 to 180,000 in 2008 (Reisman, 2009: 186). Usually FDWs who are perceived as a mixed blessing are invisible and marginalised in the host societies (Huang and Yeoh, 2003). Live-in FDWs have shaped the family roles of transnational families in affluent countries like Singapore (Huang and Yeoh, 2003). Female labour migration, particularly married women with children, fills the void left in their employers' families but this usually causes other social problems. Although migrant domestic workers as a marginalised group only appear in limited public spaces in Singapore, these women generate different styles and strategies in the use of public domains (Yeoh and Huang, 1998). Nowadays, more and more domestic workers carry mobile phones for professional and personal reasons.

In Singapore's saturated mobile phone market, SingTel, M1 and StarHub have been targeting foreign workers for revenue growth. They are viewed as a consumer niche for mobile communication services (Thompson, 2005). Since 2003, the three telcos have been pushing their marketing strategies, such as offering special phone rates and organising creative campaigns, to win over FDWs as international calling card and prepaid mobile phone customers (Lee, 2005). Price-conscious foreign workers are keen users of prepaid mobile phone cards. After 2008, the three telcos started taking aggressive marketing approaches to appeal to foreign workers, the only growth segment in Singapore where mobile phone penetration is 130 per cent (Siow, 2008).

Moreover, since Singapore's telecommunication network started its global short message service (SMS) in April 2000, SMS traffic has soared. The telcos believe that foreign workers and foreign domestic maids sent the

majority of the SMS messages because global SMS offered a cheap and alternative way of communication (Goh, 2001). Also, cheap mobile phones with basic functions that cost less than S\$100 (US\$76.60) with no binding contracts were very popular in the 2008 mobile phone market: one in every six of the 2.7 million mobile phones shipped to Singapore was a budget phone (Tan, 2009). Foreign workers are one of the major social groups who purchase these economic mobile phones.

Furthermore, mobile phones have become a symbol of higher socioeconomic status. To FDWs, the mobile phone is a high-value commodity. Migrant workers showed knowledge of the various telephony options available and chose the cost-effective ones to serve their needs for work, relationship maintenance, and socialising (Pranata, 2009). They learnt how to creatively manipulate the system to make mobile services more affordable. Singapore's FDWs also use strategies to manage mobile phone-mediated social networks like maximising access, controlling costs and desires, and keeping relationships (Thompson, 2009). As mobile phones bring both possibilities and problems, FDWs must exercise self-control and employ strategies to use mobile phones appropriately.

FDWs' work, control and mobile phone use

According to Sun (2006), live-in maids whose work and personal lives are isolated from the host society are situated in a similar context as Goffman's (1961) "total institution". It is defined as "a place of residence and work where a large number of like-situated individuals, cut off from the wider society for an appreciable period of time, together lead an enclosed, formally administered round of life" (Goffman, 1961: 11). This kind of domestic work condition is described as "soul-destroying hollowness" (Clark-Lewis, 1996) because nearly all aspects of a domestic helper's life are monitored and controlled. This isolation discourages the development of FDWs' support systems, leading to their vulnerability and reluctance to voice out negative emotions (Cheng, 1996). Besides, there is a power struggle between the employers and the maids. Prior studies in East and Southeast Asia have highlighted various control strategies adopted by employers (Chin, 1998). Some employers use ways to terrify, humiliate, or immobilise the FDWs to make them obedient (Cheng, 1996).

Thus, small mobile phones with text messaging capabilities are ideal for covert communication among confined FDWs, preventing them from being totally controlled by their employers (Sun, 2006; Thompson, 2009). There is potential for mobile phones to emerge as a new vehicle of resistance to effectively create virtual privacy and facilitate the formation of companionship in workers' struggles against employers' total control and social isolation in the world of paid domestic labour (Sun, 2006; 16–17).

Sun's (2006) study disclosed that Singapore's employers restricted FDWs' mobile phone use, including calling overseas families and local friends. She found these helpers managed to find ways—such as secretly owning

a mobile phone, using the SMS function, and calling at hours when they are not under supervision—to maintain relationships and build networks. To resist the control, some helpers used mobile phones secretly without their employers' knowledge (Sun, 2006) and others primarily used affordable SMS to communicate with family and friends strategically (Thompson, 2009).

Mobile phones are usually regarded as an item of privilege given by the employers (Thompson, 2005), hence FDWs' mobile phone usage is still more or less constrained by employers. Due to the prevalence of mobile telephony in Singapore's society, whether employers should allow their helpers to have mobile phones and whether employers are aware of their helpers' use of mobile phones are interesting research topics in the FDWs' domain. The usage of mobile phones by FDWs is an indication of the power relationship between employers and of domestic helpers' struggle for subjectivity and freedom in communication. Even in the cases where employers allow their FDWs to own mobile phones, informal rules are usually applied to limit the frequency and length of usage.

FDWs' communication and mobile phone use

Nowadays, community ties are geographically dispersed, specialised, and connected by information technology, including mobile telephony (Katz et al., 2004). Mobile phone use is indeed a crucial mode of building individual social networks among families, friends, and colleagues, both near and far (Katz, 2001; Ling, 2003). In the networked society, strong-tied relationships like family and close friends show more intimacy, self-disclosure, reciprocal activities and kinship (Granovetter, 1983) and tend to maintain frequent contact and share resources with each other (Garton et al., 2006). In a study by Julsrud et al. (2009), the mobile phone is found to be used as a tool to support stronger ties and internal work coordination.

Prior studies regarding FDWs' use of the mobile phone showed how mobile communication has evolved from shaping the marginalised FDW social group and connecting its members to an irreplaceable normalisation tool in their lives (Thompson, 2005). The proliferation of mobile phones has transformed transnational migrants' lives and affected their national, migrant, gender and class identities (Thompson, 2009). Building and maintaining communities is one of the significant impacts of mobile phone usage on foreign workers. Qiu and Cartier's study (2007) regarding the network mobility of China's working class found that mobile phones offer a new means for these domestic migrants to strengthen and extend their social networks, including information-based migration and place-based networking. Although some research claims that mobile phones accelerate a process of social and psychological individualisation, for Singapore's foreign workers, mobile phone use fosters their connection and maintains strong ties with distant families and local communities. Networking via mobile phones can instantiate foreign worker communities by offering help lines and social activities (Thompson, 2005).

Viewing mobile phone use as a catalyst for social change, Pranata's study (2009) examined the impacts of overseas migrant workers using mobile phones to communicate with their home families and found that the family ties were maintained by phone calls and text messages. Less disrupting and affordable text messaging was preferred to direct voice communication (Sun, 2006; Pranata, 2009; Thompson, 2009). Besides, using SMS can overcome language barriers and transcend the boundaries of communities (Thompson, 2005). Hence, the availability of mobile voice calls and text messaging enables FDWs to manage and maintain long-distance relationships almost in real time.

METHOD

This research aims to find out how Singapore's FDWs use their mobile phones for three different relations: work-related use, maintaining relationships with family and friends in the home country, and communicating with local social networks. Methodologically, this study's primary sources consist of a pencil-and-paper survey and interview data, and the survey questionnaire and structured interview questions were developed in early 2010. Done with a convenient sampling process, the survey was designed to delineate the nature and characteristics of FDWs' mobile phone usage, while the structured interview data would provide an in-depth understanding of FDWs' routine use of mobile phones and their reasons. With three sets of identical questions, the survey investigated FDWs' mobile phone usage for the three relations by comparing the quantitative results. The qualitative interviews looked at four aspects: (a) FDWs' perceived life changes after using mobile phones in regard to the three social relations; (b) their mobile phone user patterns with the three relations; (c) reasons for selecting mobile phone services; and (d) occasions and subjects to use mobile voice rather than SMS. The interviews were conducted near the respondents' workplaces or their Sunday gathering places (e.g. Orchard Road, Lucky Plaza and Sultan Mosque). As the FDWs tended to feel dubious toward interviews, two FDWs were trained as interviewers in order to gain their trust and increase rapport, and all the interviews were recorded for transcription and subsequent analysis.

During December 2009 to March 2010, 68 domestic helpers and mobile phone users completed the questionnaires and interviews. Eighty-eight per cent of the respondents were Filipinos. Filipinos have been a special focus of Singapore's telcos, as they are one of the biggest foreign nationality groups. As their English is typically better compared to other groups of domestic helpers, they are more capable of adjusting themselves in Singapore and maintaining local networks to provide emotional and financial support, facilitate job searches, and assist in practical negotiations with employers and agencies. Filipino maids tend to have better salaries compared with other nationalities and can afford to own mobile phones.

The respondents' answers to the close-ended

questions were all coded and the SPSS programme was used to obtain analyses such as frequencies for specific variables. The quantitative data obtained from a small amount of snowball sampling aims to describe the emerging phenomenon so that the relevant information in this exploratory study can be quickly understood and appreciated. The main purpose of the quantitative analysis was to identify patterns in the responses in order to illustrate the relative salience of a particular type of response. In-depth understanding of the responses were then elucidated by qualitative data (i.e. the respondents' replies to open-ended "why" questions.) All the audio recordings of the interviews were transcribed and examined by thematic data analysis (Miles and Huberman, 1994). The identified themes include life changes after using mobile phones, mobile phone user patterns, reasons for service selection, as well as occasions and subjects for using voice calls rather than text messaging.

QUANTITATIVE ANALYSIS

This study uses mainly descriptive statistics to portray whether and how mobile phone usage varies empirically by the users' social relations. The descriptive statistics which do not use random sampling is suitable for the exploratory study (Healey, 2009). The quantitative analyses include three segments: (a) the FDWs' perceptions of three social relations under investigation; (b) comparative mobile phone usage across the three social relations (FDWs with employers, FDWs with family overseas, and FDWs with local friends), and (c) FDWs' subjective reasons for using mobile phones.

Measurement of key variables

Perceived social relations

We are interested in three types of social relations: relations with employers, relations with family overseas, and relations with local friends. We included items concerning the respondents' subjective perceptions of these relationships; they were asked to rank their agreement with the following statements on a five-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree):

- My employer and I have a good relationship
- My employer controls my life
- I feel alone and apart from the local society when I work in Singapore
- I maintain close relationships with my family and friends in my country

Mobile phone usage

To measure this variable, respondents were asked to answer the following six questions regarding their usage of mobile phones (multiple-choice answers were possible and coded accordingly):

1. What kind of phone services are you using?
(Prepaid mobile phone cards with Singapore mobile operator; prepaid mobile phone cards with foreign mobile operator; monthly paid (postpaid) mobile

phone; employer's land line (domestic phone); public phone; international calling cards)

2. How do you communicate with your employers/ family/friends?
(Mostly voice call; mostly send/receive SMS; mostly home phone; mostly public phone; other)
3. How long is your total mobile calling time (initiated and received) per day on average?
(0–5 minutes; 5–15 minutes; 15–30 minutes; 30–60 minutes; more than 60 minutes)
4. How many short message service messages (SMS) do you send/receive per day on average?
(0; 1–10; 10–20; above 20)
5. What time of day do you usually use your mobile phone?
(Morning; Afternoon; Evening; Night Time)
6. Who pays the phone bills (at the time of the interview)?
(Myself; My employer; My parents or relatives; Other)

In order to analyse the usage of mobile phones in these three structural relations, these six questions were repeated for each of the three different social relations in the survey questionnaire.

Reasons for using mobile phones

In addition to understanding how mobile phone usage might be a function of objective structural relations (e.g. communicating with employers, family members and friends), this study also includes items that measure the subject's own reasons for using mobile phones. Respondents were asked to rank their reasons for using mobile phones: Question: What are the most important reasons for you to use a mobile phone? Possible answers: Maintain relationship with family and friends in my own country; Make new local friends; Exchange useful information; Reduce loneliness and isolation; Other reasons). A five-point scale was used, where 1 was "the most important" and 5 was "the least important".

Quantitative results

Respondents' profile

The 68 female respondents were aged between 23 and 39, with an average age of 31. With respect to the respondents' family situation at the time of the interview, 45.6 per cent of the respondents were never married, 44.1 per cent of the respondents were married, 8.8 per cent of the respondents were separated, and 1.5 per cent of the respondents were divorced. Concerning the respondents' personal monthly income, none earned less than S\$200 per month, 2.9 per cent of the respondents earned below S\$250 per month, 25 per cent of the respondents earned between S\$250–\$349 per month, 67.6 per cent of the respondents earned between S\$350–700 per month, and 1.5 per cent of the respondents had an income above S\$700 per month; two respondents declined to reveal their income level. Details are shown in Table 1.

With respect to how long the respondents had worked as FDWs in Singapore, the years ranged from one to 19 years, with an average of 4.5 years. Respondents have worked for the current employers for between less than

TABLE 1
Descriptive statistics of the respondents

	N	Minimum	Maximum	Mean	Std. deviation
Age	68	23.00	39.00	30.9853	3.7236
Marital status	68	1.00	4.00	1.6765	0.7006
Personal income	66	2.00	5.00	3.6970	0.5539
Time working as a domestic helper	68	1.00	19.00	4.4474	3.0988
Time working for the current employer	67	0.00	13.00	2.0818	1.9423
Highest education degree obtained	67	1.00	5.00	3.2090	1.2856
Nationality of current employer	68	1.00	12.00	6.3529	3.7487

one to 13 years, with an average of 2.8 years. As far as their educational level was concerned, 1.5 per cent of the respondents had primary school education, 42.6 per cent of the respondents were high school graduates, 13.2 per cent of the respondents were vocational school graduates, 16.2 per cent of the respondents attended pre-university colleges, 25 per cent of the respondents had a bachelor's degree, and one respondent did not specify her educational qualification. Twenty-seven respondents had Singaporean employers while 41 respondents had employers who were foreigners in Singapore.

For mobile phone usage, the respondents had used mobile phones for 4.5 years on average. Fifty-four per cent of the respondents only had one mobile phone number, while 41 per cent of the respondents had two mobile phone numbers and four per cent had three. In addition, 46 per cent of the respondents never changed their phone number, while 31 per cent changed their mobile numbers at least once, 15 per cent changed their numbers at least twice, and nine per cent changed three times or more. The majority (70.1 per cent) used prepaid mobile phone cards offered by Singapore mobile operators for work or personal purposes.

Comparing mobile usage across three social relationships

In this section, we analyse FDWs' mobile phone use patterns and strategies when communicating with the three social relations (work, distant families, and local friends). Table 2 shows that the FDWs used mobile phone primarily for personal purposes. More than half (52.9 per cent) used the phone "exclusively for communicating with family in the home country" and slightly more than one quarter of respondents (26.5 per cent) selected "equally for personal life and work purposes". Only a few reported using mobile phones more for work than for personal

TABLE 2
Respondents' subjective reasons for using mobile phones

For what purposes do you use your mobile phone?	
Exclusively for communicating with local friends	1.5%
Exclusively for communicating with family in the home country	52.90%
More for personal life than for work purposes	4.4%
Equally for personal life and for work purposes	26.5%
More for work than for personal life	7.4%

life (7.4 per cent).

Furthermore, in terms of significant reasons for using mobile phones for personal life, the majority of respondents (88.3 per cent) chose "maintaining relationship with family and friends in the home country", while a few regarded "exchanging useful information" (4.4 per cent) or "reducing loneliness and isolation" (4.4 per cent) as the most important reasons. The quantitative analysis indicates that the FDWs use mobile phone particularly for keeping in contact with their families in their home countries.

In addition, as shown in Table 3, on the one hand, respondents are more likely to call their family on their mobile phones (29.4 per cent) as compared to calling their employers (11.8 per cent) or their friends (11.8 per cent). On the other hand, the usage of SMS as the predominant form of communication is rather consistent across three social groups (employer: 39.7 per cent; family: 30.9 per cent; friends: 51.5 per cent).

TABLE 3
The use of mobile phone in the contexts of various social relationships

How do you communicate with your (employers/distant family/local friends)?	Employer	Family	Friends
Mostly voice call (mobile phone)	11.80%	29.40%	11.80%
Mostly send/receive SMS messages	39.70%	30.90%	51.50%
Mostly home phone	17.60%	1.50%	0.00%
Mostly public phone	0.00%	1.50%	1.50%

TABLE 4
Length of mobile phone voice calls within the contexts of various social relationships

How long is your total mobile calling time (initiated and received) on average per day with your (employers/distant family/local friends)?	Employer	Family	Friends
0–5 minutes	45.60%	7.40%	17.60%
5–15 minutes	26.50%	50%	44.10%
15–30 minutes	20.60%	30.90%	23.50%
30–60 minutes	1.50%	8.80%	2.90%
More than 60 minutes	4.40%	1.50%	10.30%

In Table 4, we see that the calling time to their employers also tended to be relatively short (45.6 per cent of the calls are completed within 0–5 minutes) as compared to calling time to their family members (7.4 per cent of the calls are completed within 0–5 minutes) and friends (17.6 per cent of the calls are completed within 0–5 minutes). In contrast, calling time to friends and family tend to be long (13.2 per cent of calls to friends and 10.3 per cent of calls to family last more than 30 minutes) compared to employers (5.9 per cent of calls to employers are more than 30 minutes). The findings suggest that FDWs tend to make longer calls with their stronger-tied relationships.

Respondents tend to call their family and friends in the afternoons or evenings, and tend to call their employers in the mornings, as indicated in Table 5. The analyses reveal that FDWs’ mobile phone usage patterns (use of voice calls, duration of calls and time for mobile phone use) differ for professional and personal use.

As far as FDWs’ expenditures on mobile phones are concerned, only one out of the 68 respondents spent more than S\$100 per month; almost half of the respondents (46.3 per cent) spent less than S\$30 a month, another significant portion (43.3 per cent) spent between

S\$31–\$60 per month, and the rest (nine per cent) spent between S\$61–\$100 per month on mobile phone usage. Table 6 suggests that while most respondents pay for their mobile phone bills by themselves, their employers sometimes pay for work-related mobile phone bills.

The results also show FDWs use text messaging intensively for both professional and personal purposes, as shown in both Table 3 above and Table 7 below. Table 3 shows that SMS is the most frequent mode of mobile communication with the employers (39.7 per cent), distant family (30.9 per cent), and local friends (51.5 per cent). Table 7 suggests that the number of SMS messages that respondents send and receive on a typical day is similar across the three types of social relations. The majority (80–90 per cent) of SMS messages received on a typical day is below 20 in each type of social relationship, but adding them up easily exceeds 30 messages per day. Sending or receiving one to 10 SMS messages is most common across the three social relations. However, the FDWs tended to send/receive more text messages to employers (23.5 per cent to send/receive 10–20 SMSs) compared with the other two relations.

The above analyses show that text messaging is most popular function in mobile phones used by FDWs.

TABLE 5
Time of mobile phone use within the contexts of various social relationships

What time of the day do you usually use your mobile phone for communicating with your (employers/distant family/local friends)?	Employer	Family	Friends
Morning	10.30%	2.90%	0.00%
Afternoon	26.50%	14.70%	10.30%
Evening	32.40%	63.20%	76.50%
Multiple choices	30.90%	19.12%	13.20%

TABLE 6
Paying for mobile phone use within the contexts of various social relationships

Who pays the phone bills for (work, communicating with distant family, communicating with local friends)?	Work	Family	Friends
Myself	80.90%	92.6%	94.10%
My employer	13.20%	0%	1.50%
My parents or relatives	0%	4.40%	1.50%
Other	1.50%	1.50%	0%

TABLE 7
Frequency of mobile SMS usage across various social relationships

How many SMS messages do you send/receive for work/from your family or local friends per day on average?	Employer	Family	Friends
0	10.30%	2.90%	1.50%
1–10	57.40%	73.50%	63.20%
10–20	23.50%	19.10%	22.10%
> 20	8.80%	4.40%	13.20%

However, interestingly, the FDWs, in fact, used voice calls almost as frequently as text messages when they communicated with family in the home country. It is different from the findings in previous studies that suggest that FDWs used text messages dominantly regardless of relations or other concerns (Sun, 2006; Thompson, 2009). The explanation could be that as the FDWs regarded the maintenance of strong ties with family/friends in the home country as highly important (55 per cent considered it as the most significant reason to use the mobile phone for personal matters), they did not mind the cost of voice calls, as hearing their loved ones provided irreplaceable emotional value and sense of telepresence.

QUALITATIVE ANALYSIS

The qualitative analyses of the interview data mainly focus on four segments: 1) changes with regard to the three social relations after using mobile phones; 2) duration of mobile phone usage with the three social relations; 3) reasons to select mobile phone services; and 4) occasions and subjects to use mobile voice rather than SMS.

Changes in interaction with the three social relations after using mobile phones

With regard to communication with employers, the majority of domestic helpers (83.8 per cent) found it easier and more convenient to use mobile phones. The calls or SMS messaging with employers were mainly related to housework, especially children and meals. The FDWs stressed the significance of instant communication with their employers anytime and anywhere. With mobile phones, they are able to inform employers about conditions at home almost immediately. For example, Respondent 2 often used her mobile phone to update her employers about the children's conditions at home. Other matters communicated at work were mainly everyday issues, such as preparing meals and getting permission to go out. Respondent 37 indicated, "It makes work easier because at least they won't restrict me from using my handphone when needed." As the employers realised the necessity of allowing FDWs to carry a phone for work, it also benefited the FDWs in their personal communication with people locally and in their own countries.

When answering how using mobile phones changed interaction with their families overseas and their local friends, the FDWs showed more affective responses, unlike the homogenous responses to work-oriented, employer-employee communication. Most respondents

expressed that using the mobile phones allowed them to connect with family easily, eased their worries and reduced the feeling of homesickness.

As long as I'm using handphone, I make my life so easy. Because through my handphone, I can communicate with my family anytime. I can reduce homesickness and loneliness (Respondent 36).

Hearing my family's voice across a thousand miles is a big help for me. Gave me strength to ease my loneliness, burden and boredom (Respondent 42).

The majority called and sent messages to keep track of the life situations of their parents, partners and children. Some contacted their families to check if the money they remitted had been received. Others reassured their families that they were doing fine in Singapore, like Respondent 65 telling her daughter that they "are all fine with God's blessing".

Communicating with local friends was the primary way for FDWs to relieve loneliness and homesickness as they could talk or SMS each other easily (44.1 per cent).

My local social life after using a handphone is quite ok because it helps my life lessen the burden that I'm thinking and also my homesickness with my family (Respondent 36).

Nearly one-third of the respondents felt much happier after communicating with friends. The respondents also disclosed that they used mobile phones to share about their lives and problems, make friends, relieve stress and kill time. They often sent greetings to each other, asking about each other's well-being. Their communication topics discussed included work, family, love life, gossip, greetings, and coordinating chores or meetings. Some asked about each other's employers as well, for example Respondents 50 and 52, indicating the concern and support they showed for fellow domestic workers in a foreign land.

Reasons for using mobile phones for work, family and local friends

Most FDWs used their mobile phones as and when needed. However, the most important principle ruling the use of mobile phones was that it should not influence their work performance, especially in the eyes of their employers.

My employers are not a "devil-type" of person. They allow me to use it anytime as long as it won't affect my work (Respondent 42).

Anytime because I think using handphone is not a crime as long as you know your limitations and rest assure that it won't affect my work (Respondent 33).

When communicating with family and friends, the FDWs became more time-conscious. The FDWs often used mobile phones for personal reasons in their free time, such as in the evening after they finished the housework and when the calling and text messaging became cheaper during those hours. This is probably because mobile service providers tailored the mobile packages offered to FDWs to maximise their common free time after work.

Reasons for choice of mobile phone service providers

As shown in the quantitative result, the FDWs dominantly used prepaid mobile phone cards offered by Singapore mobile operators for mobile communication. The most popular service providers among the FDWs are SingTel and StarHub due to their less expensive rates and more appealing plans (e.g. free SMS, free incoming calls) (Respondents 12, 17 and 28). The major reasons for them selecting a mobile service include cheaper rates, ease of use, and attractive deals.

Occasions for mobile calls and SMS

Mobile voice calls and text messages have different characteristics: the former provides more communication and emotional cues and satisfaction, requires real-time interaction, and costs more. When asked to choose between the two for communication, more than half of the interviewees used mobile voice calls to get quick responses for emergency situations and one-third of them used it to express their care and love on special occasions, with the consideration that voice calls were more expensive than text messaging.

There's emergency sometimes I use mobile call for my family, because they ask me to call for need to help to send money (Respondent 1).

I called during birthdays, anniversaries, Christmas, New Year's, etc. To express my love to them even though I am not in their side, I'm still thinking and care about them (Respondent 61).

It is interesting to note that almost all respondents (98.5 per cent) chose to use mobile voice or text messaging while assuming that the communicative purposes were personal, not work-related. As a result of the affordable price, the majority sent SMS messages frequently to their families in the distance and local friends, and only a few still showed their concern about cost. Slightly more than two-thirds of the respondents indicated that they sent SMS messages every day or every other day for normal occasions.

Normal occasion. Normally everyday, I send SMS to my family and greet them, "Have a nice day." It is cheap way to communicate with them (Respondent 64).

One important reason for the FDWs choosing to use

text messaging primarily is affordability. More than half of the respondents regarded the cost of text messaging as low.

As for the topics communicated by using voice calls or SMS, the FDWs tended to talk about more serious issues like family problems, money issues, and parental or romantic relationships via voice calls. This might be due to the fact that mobile voice calls facilitate immediate responses and emotional exchange, which are necessary for discussing serious issues or maintaining close relationships. In contrast, more than half of the FDWs frequently used SMS messages to convey general information and greetings.

Anything under the sun. I'm the kind of person who loves to know and share not everything but at least half of the things happening in my everyday life (Respondent 42).

Similar to prior studies (Sun, 2006; Thompson, 2009), text messaging was the main communication mode used by FDWs to maintain their connection with their families overseas and local communities. This research further compares the occasions on which FDWs chose SMS over mobile voice calls and the differences in the topics communicated via the two mobile modes. However, in the quantitative analysis, the FDWs were found to use voice calls as much as text messages when they communicated with family in their home country. Hence, it may be easier to tell how much the FDWs value the importance of communication with any social relation by observing their frequency of using costly mobile voice calls.

DISCUSSION AND CONCLUSION

With respect to FDWs' mobile phone use, this study suggests that the purposes of maintaining connection and resisting control are not oppositional or antithetical; rather, the former is an articulation of the latter. More specifically, the current work advances the thesis that maintaining connection with distant family members and local friends is in fact a form of resisting employers' control. Our data strongly show that the FDWs used mobile phones primarily for personal and relational uses, which allowed them to reach out to families and friends in the homeland and host society. This can be seen as a way to break through the "imprisoned" domestic workplace, with or without employers' permission, to regain their subjectivity, connection and freedom. For the sake of keeping their jobs, the FDWs chose to use this communicative vehicle as a subtle, covert, strategic form of resistance to employers' control.

The results show that using mobile phones significantly changes FDWs' lives when interacting with their employers, families who are overseas and local communities. Both the quantitative and qualitative results show that FDWs use mobile phones more for the purpose of connection, especially in maintaining close ties with their families. It is also an important tool for communicating with local communities, thereby reducing their loneliness and isolation and

also provides information exchange and a supporting network. These echo Julsrud et al.'s study (2009) that mobile communication is meant for maintaining or strengthening ties, such as long distance parenting roles and marital relationships.

The mobile phone is a crucial vehicle for FDWs who are allowed and can afford to own them to overcome the boundaries of the "total institution" of their working conditions and maintain their connection with the outside world. Although FDWs' mobile phone use brings them more freedom for communication and connection, their use is constrained by employers. Most Singaporean employers still regard owning mobile phones as a counterproductive influence on their domestic helpers (Sun, 2006). This study on foreign domestic helpers using mobile phones is indeed representative of a small but increasing percentage of foreign workers. For work purposes, their employers mostly agree to let them use mobile phones as long as their work can be properly done. It is considered a privilege for FDWs to have mobile phones, which signifies the trust of their employers and their own freedom and subjectivity. As such, they must respect the explicit and implicit rules about the appropriate use of mobile phones within the households. It requires the workers to exercise self-control to "earn" their right to keep using the phones.

Moreover, this study found different patterns in FDWs' use of mobile phones for professional and personal use. For most of the cost-conscious FDW respondents who ought to pay their phone bills, the results of their mobile phone usage truly reflects their perceived values toward the three social relations. They varied in using voice calls or SMS messages, time of use, the length of call, the frequency of SMS messages, and payment.

This not only indicates that the FDWs value social connections more than work with respect to using mobile phones, but also show their compliance with the conduct of phone usage set by their employers. They felt less lonely and homesick by using mobile communication to connect to local social networks and families and friends overseas.

Finally, the findings show that price-conscious foreign workers are keen users of prepaid mobile phone cards whether for work or for personal communication. The main factors that affect their selection of mobile services are cost, ease of use and relative advantages. Similar to findings in prior studies (Sun, 2006; Pranata, 2009; Thompson, 2009), the more affordable and less intrusive text messaging is found to be the most popular mobile phone function across the three social relations such that FDWs use them frequently any time, on any occasion and for any topic. In contrast, the findings reveal that FDWs tend to use voice calls longer with their stronger-tied relationships (such as family members overseas), for special occasions, and for emergencies. The FDWs strategically use a combination of voice calls and text messaging for their work and especially personal life. In fact, this study found that FDWs used almost as many voice calls as text messages when they communicated with their families overseas, something that did not surface in

any previous study. It is because the FDWs highly value the maintenance of relationships with their family or friends in their home country and thus did not mind making expensive voice calls. Although text messaging is very popular, when it comes to emotional support and personal needs, voice calls still have an irreplaceable value on the impact of telepresence.

Overall, the availability of mobile phones helps the FDWs improve their isolated working conditions and living status, as well as provides a communication channel to maintain close ties with their families overseas and broaden their local social networks. Technology is neither gender-neutral nor self-guaranteed empowerment (Richardson et al., 2002). Due to lower income and relatively few secure jobs, women are less likely to own high-priced technology items (Hafkin, 2002). However, even though all the FDWs are low-income females, as seeking emotional support and maintaining relationships are their priorities, mobile phones provide them access to their loved ones, social networks, or people in the host society. Using mobile phones provides a communication channel for them to psychologically resist total control, escape from unequal power relationships at work, and create telepresence among friends and family at home while they work in a foreign country.

Gender may also influence the use of mobile phones. In future, using a similar research design to investigate Singapore foreign male construction workers' mobile phone usage toward the three social relations could reveal differences in mobile phone user patterns related to gender.

The use of mobile communication is highly contextualised and culturally sensitive. In Singapore, most domestic helpers are strictly constrained in terms of mobility, opportunities to meet other people, and using land lines or other communication technology. To most FDWs, having mobile phones with or without employers' permission or awareness becomes the ideal, even the only means for connection. Singapore's mobile operators' packages offer cheap text messaging compared to voice calls, especially using prepaid mobile phone cards. The above reasons probably explain why FDWs tend to rely on mobile phones—especially the use of SMS—for communication purposes. In addition, the culture of Filipino maids, who form the majority of the respondents, is typically buoyant, oral and sociable. They have been able to form a strong support network in their host country. Their English language ability also helps them to fit in easily in Singapore and earn higher salaries (compared to FDWs from other countries) to afford the use of mobile phones. They are considered less isolated than maids from other countries and more innovative. In future research, it will be worth investigating how this cultural context affects the use of mobile phones in specific groups.

As for limitations, since the data collection of this exploratory study did not use a representative sampling method, the results may not be applied to a broader population of FDWs in other national contexts. However, this exploratory study contributes to the emerging literature regarding the impact of mobile communication on specific social groups interacting with different

social relations. It enhances the understanding of the relationships between mobile phone use, social control and social networking. It also investigates mobile phone use patterns and motivations among migrant domestic workers in Singapore.

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Out of Touch?

The Lack of Emotional Support over the Mobile Phone

Findings from an Australian case study of adult women expose general, light and basic use of mobile phones. Participants used their mobile phone mainly for coordination and to a lesser extent for practising intrinsic interactions motivated by emotional support purposes. This paper focuses on social and emotional support over the mobile phone. Though crucial to individuals, emotional support seems to be a neglected area of research among mobile communication studies, all the more so when focusing on adult women. This study addresses this literature gap. The empirical findings are based on a case study of 26 women over 35 years of age residing in one coastal Australian town. The research design included a combination of quantitative and qualitative methods. This paper examines the communication methods that adult women use for social and emotional support, and analyses reasons and social implications of this limited intrinsic communication use pattern over the mobile phone.

ORIT BEN-HARUSH

Social support has been examined by scholars for many years, mostly from psychological perspectives (e.g. Abbey et al., 1985; Cobb, 1976; Sarason et al., 1983), as it has been identified as a fundamental human need contributing to well-being and quality of life (e.g. Cohen and Hoberman, 1983; Sarason and Sarason, 1983; Thoits, 1982; Umberson et al., 1996). Research often focuses on a combination of a few types of social support, mainly instrumental aid, emotional support and companionship (Rook and Ituarte, 1999; Wellman and Wortley, 1990), provided by different types of social relations such as: partner, family, friends and work colleagues (Agneessens et al., 2006; Bryan et al., 2001; DeLongis et al., 2004).

Less scholarly attention has been paid to social support from a communications approach, especially when examining the role of telecommunications as facilitators of emotional support. Research on women's use of the fixed-telephone explored social and emotional support (Keller, 1977; Moyal, 1989a; Noble, 1987; Rakow, 1992). The Internet has also been studied in that aspect to some extent (Dare, 2009; Leung and Lee, 2005; McKenna and Bargh, 2000). However, to a much lesser degree, mobile phone research has focused on emotional support (Reid and Reid, 2004; Reid and

Reid, 2007). That is, *general social practices* have been extensively studied over the mobile phone (e.g. Castells et al., 2007; Goggin, 2006; Katz and Aakhus, 2002), especially among teens and young adults (e.g. Donald and Spry, 2007; Lenhart et al., 2010; Ling, 2004; Ribak, 2006; Walsh, 2009; Williams and Williams, 2005), yet little attention has been paid to *emotional support per se*, particularly among adult women. This population segment is constantly under-researched in mobile phone studies (Dare, 2009), although it comprises a significant portion of the population (ABS, 2006) and of mobile phone users (Mackay and Weidlich, 2009). This paper aims to address this gap by analysing the practice of emotional support over the mobile phone by adult women.

First, this paper defines social and emotional support and their significance to individuals' well being. This leads to focusing on one type of social relations: friends, as a significant group of people that provides emotional support. Findings from Moyal's study on women's use of the fixed-telephone (Moyal, 1989a, 1989b, 1992) are then discussed as a reference point for comparing the role of telecommunications in facilitating emotional support among adult women. The following section presents the research methods. A critical analysis compares and contrasts this case study with existing mobile phone research findings. This is followed by data analysis and a discussion of the reasons for not using the mobile phone for emotional support. This paper concludes with a reflection on the wider social implications of this latter finding and its significance in better addressing individuals' social and psychological needs by researchers, policymakers and service providers, while highlighting issues of interest for further research.

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WHAT IS SOCIAL AND EMOTIONAL SUPPORT?

Cobb (1976) was one of the first to define social support as “information leading the subject to believe that he or she is cared for and loved, that he or she is esteemed and valued, and he or she belongs to a network of communication and mutual obligation” (Cobb, 1976: 301). This definition implies that social support involves positive interactions between individuals within a defined social network. Later interpretations of this term refer somewhat similarly and broadly to the provision of different kinds of personal aid such as “socioemotional aid, instrumental aid and informational aid” (Thoits, 1985: 53). Other scholars included affect, affirmation, encouragement and validation of feelings as a part of the social support concept (Abbey et al., 1985; Kahn and Antonucci, 1980).

Social support, as a comprehensive term of different types of assistance, is beneficial to individuals as it positively affects emotional strength, physical well-being, good health, lower stress and longevity of individuals (e.g. Cohen and Hoberman, 1983; Sarason and Sarason, 1983; Thoits, 1982; Umberson et al., 1996). Generally, it correlates with quality of life (Abbey et al., 1985). These critical effects motivated the examination of social support practices over the mobile phone in this paper.

Studies differentiate between a few types of social support including instrumental support, social companionship and emotional support (Agneessens et al., 2006; Wellman and Wortley, 1989, 1990). This paper follows this distinction while particularly focusing on emotional support. *Instrumental aid* involves practical help, for example: when someone is sick, when children need to be taken care of, when the car breaks down, or when financial aid is needed. *Social companionship* relates to occasions in which an individual is interested in spending time with particular others (going out together, visiting at home, hanging out, but also when interacting over the phone or the Internet for companionship purposes). Lastly, *emotional support* is associated with comfort (Burlinson, 1984, 1994) and reassurance situations; when in need to talk to someone, to confess, to reinforce self confidence, or work through personal feelings. Emotional support is associated with intimacy, trust, openness and close relationships (Samter et al., 1997).

Though this paper particularly focuses on breaking down the social support term into different types of assistance, most commonly, in real-life situations, support involves a mixture of these types. Consider an interaction primarily made for emotional support; this also involves companionship (as both people in contact accompany each other throughout the interaction) and instrumental support aspects (if following the interaction, the support receiver could practically function better). Therefore, more accurately, this paper discusses social interactions driven by the need for emotional support.

Social support depends on “the existence or availability of people on whom we can rely, people who let us know that they care about, value, and love us” (Sarason

et al., 1983: 127). However, not all people provide all kinds of support. Often, social support is provided by people within one’s social network (Agneessens et al., 2006) and within this network, different social relations provide different social support. Work colleagues and neighbours commonly provide instrumental support and information, whereas most individuals would rather communicate with friends when in need of emotional support (Wellman and Wortley, 1990). Research found that immediate kin are somewhat more important in providing instrumental support, while friends are generally more significant for emotional support and companionship (Agneessens et al., 2006; Wellman and Wortley, 1989). Following this observation of the significant role that friends play in providing emotional support, they are the focus group of this paper.

The next section discusses communication methods as facilitators of emotional support. The main body of evidence is based on the fixed-telephone literature as mobile phone literature dedicated to emotional support is scarce. Therefore, this study follows Leung and Wei’s (2000: 316) observation according to which, the gratifications sought in mobile phone use are largely consistent with previous fixed-telephone literature.

THE ROLE OF THE TELEPHONE IN FACILITATING EMOTIONAL SUPPORT

In 1988, a seminal Australian study by communications historian, Ann Moyal (1989b), of women’s use of fixed telephone, found that untimed local calls were particularly important to women’s well-being and that of the larger social fabric, as this communication method was used more extensively to facilitate social support, but more particularly emotional support. Though two decades ago, Moyal’s study addressed social concerns that are still significantly relevant in today’s telecommunication research.

While Moyal’s work was undertaken at a time when social networks had yet to be recognised and studied by communication scholars, it revealed the dominant role that family members and friends play in many women’s lives. Moyal’s study was early in highlighting the significance of social networks for women’s state of well-being. Additionally, she approached the telephone as a facilitating tool that enabled women to sustain and maintain their social support system. This work and others undertaken at the same time (Martin, 1991; Rakow, 1992; Wellman and Tindall, 1993), recognised and appreciated the dominant social, political and economic influence of social networks in people’s lives and the role that telecommunication plays in this process.

Moyal’s (1989b) gender-related conclusions were reconfirmed by Lana Rakow (1992), a researcher of women’s studies who, following interviews with women residing in a small American town, suggested that fixed-telephone use by women is both gendered and gender work. That is, women use the telephone to execute their feminine duties (gendered work mostly associated with home and family related tasks) in a feminine fashion

(gender work, from the community's perspective). In a similar approach, the mobile phone case study discussed in this paper includes only female participants. This enables a comparison of findings from two different periods and different telecommunication platforms.

In her work, Moyal made a distinction between instrumental and intrinsic calls based on earlier definitions of these terms by Keller (1977). *Instrumental calls* included "calls of a functional nature made in connection with shopping, making appointments or business arrangements, seeking information and dealing with emergencies or household crises" (Moyal, 1992: 53). Moyal's instrumental calls involve instrumental support. Moyal defined intrinsic calls as "personal communication with relatives and friends, volunteer work, counselling and all intimate discussion and exchange" (ibid). These calls usually consist of the two other types of social support previously introduced: companionship and emotional support. Moyal's findings showed that the majority of the calls were intrinsic. They lasted much longer than instrumental calls (average of 20 minutes versus two minutes accordingly) and were mostly local. In spite of the significant amount of intrinsic calls in comparison with total calls, Moyal argued that their social value was generally underestimated and dismissed as low status uses, gossip and a waste of time, and suggested that these assumptions needed to be re-evaluated. Consequently, she stated that the primary justification for the fixed-telephone infrastructure could no longer be limited to business purposes. Following this telecommunication study and other research (Fischer, 1982; Martin, 1991; Rakow, 1992), intrinsic communication and its value in recent time is more widely recognised as significant and central to the development and maintenance of social networks (Wellman et al., 2002; Wellman and Tindall, 1993).

Mobile phone literature contributes mainly one additional aspect of emotional support to the fixed-telephone literature. Reid and Reid (2007) studied mobile phone practices of anxious and lonely users. One hundred and twenty-seven females and 31 males aged between 16 and 55 years completed an online questionnaire that resulted in a personality profile ranked by social anxiety and loneliness scales. Additionally, respondents marked their general preference to send text messages (SMS) or make voice calls over the mobile phone. Authors reported that lonely participants preferred making voice calls, while anxious participants preferred text. They concluded that "texting has intrinsic appeal to anxious cell phone users, but is dispreferred by lonely users, except for instrumental purposes" (Reid and Reid, 2007: 433). Reid and Reid (2007) found that individual differences influence mobile phone practices. They also suggest that preferences for mobile phone use mirror social practices via the Internet. Leung (2001) found in an Internet study that heavy users of online chat were motivated by intrinsic goals of sociability and affection, while light users were instrumentally motivated, tending to chat online for entertainment or appearances sake. Reid and Reid's (2007) analysis of attitudes towards SMS

suggests that anxious cell phone users follow Leung's observation of heavy users motivated by intrinsic purposes while lonely users are more likely to view SMS as an instrumental means.

The literature discussed has defined social and emotional support, emphasised their significance and connected these terms to social networks and friends. Additionally, the role of the fixed-telephone in facilitating social and emotional support has been evaluated drawing on Moyal's study. The mobile phone literature highlighted users' preference to call or text based on personality differences. Together, this literature establishes the foundation for discussing of the current case study—women's use of the mobile phone for emotional support purposes. The next section presents the case study research methods.

RESEARCHING AUSTRALIAN ADULT WOMEN

The case study included adult women residing in Ocean Shores, one Australian coastal town of approximately 5,600 residents¹ (ABS, 2007), located along the Pacific Ocean on the far north coast of New South Wales, Australia.

Ocean Shores belongs to the Byron Shire Local Government Area, which is one of the fastest growing localities nationwide, projecting a meaningful Australian demographic shift of *sea-changing* (Burnley and Murphy, 2004); movement of people from metropolitan areas to provincial coastal communities. This demographic trend was the main rationale for focusing the study on Ocean Shores, thus directly addressing population mobility issues that are not discussed in detail in this paper.

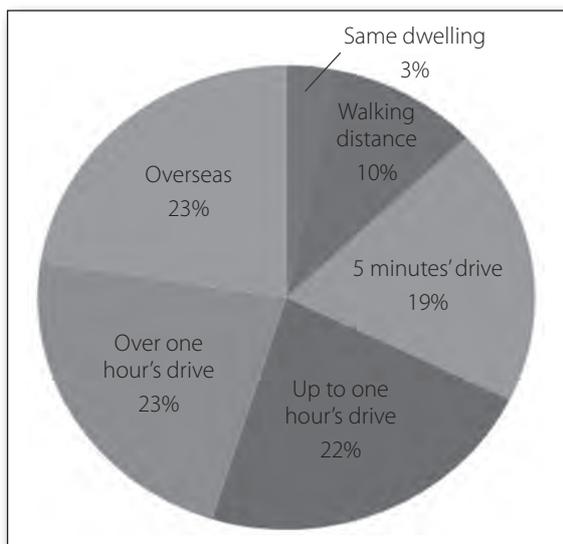
The case study included 26 female participants, aged 35–76 years, residing in Ocean Shores. Participants were recruited through a process of "snowball sampling", starting with myself, moving on to interviewing my local friends, and then, their local friends. A similar recruiting method was described in Moyal's study (1989b). The application of this technique preserved the actual social relations' structure, which was of main interest to the overall study.

As participants were recruited based on their social relations, the case study sample varied from national figures in some socioeconomic factors, including country of birth (sample consisted more immigrants than census statistics of Ocean Shores), education (higher level of education among participants) and employment rates (higher employment rate among the case study sample). In accordance with the local statistics (ABS, 2007), most participants were either self-employed or part-time employees. Most participants (19 of 26) lived with others (partner and/or children) in the same household. A similar number of women indicated that their family's level of income was enough for their needs.

On average, participants named 25 friends, of whom about one third were local (up to five minutes drive) and almost one quarter lived overseas (see Figure 1). Most friends (68 per cent) did not live locally. The high percentage of distant friends might

be related to the fact that all participants arrived at Ocean Shores as adults. By this time, they had already established social connections elsewhere, and most of these have been kept and maintained via telecommunications. Most family members of participants also resided in a distance, providing another evidence of population mobility.

FIGURE 1
Average number of friends by residence proximity



Source: The case study, $n = 25$

The research design combined quantitative and qualitative methods, which enabled triangulation of data. Thus, the study involved online surveys to collect background information regarding the case study participants and their mobile phone use, and hour and a half in-depth, semi-structured interviews, which were audio recorded, transcribed and coded into themes. In addition to open-ended questions, during the interviews, quantitative data were collected to provide information about participants' friends and their communication patterns with friends. *Mobile phone logs* were also completed using the recorded log in the participants' personal mobile phone devices. This method has been used in an Australian mobile phone survey conducted by Wajcman, Bittman, Johnstone, Brown, and Jones (2008). The logs consisted of the respondent's 10 most recent activities of incoming and outgoing voice communications as well as SMS messages. In addition to the information stored at the mobile phone device, participants completed contextual information on each interaction, including the identity of the caller, the purpose of the interaction and its level of necessity.

The findings presented in this paper are based on parts of the interviews addressing social and emotional support, as well as on the online surveys and the mobile phone logs. The next section presents findings related to participants' general mobile phone use pattern, followed by findings regarding social and emotional support practices over the mobile phone.

WOMEN'S USE OF MOBILE PHONES

Generally, adult women in coastal towns used mobile phones differently to the average Australian users (Mackay and Weidlich, 2007, 2008, 2009; Wajcman et al., 2008). The mobile use pattern of the case study participants was lighter, as the women reported lower mobile phone expenditure than the national average (Mackay and Weidlich, 2009). Mobile phone use was also more basic, including almost exclusively voice calls and SMS. Additionally, the common rationale for most of the participants' mobile activities was coordination. This instrumental pattern could be partly explained when considering that daily communication via mobile phone is mostly executed between local family and friends (Wajcman et al., 2008; Yates and Lockley, 2007). The basic use pattern was also influenced by participants' particular life circumstances as sea-changers, and is generally in keeping with the relaxed and modest lifestyle in a small town.

When participants moved to Ocean Shores, they did not have many local friends: "I didn't know anyone in Ocean Shores when I moved in ... I probably had only two good friends at that time" (Doris, 49).² This influenced their mobile phone use capacity, which significantly decreased: "I didn't really have anyone to call to other than my husband" (Holly 42, reflecting on her mobile phone use after moving to Ocean Shores). Additionally, micro-coordination—coordination of everyday activities—over the mobile phone, which is most noticeable among families with children (Ling and Yttri, 2002), is necessary to a lesser degree in sea-change communities (than cities), not only among family members but also between friends, due to common face-to-face interactions. Hence, mobile phone use remained minimal for these women, as reported by Ella (36) when asked about her current mobile phone use after relocating in Ocean Shores: "today I am a prepaid customer ... I talk much less. The calls are shorter and much less frequent".

All the case study participants, but one, used and owned a personal mobile phone. They paid their own bills as monthly bill subscribers (56 per cent) or prepaid customers (44 per cent). This proportion is similar to the nationwide statistics (Australian Communications and Media Authority, ACMA, 2009). The case study participants spent less on mobile phone use than the average Australian expenditure even when comparing only women over 35 years (Mackay and Weidlich, 2007). Over half of the case study participants (56 per cent) rated their use as light. One third perceived themselves as medium users. Only one participant rated herself as a heavy user.

A triangulation of three different examinations of *most contacted people* over the mobile phone, based on responses during the interviews, the online survey and the mobile phone logs indicated consistent findings. Most mobile communication (quantity as well as frequency of interactions) took place with the participant's partner followed by interactions with her children and friends. Nearly half of all participants

(48) reported primarily contacting their partner and to a lesser degree their children (39 per cent)³ over the mobile phone. Only three participants (12 per cent) reported primarily contacting friends.⁴ Friends were identified by half of the participants as secondary contacts. None of the participants mentioned work related people as their primary mobile phone contacts. This pattern of primarily contacting family and friends is consistent with findings reported in a recent national survey (Wajcman et al., 2008). Most contacted people lived locally.

A somewhat similar pattern is evident in three sequential Australian-wide mobile phone surveys conducted by Mackay and Weidlich (2007, 2008, 2009). In these surveys, participants stated whether they used their mobile phone mainly for personal or work purposes.⁵ Most respondents used their phone exclusively or mainly for personal use (70 per cent in the 2009 survey). When examining mobile use by gender, based on Mackay and Weidlich's 2007 survey data, gender-use patterns emerge. Twice as many women (38 per cent) used the mobile exclusively for personal reasons than men (19 per cent). Men used the mobile exclusively or mainly for work over three times more than women (14 per cent). This implies that within the overall national usage, distinct use patterns are evident. Women tend to use the mobile phone more for personal reasons.

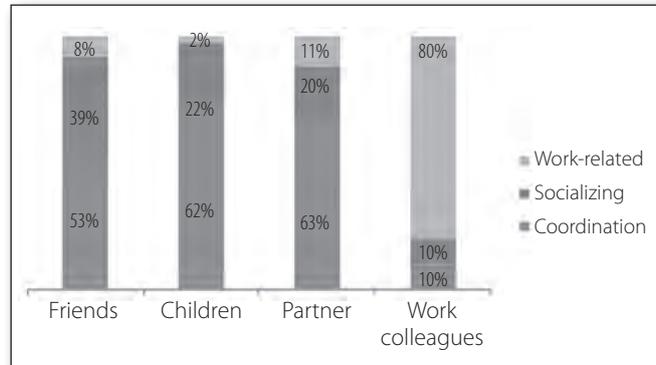
MOBILE PHONES AS FACILITATORS OF SOCIAL SUPPORT

Most commonly, mobile phone research does not further analyse mobile interactions by purpose; overall use is categorised only as personal or work related based on participants' perceptions of their use (Mackay and Weidlich, 2007, 2008, 2009; Wajcman et al., 2008). Consequently, any type of communication with family and friends is regarded as personal, while no additional information is provided regarding the nature of particular interactions (primarily, whether interactions are instrumental or intrinsic). In contrast, the case study particularly addressed the purpose of each interaction documented on their mobile phone log, hence capturing a more accurate and detailed use pattern identifying users' needs, motivations and common practices, which are most commonly overlooked or over-generalised in mobile phone studies.

Social support over the mobile phone was explored in the case study by examining whether interactions were motivated by coordination, socialising or work-related purposes. Coordination referred to instrumental aid. Socialising included intrinsic communication—companionship and emotional support purposes. Work-related interactions did not necessarily provide social support, but because of their distinct nature (paid activities), they were regarded as a distinct purpose.⁶ The most frequent purpose of interactions over the mobile phone was coordination, followed by socialising and, to a much lesser degree, work-related reasons. Even when analysing communication with friends-only, over half

of these interactions were motivated by coordination purposes while socialising driven interactions were less common (see Figure 2).

FIGURE 2
Purposes of mobile phone interactions by types of social relations

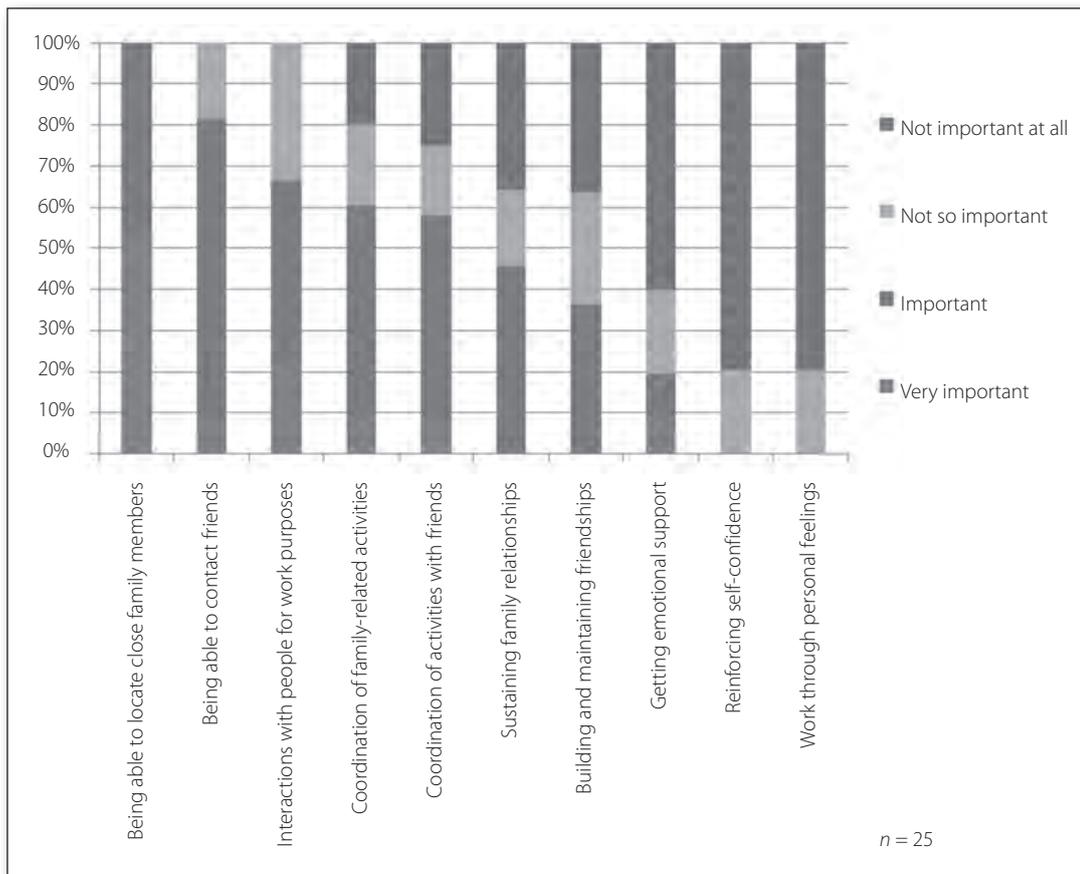


Source: The case study

Rebecca (45) explained this coordination-motivated use pattern when communicating with her partner: "I probably talk to Tim [her partner] a lot over the mobile phone organising stuff. It's the running of the household and the family. There are practical things. We don't ring and say: 'I love you darling,' not anymore [laughs]." Rebecca pinpointed three important aspects in common to most participants: (a) the social roles of most participants as mothers and wives, which is most commonly expressed by running the household and being responsible for most of their children's affairs, influenced their mobile phone use pattern, therefore (b) they all used the mobile phone extensively for coordination purposes. Moreover, (c) they barely used the mobile phone for expressive (phatic) communication, in which feelings of empathy, contact, affection and care are communicated (Geser, 2004; Srivastava, 2005). This latter purpose, which falls under social and sometimes emotional support, is especially popular among younger mobile users (Ling and Yttri, 2002; Sørensen, 2006). It seems that this dominant adolescent need for this type of affection, which is reflected by phatic communication, does not apply to the researched adult women and perhaps to wider adult populations, in the same intensity as to younger audiences, though this requires further investigation.

This preference for practical practices, including locating family members, coordinating and interacting with work-related contacts over socialising related interactions and particularly emotional support practices, was evident following data analysis of the online survey. Participants were asked to classify the significance of selected social practices. Findings are presented in Figure 3, sorted by level of significance. Of these activities, all participants ranked "being able to locate close family members" as *very important* or *important*. The next activity ranked as most important was "being able to contact friends", then "interaction with people for work purposes"⁷ followed by two quite similar

FIGURE 3
Sorting mobile activities by significance



Source: The case study

results of “coordination of family related activities” and “coordination of activities with friends”. Next, participants ranked “sustaining family relationships” and “building and maintaining friendships”. The last three activities, which fall under the emotional support category—“getting emotional support”, “reinforcing self-confidence” and “working through personal feelings”—were ranked lowest in importance when participants reflected on their practices over the mobile phone.

A certain time-related pattern was evident in this data; shorter-time social support activities (of the “contacting” and “coordinating” type) were more commonly ranked as important than social support interactions requiring more time (of the “sustaining”, “building”, “maintaining” and “reinforcing” type). The shorter time activities were also interactions that can be quite effectively communicated via text messages, which might be a more comfortable method in certain situations and often cheaper than voice calls. Following the popular perception that “time is money”, particularly emotional support interactions were translated into a higher mobile phone expense, as Julia (69) explained: “I don’t use the mobile phone so much for intimate discussions with friends because I’m wary about running up big bills. But, briefly, yes.” This issue among others is discussed in the next section, which highlights findings regarding emotional support.

EMOTIONAL SUPPORT

All the case study participants confirmed they highly valued emotional support. They all appreciated the emotional support they received and admitted providing emotional support to others. Participants associated emotional support with long interactions. Joy (49) indicated she needed “time and space” for emotional interactions. She referred to free time and private space.

Participants indicated that they most commonly meet face-to-face when in need of emotional support. They preferred face-to-face for emotional support interactions over any telecommunication method. They reported that face-to-face interactions generated qualities that could not be replicated in a similar manner while using mediated communication methods, such as physical contact, warmth, closeness and intimacy. This was also found in another Australian case study by Dare (2009) of adult women and their communication practices with friends. While e-mail and SMS were considered suitable for instrumental interactions, they were “less likely to be considered an appropriate medium when a more tangible form of emotional support is needed ... [these methods were used] predominantly as supplementary channels of communication” (Dare, 2009: 491). The Ocean Shores participants were also influenced by their lifestyle in a

sea-change community, which resulted in frequent face-to-face interactions. Participants used these encounters to practise emotional support, alongside companionship and instrumental aid.

The second most practised method for emotional support indicated by the Ocean Shores women was the fixed-telephone followed by the Internet. No participant reported the mobile phone as a primary method for emotional support. Accordingly, when asked in the online survey about *primary use* of the mobile phone, none of the participants marked “emotional support”.

When in need to communicate with distant friends for emotional support, participants favoured the fixed-telephone: “really big stuff I phone [landline] my sister in Melbourne or my closest friend in Taree” (Joy, 49). Skype, a voice over IP platform, was mentioned as a preferred communication method when interacting for emotional support with friends overseas. Overall, accessibility to alternative communication methods and especially the preference and ability to meet face-to-face facilitated emotional support without using the mobile phone. Evidently, most participants did not perceive the fact that they do not practice emotional support over the mobile phone as problematic.

Some women emphasised the importance of privacy and “quiet, reflective time” (Kathy, 39) while having emotional support interactions. In the eyes of these women, using the mobile phone “on the run” and in public areas classified the mobile device as inadequate to “conduct conversations about personal problems or issues” (Dorothy, 66). This indicates that participants’ perceived the mobile phone as “anywhere anytime” technology; hence it was constructed as a more public communication tool, rather than one of privacy. This approach can also explain concerns of *social mores* regarding mobile phone use as typically expressed by older participants. This was also evident when specifically referring to emotional support conversations, as stated by Miranda (60): “I have heard young women and girls using their mobile phones for this purpose and discussing very personal issues in public. My age group probably finds this behaviour inappropriate.” It seems that emotional support becomes something more private for older women, thus they are more likely to use other methods for emotional support. They also find it difficult to accept others using the mobile phone for this purpose. Generally, it seems that age is very much associated with certain behaviour patterns over the mobile phone (Ling, 2000; Ling and Haddon, 2003; Ling and Yttri, 2002). Different needs and gratifications of different age groups lead to very different behaviour patterns. This needs further attention from scholars who either focus on young age groups or execute nation-wide surveys, which to a large extent, lead to an over-generalisation.

Among the few women who stated that not having emotional support over the mobile phone is problematic, a concern of *effectiveness and busy lifestyle* has been raised. Ella (36) thought that women could use the mobile phone more effectively for emotional support purposes when:

Driving the car or waiting for the kids to finish school ... Often women are very busy ... Most often women will not share their feelings or get emotional support, as they do not have enough time to share it with other women. This may increase the loneliness feeling in their life.

Loneliness and feeling of isolation were concerns expressed also by Laura (61): “women can feel ... isolated in times of great need of emotional support. This feeling of isolation can have a detrimental effect spiritually, psychologically and on social wellbeing.” Often participants mentioned they were busy or that they were not wishing to impose on other “busy people”. On the other hand, they also commonly practiced face-to-face interactions and reported getting enough emotional support.

The concern of loneliness and feeling of isolation when not using the mobile phone to facilitate emotional support is associated with a concern of *immediacy*, as expressed by Dorothy (66):

If they aren’t using their mobile phones for this purpose [emotional support], then they possibly aren’t reaching their sources of emotional support as easily. With a mobile phone, women can reach their friends and partners readily ... That is, a woman can call a friend at any time with some assurance that the person will answer. This may be especially important if the need for emotional support is urgent.

Often, the need for emotional support is spontaneous, urgent and crucial. The mobile phone is ideally designed to facilitate such scenarios, as it can be used spontaneously, “anytime anywhere”, while generating immediate contact. Nevertheless, participants hardly used their mobile phone for this purpose.

Some participants raised issues of radiation, discomfort (“it heats your ear”) and unreliability (poor connections or areas with minimal or no signals), to explain why they refrain from using the mobile phone for emotional support. These reasons were directly related to the perception that emotional support interactions are especially long.

However, the main reason most commonly mentioned for not using the mobile phone for emotional support was cost. Participants often associated emotional support with lengthy interactions, which meant that emotional support was too expensive when practiced over the mobile phone:

It’s no good having great technology if you can’t afford to use it ... It is also problematic if someone is forced to use a mobile in a crisis and the whole time they’re talking, as well as dealing with the crisis, they’re freaking out about how much this call is costing them. I received a call from a distressed young woman on an overseas mobile who became even more distressed later when she realised the call cost her \$80. (Elizabeth, 58)

A similar cost-related concern has been expressed by Miranda (60): “As mobile phones are in general expensive,

I don't believe they are an effective way of communicating for deeply emotional support as it's difficult to relax when you are worried about the cost of a phone call."

A recent report of the Australian Communications and Media Authority (ACMA, 2008) surveying 1,426 respondents aged 18 and over, found that cost was the most major concern when considering to whether or not to replace the fixed-telephone service with the mobile phone. The report discerns between two cost views. Half of the participants, especially the "techno non-adopters", perceived mobile phone costs as prohibitive. The other half, the "enthusiastic embracers", thought that "mobiles offer good value for money, especially the capped plans" (ACMA, 2008: 11). Views expressed by the case study participants largely classify these women under the first category. This further explains their concern regarding cost of long emotional support conversations over the mobile phone.

If cost is a major concern, it would be interesting to examine emotional support interactions over the mobile phone when not having to worry about use expenses. Such scenarios might be common among mobile phone users who are subscribed to special plans: "If you are on plan where cost is not an issue then it would be a different matter" (Joy, 49). However, most of the Ocean Shores case study participants did not use such inclusive plans; hence, cost was a major concern for them. This situation was predicted by Moyal (1989b) in her fixed-telephone study and is discussed in further detail next.

DISCUSSION

Participants reported minimal mobile phone use and lower expense rate than the national figures (Mackay and Weidlich, 2009). The fact that most women reported similar basic use pattern might point towards a distinctive behaviour shared between a specific population group: adult sea-change women. On the other hand, this behaviour pattern might be common among wider populations. Most importantly, the national findings tend to generalise and underline the fact that different groups of population use the mobile phone differently.

Most participants in the case study reported having short conversations (or using SMS) over the mobile phone, especially with their partner and children, for micro-coordination purposes. Due to this instrumental pattern, most examined interactions were executed between spatially close people, though cost-wise, there was no difference if interacting with a close-by or a distant contact across the nation. The instrumental pattern use of the case study participants share similarities with previous studies of light Internet users and lonely mobile phone users as reported earlier (Leung, 2001; Reid and Reid, 2007) who used telecommunication more for instrumental reasons, while heavy users of the Internet and anxious mobile phone users were motivated by intrinsic goals of sociability and affection. Drawing on these studies, it is suggested that light domestic use of mobile phone motivates instrumental practices, while

heavy use involves also intensive intrinsic interactions, though this requires further investigation.

While participants in general highly valued emotional support, intrinsic communication was very limited over the mobile phone. A number of reasons explained this use pattern, including the accessibility to alternative communication methods and the preference of face-to-face interactions, the importance of privacy (while the mobile phone was perceived as more public), worries about radiation, discomfort and unreliability. Among the few participants who favoured emotional support over the mobile phone, concerns regarding lack of immediate communication when in need for emotional support and busy lifestyle resulting in loneliness and feelings of isolation have been raised.

However, the most compelling evidence for not facilitating the mobile phone for emotional support was cost. Participants perceived emotional support as long interactions, which were then translated into expensive mobile phone bills. These women did socialise with friends and family and get emotional support, but they just preferred other communication methods over the mobile phone—primarily face-to-face—followed by the Internet and the fixed-telephone. In addition to cost, face-to-face interactions were regarded as more appropriate and more rewarding for this type of activity.

The length of interactions has already been identified by Moyal (1989b) as one of the distinctions between intrinsic and instrumental calls (average of 20 minutes versus two minutes accordingly). Generally, this timed-based distinction might apply also when defining emotional support interactions over the mobile phone; short interactions are instrumental, while long interactions are intrinsic.⁸ Therefore, the major challenge that users as well as service providers and policymakers need to address is how to enable these significant, considerably long interactions, which involve high costs.

The deficiency of communication with friends for intrinsic purposes over the mobile phone contrasts with Moyal's fixed-telephone findings, where long affective conversations were practised as women's most frequent use of the fixed-telephone. Nevertheless, this contrast could be explained when taking into account cost considerations, which were actually among the major motivations behind Moyal's study two decades ago. Following her research, Moyal expressed these cost concerns of women when commenting on a potential change in cost policy from untimed to timed local calls:

Reactions [of participants] embodied fear of personal communication lost through costs; concern that the character of women's telephone communication ... would be changed; disquiet at the likely diminution of friendship contact and the supportive care this sustained; and a wide concern from most respondents at the effect that timed local charging would have on pensioners, the poor, single parents, the physically disadvantaged and society's most vulnerable groups. (1989b:

Moyal's work led to keeping the untimed local fixed-

telephone calls policy, which still applies in Australia. Retroactively and compared with mobile phone use pattern, it is now realised how this act influenced communication patterns and assisted in embedding intrinsic calls as a dominant practice of the fixed-telephone use. Therefore, findings of this case study do not contrast, but rather support Moyal's assumption—cost oppresses intrinsic communication.

Nevertheless, cost is also what keeps the fixed-telephone so popular for affective use. Though fixed-telephone use is gradually declining (ITU, 2009), it is perceived as cheaper than the mobile phone (ACMA, 2008). In practice, it is difficult to come up with clear comparative cost diagnosis due to the many payment plans available. Additionally, people often fail to factor in the cost of the line rental per month as part of the “cost”; however, as long as the fixed-telephone is *perceived* as more affordable, people prefer using it, especially for long conversations, most of which are intrinsic calls. Therefore, keeping the untimed local calls tariff is a strategic decision that gives a crucial advantage to fixed-telephone services. Exceptions to this are cases of service providers that offer competitive tariffs for long duration calls through specific mobile cost plans—plans that provide fixed-fee service or financial incentives for interacting with users of the same service provider.

Following the modern hectic lifestyle “on the move” and due to cost issues of long mobile phone conversations, it is worthwhile also to investigate brief intrinsic interaction. To what extent these brief, cheaper forms of interactions such as SMS, short mobile conversations, online chats and social network sites updates (“walls”) provide emotional support especially for adults? Do these new short-timed forms of communication substitute or complement more traditional communication patterns? Such SMS examples for rapid emotional support interactions are cited by Janet (46):

My husband is such an arsehole for not remembering my birthday! ... Oh my god yes he remembered—a huge bunch of flowers just arrived at the office!!! (I am such a bitch for thinking he would forget).

These kinds of interactions often revolve around *announcing* one's feelings rather than *discussing* emotional issues. The act of “confessing” is with no doubt emotionally releasing, but what is its affect in comparison to traditional long emotional support conversations is yet to be investigated. It is important to question the aspect of *support* provided in such interactions.

While teens research suggests that such forms of phatic communication are emotionally effective and common among young audiences (Sørensen, 2006), the case study implies that adult women do not perceive short interactions as emotional support and scarcely use SMS or other quick communication methods for this purpose, with one exception: using the mobile phone (and particularly SMS) as a means to the “actual” support—face-to-face interactions—as cited by Janet (46), when reading one of her received text messages:

“I am just so sad and lonely, can I come over now and have a cuppa?” The consistent mobile phone use of the case study participants for micro-coordination among friends highlights the role of the mobile phone as a mediator resulting in face-to-face meetings. This way, mobile phones indirectly facilitate emotional support.

CONCLUSION

As the mobile phone is primarily an interpersonal communication tool, most often it involves social interactions,⁹ which inherently encompass aspects of social support; for example, it could be argued that any positive interaction reinforces social support—knowing that one is cared for and loved, even when primarily driven by instrumental motivations. It might be worthwhile to highlight those few interactions that exclude social support (such as distressing interactions), in order to realise how such support is so embedded in people's needs and practices. In other words, socialising is an integral part of any communication interaction regardless of the platform or medium of communication. Practically, socialising is a basic outcome of most interactions, so people get to practise socialising in most interactions. Nevertheless, socialising is not necessarily a prime motivation or purpose of interactions, as found in this case study. Due to the significance and complexity of social support practices, research should further explore this area.

Accordingly, mobile phone research should address social support issues more deeply, frequently and specifically in order to understand implications of different social support practices better. There is a tendency to examine mobile phone use based on certain age groups (teens, young adults), gender, and work versus personal purposes. This case study shows that additional factors such as residential location, lifestyle, social roles and the different types of provided support also influence mobile phone practices. By taking such factors into consideration, the connection between needs of specific groups of users and their mobile phone use might be better understood and more adequately addressed by policymakers and service providers.

Moreover, as the role of friends is becoming more central in modern society (Roseneil and Budgeon, 2004; Spencer and Pahl, 2006), it is expected that social- and communication-related research would address this specific social group. In the case of mobile phones, as friends are found to provide unique support (more of the intrinsic type of communication), particular examination of friendworks—networks of friends—might highlight unique mobile practices (Ben-Harush, 2009).

Overall, the question whether or not minimal use of mobile phone for intrinsic calls is a problem remains open. On the one hand, users report getting emotional support in alternative ways; on the other hand, as people become more mobile, and use mobile phones to interact while on the move, intrinsic communication might be restricted to specific situations, while the overall available emotional support for individuals might be limited. This requires further investigation.

The analysis in this paper is based on a case study. As such, it highlights particular individuals—adult women, their behaviour and thoughts in a particular setting of daily life in a small sea-change community. The case study findings underline new ideas and insights about the use of mobile phone for social and emotional support purposes, which might apply to wider population segments. However, as the scope of the study is limited, it is acknowledged that the mentioned findings cannot be generalised to a wider population but rather offer directions for further wide-scale studies, which must take place if inclusive conclusions are to be drawn. Attempts to ameliorate the limitation of generalisability include triangulation of qualitative and quantitative data. The mobile phone log provided quantitative data on use patterns while qualitative mobile phone data collected throughout in-depth interviews supported these figures. Additionally, comparative analysis with national studies highlighted similarities but mostly differences between the case study findings and the national figures. The significance of the case study findings in this aspect is to highlight that communication use varies between different groups of populations, influenced by many factors and should not be generalised.

In conclusion, this paper highlights emotional support from a communication perspective. Adult women in this study reported very little practice of emotional support over the mobile phone. Though based on a local case study, it raises important concerns relevant to wider populations, which have not been addressed in mobile phone literature so far, questioning the extent to which mobile phones facilitate emotional support, especially among adult women. Due to its importance and crucial effects on individuals' well being, social support needs to be unbundled and thoroughly investigated in order to better understand its complicated role and practices in contemporary society.

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NOTES

1. Mentioned statistics in this section are based on housing and population data by The Australian Bureau of Statistics (2007).
2. Fictitious names are in use for all participants. Their age is bracketed.
3. Only participants with adolescent children reported regularly communicating with their children over the mobile phone.
4. This parameter of primary contacts is associated with whom participants lived with, in the same household. The three participants reporting primarily contacting friends reported living alone.
5. The national data is more general than the case study, as within the personal use category, no specific contact groups (such as partner, children or friends) are examined.
6. Two additional categories were originally included within purpose of interactions; life-saving and other. However, due to their minimal impact (less than one per cent of all interactions), they are disregarded here.
7. This contradicts findings presented earlier in which work contacts were the least contacted over the mobile phone, and the more widespread findings indicating that mobile phone users practise more commonly personal than work use. This might be explained by a gap between perception and actual use. It also highlights the need for further study around these issues.
8. There is another debate that is addressed later on, regarding the impact of brief emotional support interactions such as SMS, short conversations and social network sites “walls”.
9. An exception to this are mobile activities that do not mandatorily engage another person, such as time and task management applications (alarm clock, reminder, calendar), games and browsing the Internet for data.

‘Simply Leaving My House Would Even Be Scarier’

How Mobile Phones Affect Women’s Perception of Safety and Experiences of Public Places

Historically, women’s access to public space has been studied as analogous with women’s positions of social and economic power. The “separate spheres” of private and public spaces are characterised as gendered spaces with women destined to remain within the private sphere of home while men are freer to move about public domains (Buechler, 1990). Not unlike women’s use of computer mediated communication, mobile mediated communication has the imagined possibility of providing women with opportunities to break out of gendered ways of behaving (Foley et al., 2007). This paper is based on the responses of 99 participants in the mobile phone condition of a larger study conducted in the United States, aimed at investigating the ways in which mobile communication technology impacts women’s perception of public safety. The results indicate that women do imagine their phones as weapons of self-defence and often take more risks just because they have a mobile phone in their pocket. A critical analysis of the implications of these findings along with how these results could apply to a Pan-Asia perspective is discussed.

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Historically, women’s access to public space has been studied as analogous with women’s positions of social and economic power. Women’s struggle for equality and autonomy often begins with their symbolic as well as literal flight from the kitchen to the street. Women’s ability to organise social movements has come from interacting with each other in public space (Buechler, 1990). There is evidence of this throughout the world. However, the “separate spheres” of private and public spaces are characterised as gendered spaces with women destined to remain within the private sphere of home while men are freer to move about public domains (Buechler, 1990). This may have different implications in different cultures and classes, in that, the boundaries between public and private space (as well as public and private identities) may be blurred within the realm of cultures of heightened scrutiny, surveillance, and those that have differing views around the importance of kinship as a part of one’s social identity. Despite this, however, it appears universal that women’s ability to freely move from place to place is synonymous with autonomy, independence, self-reliance and social equality. In many places, throughout the world, it is a bold move for a woman to go against the social expectation that she is defined in relation to others and through the domestic domain and to venture out alone into the public sphere. This behaviour is characterised as dangerous

and puts her at risk of not only physical harm but also the harm that comes from violating social mores. The extent of women’s ability to occupy and navigate public space is still governed by societal views of propriety. These views are often patriarchal and housed within the context of attempting to control women’s bodies. Women’s lack of access to public space denies women’s access to opportunities and fosters what Gardner (1994) calls a “situational disadvantage”.

The demand of the domestic realm (housework, child rearing, etc.) often puts undue pressure on women to perform these tasks (Lim and Soon, 2010; Miyoko and Yutaka, 2008). The integration of the use of mobile phones into everyday life has been marketed to women as a tool to ease their daily tasks as well as one that reifies the expectation that the “modern” woman is overly social, continually shopping, and focused on the latest fashion trends (Shade, 2007). The mobile phone is promoted as a device that can alleviate the struggle women have in straddling their private and public selves. Under the guise of “multi-tasking”, women are portrayed in most mobile phone advertisements as superwomen with ability to maintain close ties to the responsibility of home and family while at the same time managing successful independent careers, hobbies and social relationships. Yet, does women’s biology make them destined to use mobile phones in these prescribed ways?

Not unlike women’s use of computer-mediated communication, mobile-mediated communication

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has the imagined possibility of providing women with opportunities to break out of gendered ways of behaving (Foley et al., 2007). However, the use and consumption of mobile phone technology is also functioning to generate new modes of femininity. While computer-mediated communication offers a certain degree of disembodiment and anonymity, use of mobile technology often happens in the context of “corporeality”, with spatial and temporal limits (Grosz, 1999). The bounds and limits of one’s physical body and the impending constraints of the physical environment, along with the demands of time, all work to impact how the mobile phone is used and how its use is interpreted by the user, the caller and co-present others. The coordination of these constraints, in the context of the promise of the limitlessness that technology affords, can lead to situations of confusion and frustration juxtaposed to experiences of exhilaration and liberation. It is at the crux of this paradox of public mobile phone use that users may lose their sense of self-consciousness and may fail to recognise the ways in which mobile phone use can distort their psychological perception of social reality.

The purpose of this paper is to utilise data collected in the United States (US) to serve as a basis for discussion of how women’s use of information and communication technologies (ICTs) affect their perceptions of public space. An attempt will be made to illustrate the ways in which some of these findings could be considered universal especially from a Pan-Asia perspective.

Women’s fears of public space and risky behaviour

Women are socially conditioned to understand that being alone in public poses more risks to them than to men (Bondi and Domash, 1998). Women’s fear of public space often centres on their fear of men and their sense of vulnerability to be harmed by men (Valentine, 1989). In studies of perceptions of public safety, gender has been found to be the most important determinant of whether or not a space is perceived as dangerous. What this means is that women, far more often than men, have to consider whether or not certain public spaces are safe for them. Women have been the main focus of studies of public safety and are socialised from early on to fear public space (Starkweather, 2007). Women interpret venturing out into public spaces alone, especially at night, as risky behaviour. The fear of attack gets transferred onto a fear of public spaces. Women are then forced to develop coping strategies for dealing with their fears of being alone (Valentine, 1992). Women’s perceptions of public safety impact their decision-making around whether or not to risk being out in public alone. Women often fear going out alone, they are watchful when walking, and they avoid certain public places and types of public transportation. Fear of sexual attack affects women’s social life and their leisure activities (Pain, 1997).

As mentioned previously, women’s ability to move freely in the world, free from the threat of physical harm, is indicative of a woman’s secure sense of freedom. This became an organising point for the women’s movement in the US in the late 1970s. Victimologists at the time were

attempting to implicate women in engaging in behaviours prior to crimes like sexual assault that would encourage such crimes to take place. Many women in the feminist movement resisted this “blame the victim” response and encouraged women to not restrict their behaviours (i.e. going out alone at night, drinking, etc.) but to instead arm themselves with tools to defend themselves if ever they were faced with a vicious assault (Ullman, 2007). Women were encouraged to take self-defence workshops as a means of self-empowerment. Fostering self-reliance was meant to counter the cultural images of the “damsel in distress” in need of rescue by men or worse as the foolish “girl” who did not heed the warnings by men and rendered herself vulnerable by being out alone in public. Providing women with adequate tools of self-defence would thereby lessen women’s dependence on men as a source of security. Walking out in the street alone, especially at night, was and still is, viewed as a defiant gesture by women (Gardner, 1994).

Mobile phones, women’s empowerment and the expansion/reduction of gendered public spheres

Public mobile phone use has changed our perception of public versus private space and behaviours (Hoflich, 2006). There is evidence that support the ways in which public use of the mobile phone can generate as well as deteriorate intimate spaces within the public sphere (Plant, 2002). The struggle between the intrusiveness of public mobile phone use and the utility that the mobile phone provides for the user in public has forced people to re-conceptualise various rules of etiquette around face-to-face social interaction. The use of mobile phones can limit the sense of social isolation that stems from being out of close contact with known others (Pertierra, 2005). The experience that comes from using one’s mobile phone to connect to a known other, a sense of mobile symbiosis, can be a pre-cursor to taking risks in public space (Cumiskey, 2010, 2008, 2007). Rendering an absent other present via the use of a mobile phone can change how the user experiences the place within which they are physically present. Many women utilise their mobile phones in public as the means through which they can broadcast to co-present strangers that they are not in fact alone, that they are in touch with known others via their mobile phones (Plant, 2002; Agar, 2003). In the 1980s mobile phones in the United Kingdom were promoted to women as providing “peace of mind” by exploiting their fear of crime. From inception, the mobile phone has been viewed as a device that promotes safety and a “safety technology of last resort” (Agar, 2003: 141).

Women’s mobile phone use and its ties to perceptions of public safety from a Pan-Asia perspective

Not unlike other places in the world, the saturation of mobile phone use within the Asia/Pacific context has signified the region’s rise into 21st century post-modernity (Hjorth, 2008; Pertierra, 2005; Plant, 2002). Asian women’s consumption of mobile technology has shaped the changes in the public perception of the roles that women play in society. In Japan, the *kogyaru* (provocative

high school girl) has replaced the *oyaji* (salaryman) as a cultural representation of the modern citizen (Hjorth, 2008; Matsuda, 2005). Japanese representations of fiercely independent young women have been linked to their displays of risky public behaviours perpetrated with assistance of mobile technology (Ito, 2005). Women's independence appears to be managed through the distinctive ways in which Asian women use their phones. The mobile phone, as the ultimate accessory, is often used in Asian cultures as part of an overall fashion statement that echoes personal distinctiveness, trendiness, a sense of belonging and social identity.

Teenage girls in Hong Kong have their mobiles festooned with stickers, trinkets, straps and toys which flash or sparkle when a signal is transmitted or received. In many parts of Pacific Asia, girls wear their mobiles as functional jewellery. In Bangkok they are carried in fur-edged plastic pouches worn as necklaces; in Beijing, the pouches are often crocheted or made from Chinese silk, and sometimes adorned with the characters for good fortune or happiness. (Plant, 2002: 44)

This appearance of fierce independence and creative self-expression can entice a backlash against women. Fears of the mobile phone functioning as a "folk devil" aimed at undermining traditional culture, social order, and areas of political dominance have been at the heart of many discussions of the regulation of mobile phone use (Ravindran, 2009). This, more often than not, has dire consequences for women, in that regulation is usually aimed at limiting women's access to the use and control of technology. As in other places in the world, women who appear to be functional and separate from men are often maligned in most Asia-Pacific cultures. Women's identities, throughout the world, are still tied to their interdependence, on familial relations and the often pre-destined roles of daughter, wife, and mother. This degree of interdependence makes it unsafe for women to be seen alone in public in some cultures.

Women in the Asia-Pacific region may not have sole ownership of the technology as often as women in more Western regions of the world (Pertierra, 2005). For instance, domestic workers may be given a phone by their employer (Thomas and Lim, 2009). The employer may own the phone and control its use. Husbands may monitor the use and access to the family's mobile phone as well as other ICTs (Lim and Soon, 2010). These differences may have an impact on the ways in which the phone empowers agency. However, despite this discrepancy in ownership and access, women may still rely on mobile phones to increase their sense of security when away from home. In addition, due to the often diasporic identities that many Asian and Pacific Islander peoples have, as women leave their homelands and establish themselves in other parts of the world, mobile phones provide a means through which they can maintain close ties to their home communities and enjoy an "absent presence" in events and happenings "at home" (Pertierra, 2005; Plant, 2002). Female migrant workers often use mobile technology to expedite support

to their families at home (McKay, 2006). The immediacy of mobile phone communication can assist in making the separation from home and family to be less traumatic (Thomas and Lim, 2009).

In addition, for those who remain in their home countries, the mobile phone may provide a means through which women can create hybrid identities beyond the limitations of political, religious, cultural and geographical boundaries and even the boundaries of home (Pertierra, 2005). For some, the mobile phone provides sole access to the Internet and all the informational and communication (and liberatory!) resources that that connection affords (Plant, 2002). For others, it has added to the increase in women entrepreneurship. And while there is genuine excitement around the ways in which mobile technology has the potential to empower women, one must question whether or not this is true empowerment or are mobile phones merely functioning as a means to ameliorate oppression and make it more tolerable?

Purpose of study and relevant research questions

The goal of this study was to investigate the ways in which women perceive risks in public. How women use their mobile phones as a means to increase their sense of safety while alone in public is of particular interest. Does this sense of security then lead to women taking more risks in public than they would if they did not have a mobile phone with them? These results will then be evaluated from a Pan-Asia perspective.

METHOD

Participants

A large survey study was conducted using 197 female college students from the College of Staten Island, CUNY, located in New York City, US. Participants for this study were recruited from a subject pool of students who were enrolled in an Introductory Psychology class. Participation in research was a requirement of the course.

Instruments

The main goal of this study was to examine whether or not women perceived their mobile phone to be a weapon of self-defence. Two versions of a similar survey were created. The surveys contained 17 scaled questions and three open-ended questions. In one version of the survey, the questions centred on the use of pepper spray.¹ In the other version, the survey questions were exactly the same except the words "pepper spray" were replaced with the words "cell phone". For example, one question on the survey in the pepper spray condition asked respondents to rate on a scale from 1 to 5, with "1" being "strongly disagree" and "5" being "strongly agree" for the item: "Just having pepper spray in my pocket makes me feel safer." This item in the mobile phone condition stated: "Just having a cell phone in my pocket makes me feel safer." In all, there were 98 participants in the "pepper spray" condition and 99 participants in the "cell phone" condition.

Procedure

Every participant was scheduled to complete the paper and pencil survey, in person, in the Social Media Lab at the College of Staten Island/CUNY. Each subject was randomly assigned, upon entering the lab, to be in either the “pepper spray” or the “cell phone” condition by being given either the survey with items related to pepper spray, or the survey with items related to mobile phones. Distribution of the surveys was structured in such a way that the experimenter was also blind to the condition being assigned to each participant. The survey took approximately 30 minutes to complete.

All participants, regardless of condition, were first asked to write a story about a time when they felt unsafe in a public place and what they did to regain their sense of safety. This item functioned as a prime to get participants to think about their sense of public safety and self-defence. They were then asked whether they currently owned either pepper spray or a mobile phone. This item was followed by a question asking them to list three reasons why a woman would choose to buy either pepper spray (in the “pepper spray” condition) or a mobile phone (in the “cell phone” condition). They were then asked to respond to the scaled items. Participants were then asked to write about a time they took a risk that they might not have just because they had either a mobile phone (in the “cell phone” condition) or pepper spray (in the “pepper spray” condition) in their pocket. They also wrote about whether or not a mobile phone or pepper spray has ever gotten them out of an unsafe situation and if so, how. The qualitative data from the three open-ended questions, from the 99 participants in the “cell phone” condition only, are the focus of the analyses for this paper.

RESULTS

Participant descriptive

All 99 participants used in the analyses for this paper were current mobile phone users. The minimum length of time of ownership was four months and the maximum was 15 years, with most participants owning a phone an average of 5.62 years. Participants ranged in age from 18 to 58 with average age being 21.29 years old. Thirty-two per cent of the participants considered themselves to be working class. Fifty-five per cent of the participants identified as middle class, 12 per cent of the participants identified as upper middle class and no one identified as upper class. In terms of ethnicity, 50 per cent of the participants identified as White, 20 per cent of the participants identified as Latina, 12 per cent of the participants identified as Black/African-American, 10 per cent of the participants were Asian, four percent were of Middle-Eastern origin, two percent identified as being Multiethnic or of mixed ethnic origin, and one person identified themselves as Nigerian. These descriptives are pretty typical of most female college students in the US with the exception of the range in age. The College of Staten Island is a commuter college and there are many students of non-traditional age. However, in this sample, 89 per cent ($n = 88$) of the participants were between the

ages of 18 and 25. This means that for this sample, the majority of participants were of traditional college age.

Qualitative analysis

The qualitative responses to the open-ended questions from 99 respondents were analysed to investigate the ways in which mobile phones are used by women to navigate as well as alter their perceptions and experiences of being in public. A coding collective was created and two independent coders were trained to analyse the qualitative data based on 18 main codes. The main codes were based on the research questions. These codes were then explained to the two independent coders so that they could code the qualitative data systematically for the presence or absence of each code.

All of the qualitative data were transcribed into a document. Each response was assigned a number. The coders then received a packet that included the numbered responses. The coders were blind to the research questions and the purposes of the study. Each coder worked independently to indicate whether or not the code was present or not in each segment of data. Each code was given a “1” if it was present in the data or a “0” if it was not. These data were then analysed for agreement via a Kappa analysis.

A Kappa analysis was performed on the coding results of both independent coders. The overall Kappa value was .704 ($T(n = 11,926) = 76.85; p < .001$). This score indicates that both coders had a good level of agreement. The coded data was used to form the basis for the main interpretation of the qualitative data. What follows is a report of the data results as it pertains to the objectives of this paper.

Perceptions of risk-taking in women and public safety

When asked about a time when they took a risk that they might not have just because they had a mobile phone in their pocket, 42 (42.4 per cent) women reported that simply being out alone, especially at night, was taking a risk.

Once I walked from class to the campus entrance at night, alone. I assumed if anyone followed me I could call the police (#3, 18, Latina) ... It was 12 o'clock at night and I walked home from work, and there was no one in the streets (#5, 18, White) ... Walking alone in the city at night where it wasn't crowded (#14, 18, White) ... I was walking back to the car alone from a club one night (#24, 21, Multi-Ethnic) ... Walking by myself at night to my car when either getting out of class late or getting out of work late (#105, 27, Middle-Eastern) ... Walking down dark alleyways (#134, 19, White).

Before reporting any additional analyses, it should be noted that 21 women (21.2 per cent) indicated that they could not recall a time when they took a risk that they might not have just because they had a mobile phone in their pocket.

No, I'm sure I would have done something even

without a cell phone (#132, 18, ethnicity unknown)... Honestly, I don't think I ever did (#140, 19, White)... No never really took risk that are unsafe or really any risk (#172, 19, Latina).

In addition, as it relates to the question about whether or not the use of a mobile phone has helped in getting out of an unsafe situation, 30 (30.3 per cent) women indicated that they could not recall a time when they used their mobile phone to get out of an unsafe situation.

No, I've never needed to use it in that way (#110, 19, White)² ... No, because I have not experienced an unsafe situation where it would help me (#116, 18, Asian) ... I never really had to use it. Been in close situations but never went far (#174, 19, Latina).

Of those 30, six women stated that if they were in an unsafe situation that they believed that their mobile phones could be used to get them out of it. "Not of now, but if I was in an unsafe situation I would try to dial for help" (#38, 18, Asian). In addition, there were only four women who were resistant to perceiving their mobile phones as weapons of self-defence:

I never took any risk that I might have just because I own a cell phone because cell phones aren't really reliable self-defence mechanisms; A cell phone has never gotten me out of an unsafe situation, but I do believe that cell phones should not be the only form of self-defence (#6, 18, Black/African-American) ... No. a cell phone is not pepper spray or a gun. Someone can knock it out of your hand (#124, 18, White).

It was expected that some respondents would not be able to relate to the scenario that was presented to them; however, these responses were in the minority compared to the multiple instances of data in which the respondents describe the ways in which the use of mobile phones shaped their perception of public safety.

How women use mobile phones to increase their sense of public safety

When asked to list three reasons why a woman would choose to buy a mobile phone, 42 of the 99 (42.4 per cent) respondents wrote "in case of an emergency" as the primary reason. Additional first responses to this item indicated that women buy mobile phones mostly for ensuring a sense of safety against perceived dangers in their physical environment ($n = 14$; 14.1 per cent) and/or some element of self-defence ($n = 5$; 5 per cent). In all, 61 participants out of 99 (61.6 per cent) indicated that the main reason that a woman would buy a phone would be to have it to use in an emergency or as a defence against a threatening situation. When analysing the list of three reasons, regardless of the priority in which the items were written, 75 of the 99 (75.7 per cent) respondents listed "in case of an emergency" as at least one reason women give for buying a mobile phone. Twenty-two (22.2 per cent) of the respondents listed that women choose to buy mobile phones as protection from perceived threats or

danger in their physical environment, with 24 (24.2 per cent) additional responses indicating that the mobile phone could be used as a weapon of self defence:

Maybe for tracking chip in an abduction (#3, 18, Middle Eastern)³; She can use it to call the police if she's ever out of the house (#14, 18, White); Protection (#24, 21, Multiethnic); If someone sees you on and off (the phone) and they (are) doing something, they will think twice because cell's have tracking devices (#27, 20, Middle Eastern); (a) Safety—in case of an emergency, you are taking a necessary precaution. (b) Communication let people know where you are in an emergency. (c) Protection, you can call for help; someone you know who can protect you. (#87, 19, Multiethnic).

In addition, 29 (29.2 per cent) respondents indicated that women buy mobile phones to make them feel safer or to assist them in dealing with their fears.

To feel safer when they are outside by themselves (#26, 19, Latina); In case they are being followed (#101, 18, White); To never be completely alone; knowing someone is only one call away (#110, 19, White).

After the participants were asked to list reasons why a woman would choose to buy a cell phone, they were then asked to respond to the two questions about risk taking. Thirteen women (13.1 per cent) described explicitly how their fears of being alone in public stemmed from their fear of their vulnerability to strange men.

When I feel like a creepy guy is going to come up to me and talk, I usually take out my cell phone and act like I am talking so I can ignore them (#9, 21, Latina); When going home at night where it's empty and only men, it's good to talk on the phone with someone (#28, 18, Latina); Because when men approach me I pretend to be on it or make a call when I don't want them to talk to me or I feel uncomfortable (#35, 20, White); One time I had to walk through a crowd of rowdy and drunk men to get to my friend's house. I took out the cell phone to call her and passed through the crowd (#42, 20, White).

Twenty-four (24.2 per cent) women narrated how just having a mobile phone with them made them feel safer when they were out alone. Within these results is a sense of dependency on the phone as source of comfort and security.

I feel a little safer (sic) if I'm alone and I'm on the cell phone (#5, 18, White); I always get paranoid walking home alone late at night. If I didn't have a cell phone on me I would always be home before the sun goes down. I feel more secure that I have a phone in my pocket (#28, 18, Latina); I feel every time I'm out alone may be a time a cell phone could change my life and save me potentially (#110, 19, White); You feel more comfortable with a cell phone at times. In case of an emergency, it's always good to have a

cell phone (#128, 19, Ethnicity unknown); Simply leaving my house would even be scarier without a cell phone to contact anyone (#153, 19, White).

Forty-two (42.4 per cent) respondents reported that they have used their phones as a rescue device. These women described situations in which they used their phones as a means for calling for help and for getting out of dangerous or uncomfortable situations.

I called my dad to come pick me up at the bus stop because guys were saying inappropriate things (#20, 20, White); I was able to call someone to pick me up (#80, 19, White); When my friends were drunk, we called up our parents to pick us up (#91, 19, White); I did not feel comfortable in the place I was so I called my father to pick me up (#103, 18, White); The time I had my first car accident. It helped me to call my boyfriend (#126, 24, Latina); Cell phones have gotten me out of situations where I felt scared, I used my phone to call someone to pick me up (#160, 19, White); Plenty of times I felt uncomfortable somewhere and called someone to pick me up (#186, 23, Black/African-American).

In 12 of those situations (28.6 per cent), the respondents explicitly stated that they called a man to rescue them from the dangerous situation.

Twenty-four (24.2 per cent) respondents wrote about how they used the phone itself as a shield against threats to their personal safety. Their responses indicate that the phone does not even have to be working in order for it "protect" them from harm while in public. There appeared to be a belief that if a potential perpetrator of a crime saw that a woman had a phone that they would be scared off.

When I feel like a creepy guy is going to come up to me and talk, I usually take out my cell phone and act like I am talking so I can ignore them (#9, 21, Latina)⁴; One time while walking in the city, a bum was coming towards me and just simply taking out my phone scared him off (#10, 24, Latina); One time someone was following me as I was walking alone at night and I pretended my dad called me and I said, "Ok, Dad, I'm at Greely now see you in a minute?" (#17, 18, White); I pretended I was on the phone with my dad when someone was trying to interact with me and I did not feel comfortable (#20, 20, White); When I was younger I was walking with my friend to a nearby store. A man in his car was following us, trying to get us to stop. My friend pulled her phone out and he drove away (#23, 19, White); I have faked phone calls to keep people from coming up to me in a crappy neighbourhood. It is somewhat of a deterrent (#95, 20, White); Once I felt like I was being followed by a group of men, so I pretended that I was calling a man and they backed off (#120, 18, White); Because of my talking on my cell phone, it alerted strangers that I can call the police right on my phone (#162, 19, Asian); My friend wanted to go to this boy's house

that she never met before and dragged me along. I had my phone in my hand until we left although he was harmless (#178, 20, White).

These responses illustrated that for some respondents, their mobile phone indeed functioned as a weapon of self-defence. It should be noted here that in four of the instances (16.7 per cent), it was stated specifically that men figured prominently in reassuring women even when they were pretending to initiate a call for help.

Ten (10.1 per cent) respondents wrote about how rendering a known other present through the use of their phone made them feel safer and as though they were no longer alone.

One time late at night I wanted to go home, didn't have enough money to call a cab, and did not want to wake my parents. I took the train by myself and stayed on the phone with a friend until I got home (#23, 19, White); I take night classes and I get out at 9 p.m. My brother usually picks me up but that day he couldn't so I went home by myself. No one is outside where I live, it's very isolated, walking up the blocks I called my friend so she could talk to me while I walked alone (#82, 19, Latina); I was on the phone with my dad walking home from sunset, when some guy started following me. The good thing was I kept informing my dad where I was and he picked me up (#130, 20, Middle-Eastern); When I am in a taxi, going to an unknown place, I keep talking to my husband on phone so that I feel safe (#197, 30, Asian).

Connecting with a known other served as a reassuring gesture. In the above examples, the respondents described how using the mobile phone when they felt threatened changed their psychological sense of the unsafe situation simply because they could render a remote known other present.

Twenty-five (25.2 per cent) respondents indicated that not only did having a phone make them feel safer in public but it also made them feel braver. For these women, their phones served as back-up in situations for which they were acting independently and/or out of the stereotypical female role.

I travelled late at night by myself just because I knew I would be able to call for help (#22, 18, Black/African-American); A few years ago, my friends and I went walking through the woods. If I didn't have a cell phone in case I got lost or separated, I would not have went (sic) (#80, 19, White); The time I drove from Miami to Texas ... a 23-hour drive. I felt safe because I knew I had my cell phone (#126, 24, Latina); When I was younger, being with other kids doing illegal things my cell came in use to call my sister to come get me (#166, 18, White); I snuck out of my house one time and this was right after I got my cell phone. I thought I can always call if I need anything. Fortunately nothing bad happened but I still felt much safer with my cell phone (#195, 19, White).

The examples given thus far focus on the respondents initiating the connection to others as a means of reassuring themselves or reaching out for help when needed. Also evident in the data were examples of instances when the concern for the respondent's safety came from others with whom they have close ties and the need for contact did not come from the respondent but instead from worried remote others.

These results indicate that women in fact do utilise their phones to enhance their sense of safety and confidence while out alone in public. What follows is a discussion of how these results can inform what is already known about how women are integrating the use of mobile phones into their everyday lives. How these results may be applied to a more global, Pan-Asia perspective will also be discussed throughout.

DISCUSSION

The goal of this study was to investigate the ways in which women perceive risks in public and how mobile communication technology affects women's perception of public safety. It should be acknowledged that women in this study were primed to think about their own perceptions of public safety and were asked to then consider the role that mobile phones play in that context. Priming was used as a tool to gear their mindset towards thinking about public safety and mobile phones together. If they could not psychologically relate to this association, it would be difficult for them to answer the items of the survey. The results indicate that the women in this study could overwhelmingly narrate this experience from their own personal perspective and they provided examples for the ways in which they have used their phones as weapons of self-defence. Although this study took place in New York City, a place notorious for crime and violence, the results should be applicable to other comparable places throughout the world. It should be mentioned here that this study was in fact inspired by the murder of two women in New York City who had relied on their mobile phones as a source of protection.

What is universal, especially from a Pan-Asia perspective, is that the results of this study call attention to the fact that women are still socialised to occupy public space differently than men. Many women in this study narrated their fears of being out in public alone and how they perceived this to be risky behaviour. Women throughout the world are often the targets of street harassment and are more vulnerable when out alone. The participants in this study were also able to narrate the ways in which just having a mobile phone with them at all times alleviated some of those fears. An increased feeling of safety and confidence in public space often did not require the actual use of the phone. Some women described that just holding the phone in their hand or knowing that it was in their pocket produced this effect. These findings support the notion that the use of mobile technology can actually facilitate women's autonomy and support their ability to access public space (Foley et al., 2007). If the use of mobile phones can decrease a woman's

fear, she may feel empowered to engage more fully in the public sphere. However, can the use of a mobile phone truly be seen as a universal source of female empowerment or merely a band-aid solution to a larger societal problem? Furthermore, can the reliance on mobile phones actually undermine true empowerment for women?

Mobile phones—Source of empowerment or tool for reifying gender stereotypes?

While the prospect of imagining mobile phones as a universal tool for women's empowerment in public space is truly exciting and inspiring (Foley, et al., 2007), it is equally important to examine the ways in which reliance on this technology for a sense of security could actually foster an enormous amount of dependency on these devices. There was evidence in the data that the reliance on mobile phones actually reified many gender stereotypes. While it is undeniable that the women in this study were narrating the ways in which their use of their mobile phones allowed for them to venture into public spaces in ways that they might not have prior to having a phone, beneath that was still the fact that the women viewed being out alone in public as dangerous. Mobile phones may function to alleviate that fear but the fear still exists. In other words, instead of changing factors that make public spaces seem more dangerous to women than men or instead of providing women with a reliable weapon or techniques of self-defence, the comforting and reassuring aspects of mobile phone use may actually foster a sense of dependency on the technology. This dependency may then call into question the degree to which the technology allows for women to truly be self-reliant, especially when there is an assumption that the phone can be used as a means to be rescued by men. Women may fear men but, as indicated in the data, there might also be the expectation that they need to be rescued by men.

The effectiveness of this strategy is, of course, dependent on women's access to the technology. As mentioned previously, women's access to technology as well as to public space may be regulated by men, especially in Asian cultures. There is a gender gap in mobile phone ownership in low- and middle-income countries. For example, a woman is 37 per cent less likely than a man to own a mobile phone if she lives in South Asia (GSMA, 2010). There is also the fear of backlash in that if a woman ventures out on her own that she is asking for trouble. A paternalistic and patriarchal approach to regulating women's lives is still dominant throughout Asia. This approach to regulating women's movements renders women vulnerable to criticism when she may violate social norms. In this context, the phone may function more as a leash than a vehicle for self-empowerment.

There is no denying that using the mobile phone as a phone-shield could be viewed as an effective strategy for establishing a physical as well as psychological boundary from others with whom the physical environment is shared (Plant, 2002). The women in this study were comforted by imagining that they were being rescued and by giving the impression to co-present strangers that their rescue

was imminent even if they had not really done anything to initiate it (i.e. pretending to call someone, pretending to call 911). The mobile phone in this study was often characterised as a shield, used to protect women from attack. However, since this boundary, and formulated means of protection, is imaginary and not actual, are women who use their phones in this capacity actually rendering themselves more vulnerable to harm? Women's reliance on this technology can lead to women not taking necessary precaution or to them not being aware of what is actually occurring in their physical surroundings. The distraction caused by using the mobile phone has been linked to accidents and deaths and to people not being adequately prepared for dealing with what might happen to them (Cumiskey, 2010). Being alleviated of the fears caused by feeling alone while in public, through the use of a mobile phone, may then cause the user to not realise that in fact they are actually alone, and that they will have to deal with whatever happens around them. Again, this may render women throughout the world vulnerable to public scrutiny and they may be blamed for what happens to them while "out alone".

Electronic extensions and the myth of separate worlds

The data echoed evidence found in other studies worldwide that mobile phones often function as electronic extensions of women's bodies (Lim and Soon, 2010; Edley, 2001; GSMA, 2010). Women, especially mothers, are often viewed as comfort objects. Mobile phones may prove to be the means through which women become continually consumed by their loved ones. Many women in this study indicated that they felt as though they were no longer allowed to be unreachable. Responsible motherhood was seen as reflective of being always easily accessible. The mobile phone in one's pocket serves as the ultimate comfort object and may be imagined to be incorporated into one's physical body (Terrades and Bona, 2007).

While it is critically important that all women, regardless of geography, culture, or class are afforded the ability to pursue activities outside the home, it has been debated in the literature for decades that even professional women cannot compartmentalise their lives in such a way that they can fully be present in the workplace or in public without also feeling responsible for what is or is not happening at home. Essentially, with a mobile phone in one's pocket, you are never away from home (Rakow and Navarro, 1993). Women have also utilised other forms of ICTs in order to make this separation even less distinct (i.e. virtual communities, instant messaging, NannyCams, etc.) (Madge and O'Connor, 2006; Wakeford, 1999). The whole experience of being on one's mobile phone in public can create a dual experience of being physically in one place while psychologically in another (Plant, 2002). In addition, while it may be comforting to imagine that one is carrying their whole social support network with them in their pocket at all times, it is also important to recognise the demands that others put on the individual to be constantly accessible. When do "tracking devices" serve to protect and when do they control? And as the development of

technology leads to the mobile phone functioning almost independently of the user, letting us know who is almost "known" to us, which strangers are most like us and nearby, can this mobile-mediated degree of "familiarity" lead to new risks and dangers while in public?

CONCLUSION

To conclude, one cannot deny the powerful impact the integration of mobile phones has had on changing how users around the globe perform daily tasks. Access to mobile phones has definitely increased the safety and security of many people who have long been denied the means of easy, convenient, effective and efficient communication (GSMA, 2010). Mobile phones in Asia and beyond have the potential to serve as early warning systems (Gow and Waidyanatha, 2009), as the means of generating political participation (Pertierra, 2005; Plant, 2002), and they have empowered people to take risks in ways never before imagined (Rheingold, 2002). In the most immediate of circumstances, there are a plethora of examples in which phones were actual safety nets. In addition, especially in a Pan-Asia context where many women have to leave their home communities to work in the homes of someone else, the notion of breaking free from the domestic realm via a mobile phone is a means through which these women in particular, can feel empowered to cultivate and maintain an identity that is separate from their work (Yeoh and Huang, 1998). Use of the mobile phone in public, may be the only time when a woman can feel as though she has her own, private and individual "space". While there appears to be mounting evidence in support of imagining the use of mobile phones as weapons of self-defence, it is important that mobile phone users, both in the US and around the world, remain conscious of the ways in which the reliance on one's mobile phone could encourage dependency and limit actual, human ability to defend one's self. Studies have shown that when women feel as though that they can physically defend themselves if faced with a threat of harm, that this enhances their psychological well-being and makes them feel more self-confident (Ullman, 2007). The results of this study may apply universally as a reminder to not allow technology to supplant the learning of real and practical ways of defending oneself. If there is a lack of signal, if the phone's battery dies and if one's pre-paid runs out, users will still want to know how to build a fire, tie a tourniquet, perform CPR, and ultimately rescue oneself from dire circumstances without the need for a mobile phone.

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NOTES

1. Pepper spray is a chemical spray sold in small aerosol cans. It is marketed to be carried discreetly and used as a weapon of self-defence. When sprayed in the eyes of an assailant it will cause the eyes to burn, tear up, and temporary blindness. The overall experience is painful, although not life threatening. It is meant to be used as a deterrent so that the victim can extricate themselves from the dangerous situation.
2. It should be noted that subject #110 is quoted in the next section of this paper that she views her mobile phone as having the potential to save her life.
3. The first number in the parenthesis is the subject number, the second number is the participant’s age, and the third number is their stated ethnicity.
4. Quoted previously in the section about vulnerability to men.

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Mobile Telephony Uses and Gratifications among Elderly Singaporeans

This study explores mobile telephony among Singaporeans aged 55 and older. Using data from a survey of 500 respondents, the study finds significant differences in the patterns of use of, and the gratifications ascribed to, mobile phones across respondent groupings according to age and mobile phone ownership. The paper argues that age and ownership can, in the short-term, be used as cohort variables since they are significantly related and they have generally similar impacts in distinguishing respondents' uses and gratifications of the mobile phone. The study provides insights about possible age-based digital divides and informs the utility and limitations of the uses and gratifications approach in mobile telephony, particularly in terms of media dependency.

FERNANDO DE LA CRUZ PARAGAS
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The digital divide refers to the unequal access and use of technology, usually according to income, education, age, gender or geographical distance (Rice and Katz, 2003). In Singapore, which has a mobile phone penetration rate of 137 per cent and Internet broadband penetration rate of 142.2 per cent (Infocomm Development Authority of Singapore, 2010), discussions about the digital divide are limited. However, Chong et al. (2004) note that there exists a digital divide in Singapore based on gender, age, housing and income.

However, the literature pertaining to this divide focuses on the relationship between Internet use and different respondent groupings. There is a need, therefore, to complement this literature with research, which focuses on other communication technologies such as mobile telephony, as indicated by data from other countries (Kurniawan, 2008; Lin and Wang, 2008). These studies posit there is an age-based digital divide where mobile phones are concerned and this digital divide is due to factors such as design of the mobile phone (Abascal and Civit, 2001; Mann et al., 2004; Kurniawan, 2008; Lin and Wang, 2008), functions of the mobile phone (Salz, 2006),

and mindsets of the elderly (Morrison, 2002; Ling, 2004; Kurniawan, 2007).

In the literature pertaining to the digital divide in Singapore, there has been little attention to differences in levels of access to and use of various digital technologies across age groups (Lim and Tan, 2003). Moreover, while some studies have looked at age as a variable in the use of digital media (Cheong, 2007; Lim, 2009), these have focused on the youth, primarily because of their enthusiastic adoption of information and communication technologies (Lim, 2009). This situation must be addressed because, as Ngian and Munoo (2005) state, the gap between the elderly "ageing" population and the young "born digital" generation is growing. Moreover, age is an important variable because it has been found to be related to attitudes towards, and the adoption of, technology (Kerschner and Chelsvig, 1984). The older one is, the more negatively one views technology and hence, the lower the use of various technologies. Fuglsang (2005) identifies those above 60 years of age as the social group that had the lowest participation level in the information society.

FRAMEWORK, RESEARCH QUESTION AND HYPOTHESES

The Uses and Gratifications Approach (UGA) is a social psychological perspective that puts the focus on the audience as individual active consumers of the media (Katz, 1959). As active consumers, the onus is placed on the individual to make rational choices to satisfy particular media needs. Psychological and social factors persuade the consumer in making these rational choices. Blumler (1979) further argues that a specific medium,

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rather than media in general, must be examined in order to understand the gratifications sought by the audiences. Hence, UGA is useful in identifying motivations behind media use (Wei and Lo, 2006), especially for a particular medium such as the mobile phone (Kurniawan, 2008; Lin and Wang, 2008; Chang and Villegas, 2008; Melenhorst et al., 2006).

In this research, use is operationalised into three concepts: patterns of use, perceived ease-of-use (PEOU), and use of functions. Corollary to these concepts are considerations about the mobile phone itself. Patterns of use pertain to the number of outgoing and incoming calls and text messages. PEOU is the degree to which a user believes that using a particular technology will be free from effort (Davis, 1989). Use of functions refer to the extent to which people use their phone to make calls, send or receive text messages, take pictures with its camera, surf the Internet, listen to music or radio, play games or video, and exchange e-mail. Meanwhile, considerations about the phone include its price, model, design, sign, accessories, and the type and number of its functions.

Leung and Wei's (2000) study utilises this approach and puts forth several dimensions of gratifications for use of mobile phones: sociability, immediacy, mobility, and security. Sociability has to do with fulfilling a social need of staying connected, whether with family members, friends or colleagues. Immediacy is to be immediately available and accessible to anyone at any time of day, regardless of location. Mobility is the likelihood of carrying the mobile phone around so as to contact someone anytime and anywhere. Security is the use of the mobile phone to fulfil a psychological need to feel safe. Thus, in line with UGA, this research addresses the question:

What are the uses and gratifications of the elderly as regards mobile phones?

Age and mobile phone ownership

The literature on mobile phones and young people is quite nuanced, with studies which look into and compare patterns of use among tweens, teens and young adults. These studies show that young people do not comprise a homogenous group in terms of their mobile telephony. Similarly, there is a need to explicate differences among members of the elderly community. In this research, distinction is made between younger (55 to 64 years old) and older (65 years old and above) respondents. The distinction is based on the retirement age of 65, upon which the social circle of the elderly becomes smaller and their outside-home activities become less regular than when they worked full-time (Lin and Wang, 2008). The distinction also helps determine the extent to which any current mobile phone-based digital divide may exist since the younger elderly of today will be the older senior citizens of tomorrow. Those 65 and older, being a generation away from baby-boomers, are less likely to start and continue using mobile phones (Ling, 2008). Based on literature, therefore, the following hypothesis between age and mobile phone ownership needs to be investigated:

H1 Younger respondents are more likely to own a mobile phone.

If age and ownership indeed have a significant relationship, then it may be possible to treat them as cohort variables in studies involving the elderly. However, to ensure that they are true cohorts requires exploring the extent to which age and ownership similarly and significantly differentiate groups of the elderly in terms of uses and gratifications.

Mobile phone use among the elderly

Aging brings about a general decline in cognitive, psychomotor and perceptual functions and the elderly do not see or hear as clearly as younger users (Pattison and Stedmon, 2006). This deterioration prevents and impairs the adoption of technology among the elderly (Charness and Holley, 2004). Current mobile phone models in the market are not designed for the elderly (Lin and Wang, 2008) as the displays and keypads of mobile phones are mostly too small, making it difficult for the elderly to see the display and manipulate the small buttons of the keypad (Kurniawan, 2008). In line with the earlier hypothesis on age and ownership, the following hypotheses are thus explored:

H2.1 Younger respondents will perceive mobile phones as easier to use than do older respondents.

H2.2 Respondents with mobile phones (WMP) than those without mobile phones (WOMP) will perceive mobile phones as easier to use.

Salz (2006) says that elderly customers want simple functions, which effectively limits the number of their considerations in a phone. However, whether there are differences in these considerations across age and ownership needs to be tested:

H3.1 Younger respondents will have more considerations in a phone.

H3.2 WMP than WOMP respondents will have more considerations in a phone.

Research says that only nine per cent of elderly respondents use at least one function of the mobile phone on a typical day (Horrigan, 2008), perhaps because most elderly consider mobile phones as an extension of landline phones and rarely use functions beyond making and receiving voice calls (Kurniawan, 2008). Two hypotheses are offered in line with these findings:

H4.1 Younger than older respondents will use functions more frequently.

H4.2 WMP than WOMP respondents will use functions more frequently.

Kurniawan (2007) says that older people have fewer contacts in their phone because they see mobile phones as a security device than as a communication tool. Moreover, Ling (2008) speculates that frequency of mobile phone use is related to the degree to which the elderly are engaged in daily life. This means older people who have a less active social network will have less of a need for mobile phone partners:

H5.1 Younger than older respondents will have more phone contacts.

H5.2 WMP than WOMP respondents will have more phone contacts.

Because younger and WMP respondents have more mobile contacts (Kurniawan, 2007), it may follow that they use their phone more frequently to make and receive calls and text messages, the two primary phone functions among the elderly (Coates, 2001). However, distinction must be made between these two functions and whether differences exist among the elderly across age groups and mobile phone ownership. Kurniawan (2008) says that although predictive texting software is now available in most mobile phone models, it does not make texting for the elderly any easier as it can be distracting. Moreover, MacKenzie and Tanaka-Ishii (2007) have found that younger mobile phone users find texting on mobile phone easier than do the elderly.

H6.1 Younger respondents will make and receive more outgoing and incoming calls and text messages.

H6.2 WMP than WOMP respondents will make and receive more outgoing and incoming calls and text messages.

Mobile phone gratifications among the elderly

One of the reasons the elderly are seen as less frequent users of mobile phones could be due to the “degree of engagement/disengagement of the elderly in daily life” (Lin and Wang, 2008: 335). As one grows older, one is perceived to have a less active social network and hence, less need for a mobile phone (Ling, 2008). When most elderly use mobile phones as a way to communicate with their families (Morrison, 2002), there is hardly need for a mobile phone when a landline phone would suffice.

H7.1 Younger than older respondents will rate more highly the sociability value of mobile phones.

H7.2 WMP than WOMP respondents will rate more highly the sociability value of mobile phones.

Mobility, the ability to carry one’s phone around for convenience and thus do away with the need for coins or a public phone, is a strong gratification in mobile phone use. Together with immediacy and security, mobility is also one of the main motives behind mobile phone ownership (Leung and Wei, 2000). Whether these findings cut across age and ownership need to be tested:

H8.1 Younger than older respondents will rate more highly the mobility value of mobile phones.

H8.2 WMP than WOMP respondents will rate more highly the mobile value of mobile phones.

Because younger people generally have a wider and more active social and/or professional life than older people, they have a greater sense of urgency in their daily schedule. Thus, the following hypothesis is posed:

H9.1 Younger than older respondents will rate more highly the immediacy value of mobile phones.

In line with UGA assertions, the continued use of a certain medium makes the user place greater import on it. Because of the hyper-coordination (Ling and Yttri, 2002) that mobile phones enable, those who own mobile phone will ascribe a higher value on its ability to address the immediacy with which it helps organise daily life.

H9.2 Mobile phone owners will rate more highly the immediacy value of mobile phones.

Accessibility is a motivating factor where one is able to contact and/or be contacted by family and friends in times of emergencies. Being able to contact others immediately in urgent situations is another aspect of perceived functionality (Leung and Wei, 2000). Instead of viewing the mobile phone as a fashion accessory or lifestyle marker (Morrison, 2002) or a social communications device, the elderly sees the mobile phone as an added security measure (Kurniawan, 2007). However, whether age or ownership differentiates respondents needs to be tested:

H10.1 Younger than older respondents will rate more highly the ability of mobile phones to afford them security.

H10.2 WMP than WOMP respondents will rate more highly the ability of mobile phones to afford them security.

Informed by Park’s (2010) study, which establishes linkages between the design and familiarity of other technologies to PEOU, this research explores the correlation between use (perceived ease-of-use, use of functions, number of considerations, number of contacts, calls and text messages) and gratification (ratings for sociability, mobility, immediacy, and security):

H11 There will be a significant correlation between uses and gratifications of the mobile phone among the elderly.

METHODOLOGY

A one-shot survey design was conducted at community clubs and centres (CCs) from December 2009 to January 2010, from Mondays to Fridays between 10 a.m. to 7.30 p.m. CCs were chosen because the elderly congregate there to participate in various activities and programmes.

A total of 500 respondents, 55 years old and above, participated in this research. Participation was voluntary and anonymity was ensured for all respondents. A voucher, which was funded by the Tsao Foundation, was given to each respondent who completed the survey.

In order to achieve national representation (margin of error = 4.5 per cent), the following sampling procedure was undertaken. To identify CCs, Singapore’s 35 planning areas were grouped into five geographically contiguous zones with their specific CCs. A target number of respondents were then assigned for each CC depending upon the number of elderly residents in the area that the CC serves. The target is based on the proportion between the total sample size of 500 and the total elderly population in Singapore. To randomise respondent selection, simple

random sampling (interval value = 3) was used within the CC. Potential respondents were approached when they entered the CCs. The survey was conducted in English, Mandarin and Malay with the use of assigned language guides. Surveyors were trained according to their proficiency in each of these languages. The study had a response rate of 64 per cent. In total, 784 people were approached for this study, but 50 of them did not meet the age criterion. Only three prospective respondents did not complete the survey because of time constraints.

The survey questionnaires were refined twice, first after the pilot study and later after the second pre-test. Specifically, 39 items were eliminated in the pilot test because respondents experienced survey fatigue. The pre-tests were conducted among 60 elderly respondents in the CCs, which did not fit into the given planning areas in the Population Trend 2009 report.

Two instruments were then used and categorised into two categories (with and without mobile phones) to ensure that the questions catered to different usage habits. Both instruments had four sections: (a) demographics, (b) mobile phone profile, (c) general questions and (d) exposure to other technologies. The first and last sections were the same across both instruments, with differences in sections two and three. A future tense was adopted for the statements in the instrument “without mobile phone”, as the study required respondents without mobile phones to visualise owning one and then to predict their responses and behaviour. Concerns about asking intentions about future behaviour were mitigated with the use of non-forced questions and the inclusion of uncertain option, following the recommendations of Manski (1990).

Two types of Likert scales—with choices ranging from 1 = strongly disagree to 5 = strongly agree or from 1 = never to 5 = always—were used to measure the responses from each individual on each item. Scales were tested for reliability, with their Cronbach’s alpha coefficients as follows: perceived ease-of-use (0.82), use of functions (0.73), sociability (0.70), mobility (0.61), immediacy (0.82), and security (0.82).

Composite scores for these items were used to test for the correlation between uses and gratifications. Moreover, the interval data on number of contacts were included in the mix. Additionally, two new dummy variables were created and subsequently included in the mix of use variables. These were the number of calls and text messages, which was the respective summation of outgoing and incoming calls and text messages. To present a holistic picture of mobile telephony among the elderly, the discussion of age-differentiated data did not differentiate respondents according to their current ownership of a mobile phone.

FINDINGS

Respondents’ profile

A majority (57 per cent) of respondents were male. Almost as many (56 per cent) were between 55 and 64 years old. Respondents who completed either secondary (35 per cent) or primary (31 per cent) education comprised the

biggest groups. Ten per cent had at least some tertiary education. Almost two-fifths (38 per cent) and over 25 per cent of respondents respectively belonged to the lowest (below S\$2,500) and the highest (above S\$4,500) monthly household income brackets. Forty-three per cent of the respondents were either retired or unemployed, and 19 per cent were homemakers. Among the employed respondents, the biggest group worked as clerical, support, sales and service workers.

Age and mobile phone ownership

Seven of every 10 respondents had a mobile phone. However, as H1 stated, younger respondents were more likely to own a mobile phone ($\chi^2(1, N = 500) = 48.07, p < .001$). Most (84 per cent) of younger respondents had a mobile phone compared to only 56 per cent of their older counterparts.

Mobile phone uses among the elderly

It was hypothesised that younger respondents and WMP respondents would have significantly different mobile phone use patterns compared to their older and WOMP counterparts.

Mobile phones were perceived to be neither easy nor difficult to use across all respondents ($M = 3.32, SD = 0.86$) (Table 1). As H2.1 and H2.2 posed, younger than older ($t(490) = 6.554, p < .001$) and WMP than WOMP respondents ($t(381) = 12.177, p < .001$) perceived mobile phones to be easier to use.

Across all respondents, price (88 per cent), phone model (56 per cent), and type of functions (52 per cent) were the three main considerations in a mobile phone. Considerations such as phone design (27 per cent), size (21 per cent), accessories (12 per cent), and number of functions (six per cent) were not deemed important by a majority of the respondents. Three-quarters of respondents only had three and four considerations. This preference was the same across age groups, contrary to H3.1. H3.2, however, was supported as mobile phone ownership differentiated preferred number of considerations ($\chi^2(2, N = 486) = 12.37, p = .002$). WOMP respondents wanted fewer functions in their phone compared to their WMP counterparts.

Among all respondents, using their phone for voice calls was perceived as the most frequent activity ($M = 4.23, SD = 0.93$). This was followed by texting ($M = 2.2, SD = 1.42$), taking pictures ($M = 1.77, SD = 0.99$), and playing music ($M = 1.67, SD = 1.07$). In sum, respondents hardly used majority of the nine functions that were included in the study ($M = 1.71, SD = 0.47$). Across age groups, H4.1 was supported, as younger respondents used functions more frequently than did older respondents. Respondents with or without mobile phone were significantly different in the utility of these nine functions, as stated in H4.2: WMP respondents used these functions more frequently than their WOMP counterparts would if they had a phone ($t(498) = 7.543, p < .001$).

Hypothesis 5.1 was supported as younger respondents had a significantly bigger list of mobile phone contacts

TABLE 1
Utility of mobile phones

	Total (<i>N</i> = 500)		Age				Mobile phone			
	Mean	SD	55 to 64 (<i>n</i> = 279)		64 and above (<i>n</i> = 221)		With (<i>n</i> = 357)		Without (<i>n</i> = 143)	
Perceived ease-of-use*			Mean	SD	Mean	SD	Mean	SD	Mean	SD
I strain my eyes to look at the screen of a mobile phone	3.61	1.11	3.38	1.11	3.91	1.05	3.41	1.15	4.12	0.82
Buttons on current mobile phones are too small to press	3.58	1.04	3.42	1.03	3.79	1.02	3.41	1.07	4.02	0.80
Mobile phone functions are hard to understand	3.51	1.27	3.23	1.29	3.86	1.16	3.22	1.29	4.22	0.88
I need guidance when using a mobile phone	3.10	1.23	2.85	1.26	3.42	1.11	2.77	1.21	3.94	0.82
Composite mean	3.32	0.86	2.78	0.95	2.26	0.84	2.80	0.92	1.93	0.62
			<i>t</i> (490) = 6.554, <i>p</i> < .001				<i>t</i> (381) = 12.177, <i>p</i> < .001			
Number of considerations**	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
One	36	7.20	18	6.45	18	8.14	20	4.00	16	11.19
Two	82	16.40	39	13.98	43	19.46	50	14.33	32	22.38
Three to four	368	73.60	215	77.06	153	69.23	279	79.94	89	62.24
			χ^2 (1, <i>N</i> = 486) = 3.73, <i>p</i> = .152				χ^2 (2, <i>N</i> = 486) = 12.37, <i>p</i> = .002			
Frequency of use of functions*	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Composite mean	1.71	0.47	1.85	0.48	1.55	0.39	1.84	0.48	1.40	0.26
			<i>t</i> (498) = 7.543, <i>p</i> < .001				<i>t</i> (453) = 13.00, <i>p</i> < .001			

*On a scale of 1 to 5 where 1 is strongly disagree and 5 is strongly agree.

**Percentage is based on total number of respondents. Chi-square test is based on total number of responses.

TABLE 2
Calls and text messages, in percentage

	Total (<i>N</i> = 500)	Age		Mobile phone*		Total (<i>N</i> = 500)	Age		Mobile phone*	
		55 to 64 (<i>n</i> = 279)	64 and above (<i>n</i> = 221)	With (<i>n</i> = 355)	Without (<i>n</i> = 143)		With (<i>n</i> = 355)	Without (<i>n</i> = 143)	55 to 64 (<i>n</i> = 279)	64 and above (<i>n</i> = 221)
Calls		Outgoing					Incoming			
None to 5	28.40	18.28	41.18	17.75	55.24	23.80	15.05	34.84	12.96	51.05
6 to 15	35.60	36.92	33.94	35.21	37.06	35.40	33.69	37.56	34.08	39.16
16 to 25	19.00	22.22	14.93	24.51	5.59	20.40	23.30	16.74	25.07	9.09
26 to 35	6.40	8.24	4.07	8.45	1.40	8.20	10.04	5.88	11.27	0.70
36 and more	10.20	14.34	4.98	14.08	0.70	11.80	17.92	4.07	16.62	
		χ^2 (4, <i>N</i> = 500) = 40.50, <i>p</i> < .001		χ^2 (4, <i>N</i> = 498) = 95.20, <i>p</i> < .001			χ^2 (4, <i>N</i> = 500) = 46.08, <i>p</i> < .001		χ^2 (4, <i>N</i> = 498) = 112.94, <i>p</i> < .001	
Text messages		Outgoing					Incoming			
None	56.40	40.50	76.47	43.38	89.51	50.40	32.62	72.85	34.93	89.51
1 to 5	16.20	19.35	12.22	19.72	7.69	18.60	22.94	13.12	23.10	7.69
6 to 15	11.20	15.05	6.33	14.93	2.10	11.60	13.98	8.60	15.49	2.10
15 to 26	7.40	11.83	1.81	10.14	0.70	9.40	15.41	1.81	12.96	0.70
26 and more	8.60	13.26	2.71	12.11	0.00	9.80	15.05	3.17	13.80	0
		χ^2 (4, <i>N</i> = 500) = 73.25, <i>p</i> < .001		χ^2 (4, <i>N</i> = 498) = 91.60, <i>p</i> < .001			χ^2 (4, <i>N</i> = 500) = 91.17, <i>p</i> < .001		χ^2 (4, <i>N</i> = 498) = 124.79, <i>p</i> < .001	

*On a scale of 1 to 5 where 1 is strongly disagree and 5 is strongly agree.

TABLE 3
Gratifications*

Statement	Total (N = 500)						Age					
			55 to 64 (n = 279)		64 and above (n = 221)		With (n = 357)		Without (n = 143)			
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
Sociability												
I use my mobile phone to keep in touch with my family members	3.99	0.72	4.04	0.72	3.93	0.73	4.11	0.64	3.69	0.82		
My family members can reach me via my mobile phone	4.18	0.67	4.22	0.67	4.12	0.65	4.28	0.58	3.92	0.79		
Once in a while, I use my mobile phone to keep in touch with my friends	3.63	1.08	3.87	0.88	3.33	1.22	3.92	0.82	2.92	1.29		
I use my mobile phone to fix my social appointments	3.76	1.02	4.00	0.89	3.46	1.08	4.03	0.87	3.09	1.05		
I prefer the mobile phone in contacting my colleagues**	3.27	1.31	3.30	1.30	3.07	1.36	3.32	1.30	2.86	1.39		
My colleagues can contact me via my mobile phone**	4.02	0.97	4.06	0.94	3.83	1.09	4.13	0.87	3.19	1.25		
Composite mean	3.89	0.64	4.03	0.58	3.71	0.67	4.09	0.50	3.40	0.70		
			$t(438) = 5.67, p < .001$									
			$t(202) = 10.58, p < .001$									
Immediacy												
A mobile phone allows others to contact me anytime, anywhere	4.30	0.52	4.37	0.48	4.20	0.55	4.36	0.49	4.14	0.55		
I can contact others immediately with my mobile phone	4.26	0.57	4.35	0.53	4.14	0.59	4.36	0.51	4.02	0.62		
I depend on my mobile phone to inform others when I am running late	3.92	0.85	4.14	0.74	3.65	0.89	4.11	0.72	3.45	0.95		
With a mobile phone, I am able to change my appointments on short notice	3.94	0.81	4.15	0.70	3.67	0.86	4.11	0.69	3.50	0.92		
Composite mean	4.10	0.57	4.25	0.52	3.92	0.57	4.23	0.49	3.78	0.60		
			$t(498) = 6.90, p < .001$									
			$t(498) = 8.69, p < .001$									
Mobility												
When I go out, I carry my mobile phone with me	4.68	0.74	4.83	0.50	4.50	0.93	4.89	0.41	4.17	1.06		
Between my mobile phone and my landline, I prefer using my mobile phone	2.64	1.56	2.90	1.57	2.31	1.48	2.96	1.51	1.83	1.38		
I find it a hassle to carry my mobile phone around.	1.78	1.28	1.55	1.10	2.06	1.44	1.39	0.92	2.73	1.54		
I bring my mobile phone along when I am overseas	3.13	1.79	3.47	1.75	2.71	1.75	3.52	1.74	2.17	1.53		
Composite mean	3.67	0.95	3.91	0.86	3.36	0.95	3.99	0.74	2.86	0.92		
			$t(445) = 6.57, p < .001$									
			$t(498) = 14.35, p < .001$									
Security												
My mobile phone makes me feel safe	3.86	0.94	3.82	0.96	3.91	0.92	3.87	0.95	3.85	0.94		
With a mobile phone, I feel more confident when I am out by myself	3.80	1.04	3.79	1.05	3.80	1.03	3.84	1.02	3.69	1.08		
I use my mobile phone during emergencies	4.63	0.56	4.64	0.51	4.62	0.61	4.65	0.49	4.57	0.69		
With a mobile phone, I am not afraid of getting lost	4.11	0.87	4.11	0.84	4.11	0.91	4.15	0.84	4.01	0.93		
I can call somebody on my mobile phone if I am in trouble	4.63	0.56	4.65	0.51	4.62	0.62	4.67	0.49	4.55	0.70		
Composite mean	4.21	0.62	4.20	0.60	4.21	0.65	4.24	0.58	4.13	0.71		
			$t(497) = -.220, p = .83$									
			$t(497) = 1.67, p = .100$									

*On a scale of 1 to 5, where 1 is strongly disagree and 5 is strongly agree.

TABLE 4
Correlation between use and gratifications

Uses	Gratification			
	Sociability	Mobility	Immediacy	Security
Perceived ease of use	0.390**	0.512**	0.416**	-0.066
Use of functions	0.457**	0.519**	0.447**	-0.016
Number of considerations	0.126**	0.007	0.069	-0.124**
Number of contacts	0.327**	0.323**	0.356**	-0.122**
Number of calls	0.289**	0.411**	0.311**	-0.039
Number of text messages	0.323**	0.381**	0.359**	0.000

**Significant at .01; *Significant at .05

than older respondents ($\chi^2(3, N = 484) = 49.89, p < .001$). Moreover, H5.2 was supported since there was a significant difference between perceived and anticipated number of phone contacts between WMP and WOMP respondents ($\chi^2(3, N = 484) = 7.94, p < .001$). Forty per cent of WMP and 80 per cent of WOMP respondents said they had or would have less than 20 contacts in their unit.

H6.1 and H6.2 stated that younger respondents and WMP respondents would make more outgoing and incoming calls and text messages. Indeed, H6.1 was supported since younger respondents made and received more calls and sent and received more text messages (Table 2). Similarly, H6.2 was supported. There was a significant difference in perceived and anticipated number of outgoing ($\chi^2(4, N = 498) = 95.20, p < .001$) and incoming ($\chi^2(4, N = 498) = 112.94, p < .001$) calls and outgoing ($\chi^2(4, N = 500) = 91.60, p < .001$) and incoming ($\chi^2(4, N = 500) = 124.79, p < .001$) text messages between WMP and WOMP respondents. WMP respondents consistently said they sent and received more calls and text messages than what WOMP respondents anticipated once they got a phone.

Mobile phone gratifications among the elderly

Among the four gratification variables, the elderly registered their strongest agreement to the ability of the mobile phone to make them feel secure, followed by its ability to help in the immediacy of their daily activities and in their sociability and mobility. The elderly indeed had a favourable estimation of mobile phones, as the level of agreement with these variables was positive (Table 3).

Hypotheses 7.1, 8.1, and 9.1 propose that younger respondents will ascribe greater value to the sociability, mobility, and immediacy that mobile phones afford them. Findings supported these hypotheses, as there were significant differences between older and younger respondents in their estimation of the mobile phone towards sociability ($t(438) = 5.67, p < .001$), immediacy ($t(498) = 6.90, p < .001$), and mobility ($t(445) = 6.57, p < .001$). However, hypothesis 10.1, which purports a similar role between age and security was not supported, as there was no significant difference across respondents ($t(497) = -.220, p = .83$).

The same pattern was observed with hypotheses 7.2,

8.2, 9.2 and 10.2, which explore the relationship between mobile phone ownership and the four gratification variables. There was a significant difference between the WMP respondents' actual and the WOMP respondents' anticipated way that mobile phones would help in their sociability ($t(202) = 10.58, p < .001$), mobility ($t(498) = 14.35, p < .001$), and the immediacy ($t(498) = 8.69, p < .001$) of their activities. Similarly, security was the only gratification variable in which owners and non-owners were not significantly different from each other ($t(497) = 1.67, p = .100$).

Correlation between uses and gratifications

Correlation coefficients generally indicated that there was a significant link between use and gratification, which meant that H11 was supported. Perceived ease of use, use of functions, and number of contacts, calls and messages were directly correlated with sociability, mobility and immediacy concerns.

Use was consistently and significantly correlated to sociability. Mobility and immediacy were also mostly correlated to use, except in terms of number of considerations. Among the various use-gratification combinations, the strongest and significant correlations were observed between the use of functions and mobility (0.519), sociability (0.457), and immediacy (0.447) (Table 4). Among the gratification variables, security was the only one to be negatively, if mostly not significantly, correlated with the use variables.

DISCUSSION AND IMPLICATIONS

Age and mobile phone ownership may be used as cohort variables, as they are significantly related to each other and have generally similar impacts in distinguishing respondents' uses and gratifications of the mobile phone. However, this relationship and its attendant implications on the digital divide (Kurniawan, 2008; Lin and Wang, 2008) are going to hold only in the short-term, contrary to previous concerns that the gap between the young and the elderly are widening. As senior citizens below the age of 64 retire and become part of the older segment of the elderly, they will be quite savvy with mobile telephony. Inasmuch as age plays a significant role in mobile phone ownership, use and gratifications only in the short term,

other variables can be studied as possible longer-term cohorts for ownership. Based on digital divide research, such variables include demographics such as gender, income and educational level (Rice and Katz, 2003; Chong et al., 2004), as well as psychographics such as individual mindsets (Morrison, 2002; Ling, 2004; Kurniawan, 2007) and openness to technological innovation (Kerschner and Chelsovig, 1984).

The significant correlations as well as the difference between actual and perceived levels of uses and gratifications between mobile phone owners and non-owners inform media dependency, which is an extension of UGA. Findings indicate that, similar to other media and their audiences, mobile telephony among the elderly results in a reinforcing mechanism in which initial subscription results in greater use and gratification. The main departure from the classical dependency argument, however, is there is no undue reliance on mobile phone among the elderly given their relatively limited use of it and its functions and small network of phone contacts. This perhaps explains two items: firstly, the significant but weak to moderate correlations; and secondly, the inverse, if weak, relationship between security and the use variables.

The non-significant relationship between security as well as use variables such as perceived ease-of-use and the number of calls and text messages can also be interpreted as another departure from general UGA arguments. Even with limited use and relative unease in using them, mobile phones are seen as addressing the security concerns of the elderly. Gratification in this case is not rooted in use per se and vice-versa, but perhaps in the perception that a mobile phone potentially provides security even without the attendant use.

As shown in this study, UGA can be readily applied in exploring mobile telephony among the elderly and to investigate significant differences between segments of the elderly population. However, keeping true to UGA means that no predictive relationships between uses and gratifications are established given that UGA focuses on the user's choice of media to gratify themselves rather than on whether specific uses result in particular gratifications. Moreover, inherent in UGA is the reflexive relationship between uses and gratifications, which practically precludes, and not just simply makes it difficult to ascertain, some predictive relationship between the two variables. Thus, subsequent research that seeks to establish whether uses result in gratifications needs to use another framework. Researchers can, for example, explore the application of the deductive approach to the means-end-chain (MEC) framework (Lin and Wang, 2008). The MEC framework (Gutman, 1981; Gutman, 1997) can trace how specific attributes of a particular product, in this case a mobile phone, results in specific consequences such as immediacy, sociability, security, and mobility given particular values pertaining to the self and others.

One of the continuing criticisms of most uses and gratifications research is their dependence on self-reports, as this research does, given concerns about the reliability

between respondents' actual and perceived patterns of use and the validity of the measures for levels of gratification. However, self-reports are effective insofar as generating representative data, which can be used to generate findings about a particular population. Rigorous pre-testing of instruments also addresses concerns about the reliability of self-reports and the validity of measurements. To enrich the literature on uses and gratifications as regards mobile telephony and the elderly, future research can use qualitative methods such as in-depth interviews or group discussions. Subsequent work can also involve the use of journals, which may be feasible for the elderly given they have the time to write but may not be viable given their generally weaker eyesight and motor skills (Pattison and Stedmon, 2006; Charness and Holley, 2004) and lower level of education attainment compared to the rest of the population.

A major concern in this research is the comparison of actual and anticipated uses and gratifications between owners and non-owners of mobile phones, though there is extensive literature on intentions-based surveys (Manski, 1990). The research addressed this concern by following Manski's suggestion to avoid fixed choices and provide neutral or uncertain choices. Still, future research that seeks to compare the influence of ownership may use experimental designs in which the role of ownership as stimulus on issues such as uses and gratifications can also be studied. However, an experiment will not provide the representative data that the survey approach of this study provides.

The findings of this research can inform similar situations in affluent countries with ageing populations and high levels of mobile phone penetration. It will be interesting, however, to implement the protocols of research in developing countries to see the extent to which the elderly are perhaps marginalised in terms of mobile connectivity given the lower mobile penetration rates in their country and their limited individual resources.

The age-based differences in uses and gratifications mean that efforts at promoting mobile connectivity among the elderly must focus on retirees who see considerable benefits in mobile phones but almost half of whom do not own one. Thus, from a practical perspective, mobile phone service providers who seek to cater to the elderly must offer a subscription scheme that focuses on voice calls than text services (Kurniawan, 2008; MacKenzie and Tanaka-Ishii, 2007). Inasmuch as the elderly limit themselves to these calling and texting (Coates, 2001; Ofcom, 2006), these providers must also offer basic phone models since the elderly are less concerned with the number than with the type of functions of a phone (Wildstrom, 2005). Offering basic services and basic models would also address the relative unease that the elderly had with mobile phones. It would also lower the price of purchasing and maintaining a mobile phone, the main consideration among the elderly. Based on the data for perceived ease-of-use, a phone for the elderly should have a big screen and keypad (Abascal and Civit, 2001; Mann et al., 2004; Kurniawan, 2008; Lin and Wang, 2008) and a user-friendly system of functions (Salz, 2006).

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Moveable Types

Youth and the Emergence of Mobile Social Media in Australia

This paper discusses youth and mobile media, with a particular focus on the emergence of mobile social media such as Facebook and Twitter. Drawing on qualitative research conducted for an Australian national study, it finds that social media on mobiles is well on the way to being entrenched in the everyday lives of our respondents—intertwined with text messaging as important technologies of friendship, intimacy, family and other relationships. It is argued that this connection between mobiles and online social networks means that we can no longer look to the phone as a sealed, standalone and portable vessel of connection and engagement, but as a portal that opens into many other spaces.

GERARD GOGGIN
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INTRODUCTION: YOUTH CULTURE, MOBILE MEDIA AND INNOVATION

Mobile communication continues to experience great growth, with subscriptions set to cross the five billion mark in 2010. At present, we see not only the sheer breadth of the continuing diffusion of devices and uptake of subscriptions—especially in overdeveloped as well as the less developed world, and in the so-called emerging markets. We are witnessing the metamorphosis of mobile communication itself. The term “mobile phone” is no longer adequate to indicate what is occurring here. Around the world, mobiles are increasingly recognised as media. Researchers are grappling with the concomitant question of what kind of media form mobiles represent. Also there is the closely related question of what implications mobile technology and user practices are having for media, its characteristics, communicative architectures and social functions. Questions of use and users are at the centre of these changes and their dynamics (Ball, 1968), and, as we now realise, such inquiries are deeply connected with the problem of innovation.

In our paper, we wish to approach this rubric of innovations in use from two standpoints. Firstly, we will focus upon recent innovations in youth culture and mobiles. This has been a prominent, if not defining, axis of innovation in mobile communication and technology, with many rich studies available documenting and theorising youth and mobiles especially in wealthy

countries. Our study of youth looks at a relatively late period of the category—18- to 30-year-olds. This is not simply because mobiles users of this age group have not been well-studied. They certainly have—not least—because researchers in universities have many members of this cohort handily placed as research subjects by dint of being enrolled students. Rather, our starting point is a critique of rhetorics of generations, which often pivots on discourses, myths and ideas on this broad group especially. Our empirical research discussed in this paper fit into a framework of study of how the contemporary constitution of youth culture as a phenomenon that is shaped by such overarching social and political logics of generations (Butcher and Thomas, 2003; Crawford, 2006; Wyn and Woodman, 2006)—and in which uses and representations of technology are vitally important.

Secondly, we are especially interested in innovations in use in relation to the shift towards mobile media. Mobile media is a comparatively recent development in the technology, though its origins can be clearly traced to the late 1980s and 1990s (and even earlier, if we include the many kinds of portable media technologies) (Goggin, 2011; Haddon and Green, 2009). There is much less research available on youth and mobile media (Donald, Anderson, and Spry, 2010; Donald and Spry, 2007; Goggin, 2010; Haddon and Vincent, 2009; Hjorth, 2009; Ito et al., 2009 and 2010; Ito and Okabe, 2006; Ito, Okabe, and Matsuda, 2005; Scifo, 2009; Westlund, 2007), so this focus has a certain novelty. However, as well as the empirical yield from such a research approach, we also wish to understand the thing we call mobile media. Presently, the greatest area of energy and action in mobile media is at the intersection of mobiles and Internet. Mobile Internet sits alongside, and is entwined with, the seemingly infinite recursive and reconfigurable technology of SMS (Donner, 2009), as shaping the very form of mobiles as media, and

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through this how we understand mobile communication.

Again, youth culture is an auspicious place to explore the innovations of use central to the second coming of mobile Internet (the first appearance, of course, being, respectively, Wireless Access Protocol and iMode, in the 1990s). As research is beginning to establish, mobile Internet is emerging in new and quite specific forms, across the world, with profound implications for how we understand both forms of mobiles and Internet (Fortunati and Contarello, 2002; Haddon, 2002; Kraut, Brynin, and Kiesler, 2006; Madell and Muncer, 2006). In our own research, we have observed a rapid development and salience of mobile Internet in youth culture, especially with the significant use now of social media—notably Facebook and Twitter—on mobile devices.

What emerges as a particular gap, as this brief literature review indicates, is research on this new kind of “mobile social media”. Accordingly, it is youth and mobile social media that are at the core of this paper. In what follows, the first section of the paper gives an overview of our research project on youth culture and mobile media in Australia, and outlines our approach and methods. Secondly, we summarise general findings and especially focus upon Facebook, Twitter and mobile social media. In the third part, we discuss the implications of the findings, and offer an argument about the changing nature of mobile phones, youth cultures and friendship, which we sum up as “phones as portals”.

MOBILE MEDIA AND YOUTH CULTURE: APPROACH AND METHODS

As part of a three-year Australian study on youth and mobile media, we conducted qualitative research about use, consumption, perceptions, and affect, which underpins our discussion of mobile social media in this paper.

During 2009, we conducted one-to-one interviews and focus groups with a total of 339 respondents aged 18–30 years. The group consisted of 172 women and 147 men drawn from one of four locations around Australia. There were approximately 30 one-to-one interviews and 26 focus groups. Participants were distributed by advertisements, leaflets, and information circulated through youth agencies seeking participants. The snowballing sampling technique was also used to identify other suitable participants. Of the total participants, there were 97 participants from Marrickville, an inner-city area of Sydney; 204 participants from Richmond-Tweed region in Northern NSW (a rural location), stretching to the Gold Coast, an urban location in the south-east corner of Queensland; 14 participants from Port Augusta, a rural town, approximately three hours’ drive from Adelaide in South Australia; and 24 participants from inner city Melbourne, Victoria. The reason for conducting the research in four sites, and with a mix of metropolitan and non-metropolitan locations, was to gain a broader national perspective across particular regions and states.

Interviews lasted approximately 45 minutes, and while all participants were asked the same set of questions,

some areas of discussion were pursued in greater detail as determined by the interests and experiences of the subjects. As far as was possible, we maintained a rough balance between genders, urban and rural residents, and ends at the age spectrum (below 18; greater than 30 years) throughout the process.

In many respects, the findings from this qualitative part of our study are broadly consistent with predecessor studies elsewhere in confirming the importance for young Australian users of mobile phones (Walsh, White, and Young, 2007; Donald and Spry, 2007). We had many conversations concerning the ubiquity of mobiles in the lives of informants, with quite a few informants always having the phone near them, even while sleeping, and never turning it off. Indeed one of the most striking instances was of someone reporting the high anxiety experienced when they were obliged to turn their phone off when travelling on a plane:

I never [turn my phone off]. So I was just like, I have to do what? Like turn it off? I couldn’t fathom that they wanted my phone off. I was like, can I just put it on silent, and they’re like, that doesn’t help, we need you to turn it off, Miss. I was like oh, okay (Female, 20, Marrickville).

Others spoke of the highly significant role that the mobile played in the formation of relationships, especially their friendships:

- Male 1: It is like your friend. The mobile phone is like your friend.
 Female: It is a love hate relationship ...
 Male 2: It’s a network of friends in one ...
 Female 2: Dozens of friends are there [in the phone] (excerpt from focus group conversation, Gold Coast).

One might see such statements bearing a strong resemblance to many findings of previous studies about the role that mobiles specifically play in youth and friendship. However, our observations have led us to believe that granular, variform notions of friendship are developing in youth cultures in relation to mobile social media, and we will return to this later in the paper, after we set out the findings.

MESSAGING, MOBILES AND FACEBOOK

A focus of research on mobiles has been the place of text messaging in youth cultures, with Kasesniemi’s classic Finnish study putting this phenomenon at the heart of second-generation GSM mobiles (Kasesniemi, 2003). More recently, Rich Ling has offered a thought-provoking account of “texting as a life phase medium”, drawing upon Norwegian data (Ling, 2010). In our Australian study, text messaging loomed large in the social life of technology for youth, as our respondents’ spoke of it. Many reported sending tens, or even hundreds, of text messages per day, with a semi-continuous stream of such communication being the norm among our cohort. We heard many stories about the under-studied yet prevalent

practice of “drunk texting”, and participants revealed both the strong temptation to send pictures or messages while drunk, and the techniques they deploy to avoid doing so.

Our study found that text messaging features prominently in youth culture. However, it is now entwined in other kinds of text, visual and other messaging communication that have grown up on the Internet. For our informants, these other kinds of communication included instant messaging, but especially now the communicative practices and meanings surrounding Facebook (and to a lesser extent MySpace and Twitter). It comes as no surprise to researchers studying digital media in mid-2010—ensconded in what one might call the “Facebook moment” (Goggin, 2011)—that these social networking systems and indeed social media carry primary importance for users. In terms of the Internet, in many countries of the world social networking systems are widely used, with Facebook since 2008–2009 enjoying a primacy unrivalled, not only among the Anglophone world and European countries but now among a wide range of countries elsewhere, including Asia, where other social networking systems have preceded it (Goggin and McLelland, 2009). Facebook has viewed the mobile media platforms as an area of strategic expansion, as too have the mobile carriers and equipment manufacturers.

Nearly all participants we interviewed used Facebook on a computer. As many remarked Facebook had very quickly become an essential—if not the essential—technology they used for networking and friendship. A majority of those who used Facebook on their computer also used Facebook on their mobile phone:

[Facebook on the mobile is] far easier than getting to the computer. It’s in your hands and it’s easier access than going home and uploading and like logging in and you know and things like that. With your phone, it like goes straight into Facebook, it’s easily updated. (Female, 18, Marrickville)

... Facebook’s pretty good in that way. You can get the whole contact and see what everyone’s doing and also people you haven’t seen for a while you know. (Male, Gold Coast)

For many of these respondents, Facebook was something that they avidly and regularly checked via their mobile phone:

I probably check it every day. (Male, 21, Port Augusta)

... the main one [time I switch my phone off] is probably when I’m at the airport ... Probably when I get on the plane and I’m like—it’s okay, it’s three and a half hours without Facebook. You can live without that. (Male, 22, Port Augusta)

You’re checking to see what other people have done with their day or writing about, that’s what you’re doing and it’s incredibly weird to me because ... half the people I’m friends with. They only log in just to see what people have written, what you can like and what you can comment on and half the

time you can’t like or comment anything because it’s all pointless, but it’s a completely new kind of addiction. I never had that problem with MySpace either (Male, 20, Marrickville).

Facebook checking was not something indulged in or appreciated by all respondents:

I think it’s worse if [friends] are on, with the iPhones, like Facebook. So they’re like updating and you’re having a conversation with them and they’re on there and checking if there’s any notifications. I’m just like, you know, I’m here; because then it’s like they’re kind of half heartedly in the conversation. (Male, Gold Coast)

Female 1: One thing I can’t understand is when you go to gigs and concerts or out like nightclubbing and stuff and you see the people in the corner on their like Hiptops or their iPhones and stuff on like FaceBook or MSN it’s just like you paid money to come in here, what are you doing?

Female 2: Or people go on holidays and while they’re on holidays upload FaceBook from their iPhone ... (respondents, Gold Coast)

However, the main factor that discouraged or inhibited respondents from using Facebook was the cost of data charges for mobile Internet:

Facilitator: How often would you use your phone for the Internet?

Interviewee: Very very rarely, as it costs too much. I usually just jump on to see what’s happening on Facebook and that’s it. I only use it for Facebook purposes at the moment as I have just moved into a house so I don’t have internet connected yet.

Facilitator: ... how many times a day do you go on Facebook?

Interviewee: Once or twice. (Female, 24, Port Augusta)

I think probably the worst thing now with my phone is that I can go on the Internet, so every now and then I might just Facebook up a little bit of a storm, but it costs me an arm and a leg (Female, 23, Port Augusta).

Others found Facebook a cost-effective alternative to other means of communication:

Facebook on the mobile is good because you can send group messages for free over Facebook, so I do that a lot. (Male, Marrickville)

For one respondent, not checking Facebook on their mobile served as a self-preservation strategy:

I spend so much time doing it at home, that if I did it outside of the house, I’d be a sick, sick person.

You wouldn't be able to talk to me. Sometimes I come home and there's nothing been updated. That's how often I check it. It's sad. I've been gone for an hour and nothing's happened. I feel like the world's ended. Like there was a few weeks there where Twitter went down, for like two days. That was hilarious. I was getting so many texts, people going, oh my God, Twitter's down. I was like, there's still Facebook. Don't worry about it. (Female, 20, Marrickville)

For another, the perceived affordances of mobile social media were unappealing:

I just think there's probably an excessive amount of communicating exactly what you're doing at a particular time and being available all the time by mobile phone can sometimes be a bit of a chore anyway. (Female, 26, Marrickville)

The majority of respondents' transferred photos taken on their mobile phone to a computer before they uploaded them to Facebook (in particular):

... I usually upload [a photo taken on a mobile] onto my mate's computer and we just manipulate it and just do random stuff with it ... but then we usually just upload it online as well ... Probably on Facebook ... Like all our photos. (Male, 22, Port Augusta)

The predominant ways that mobile phone images reached Facebook (or to other sites such as Flickr), was via Bluetooth or cable connections:

I don't really look at them, they're just in my phone and they just automatically upload to my computer when the Bluetooth is switched on. So I just save them all to my computer and then look through them, I don't know, whenever but not often. They just usually go straight to my Facebook. (Male, 29, Marrickville)

During 2009 when we conducted our fieldwork, the other social media application increasing in popularity was Twitter:

... it's the first time I've ever done the Internet in bed and I felt like that was a really big shift for me because two weeks ago, I realised I could check Twitter in bed and I was like whoa, it's like the first time you watch TV from bed. (Female, Melbourne)

I have time to think of like funny, pithy things to say and I think I can be funnier in text. Probably why I like Twitter as well [as text messaging]. (Female, 20, Marrickville)

One respondent not yet using Twitter suggested they would be interested in purchasing a smartphone because of the particular nature of tweeting:

One of the things I've felt that's made me think about getting a smartphone or phone with smart capabilities has been to use Twitter actually ... I'm

kind of resistant to Internet capability and net mobility. Because I don't really want the expectation that people will be able to, or reasonably expect that I can answer an e-mail on the train, to meet someone for lunch ... But Twitter because I do see it as a kind of—it's like a spatial as well as temporal thing. So I often—I do find myself sitting there going, oh, could be such a good Twitter update. (Female, 30, Marrickville)

What we have presented here is only a brief selection from the interviews with over 300 users of mobile media. Less than half this sample had 3G phones, and many were resistant or sceptical of the blandishments and promises surrounding smartphones, especially the iPhone. We also noticed a strong current of cynicism among young people regarding the "self importance" of those who have iPhones. In a kind of reverse cultural capital, some respondents viewed others as self-obsessed and somehow spoilt if they had an iPhone. These findings flew directly in the face of the common representations of young people as mediaphilic early adopters.

Many under-20s interviewed lacked independent economic power and lived with parents, or if they lived out of home, were living on extremely low earnings. The class politics of phones for such users is very evident and often surfaced as a backlash against ostentatiously hip and newly released items such as the latest iPhone (cited in Goggin, 2009; Ling and Sundsoy, 2009). This recalls the early period of commercial introduction of mobile phones in the late 1980s and early 1990s, where mobiles were seen as "yuppie" devices (Goggin, 2006). Indeed, in our research, we found that older phones, particularly Nokia models from the late 90s and early 2000s, are already being accorded a kind of retro cool, and seen as a form of individual resistance to the blanket advertising and marketing of the ever-latest models of phone. In direct contradiction to the reification of young people as the leading edge users of technology, the young people we surveyed are often suspicious of the push for ever-shorter lifecycles of mobile phones and the purported need for 3G services at all times.

While the majority of our respondents were regular or heavy users of Facebook, and, to a lesser extent, Twitter, some respondents had chosen not to use social media, or indeed other mobile Internet services. As we have noted, some limited their use of social mobile media, especially Facebook, in particular for fear of the cost implications (cf. perceived cost of early mobile communication discussed in Funston and MacNeill, 1999). Nonetheless, as these quotations illustrate, social media on mobiles is well on the way to being entrenched in the everyday lives of our respondents. It is intertwined with text messaging as important technologies of friendship, intimacy, family and other relationships. Mobile social media partakes of the specific affordances of mobile phones, evident in camera phone culture—even if, as we have observed, users do not often upload photos or videos directly from their mobile to Facebook, Flickr, or other accounts, tending to do this via a computer. It is the imbrications of mobile

social media with its Internet varieties that is key to this emerging facet of youth culture, as least as revealed in our Australian study. While an emergent phenomenon, there are early signs of a new identity, function, and significance for mobiles here, at the crossroads of multiple media forms.

DISCUSSION: PHONES AS PORTALS

If something significant is going on with this salience of social media on mobiles, what would this innovation in use be? For many of our informants, particularly for those with 3G phones, social media networks such as Facebook and Twitter are never far away. While such users would not necessarily be updating their accounts frequently, they would regularly be checking in on others, what Kate Crawford has proposed elsewhere as a “practice of listening” (Crawford, 2009). Users are tuning in, checking the frequencies to hear the latest, and then disengaging. This connection between mobiles and online social networks means that we can no longer look to the phone as a sealed, standalone and portable vessel of connection and engagement, but as a portal that opens into many other spaces. A person’s contacts list in their phone is no longer a representation of the communities they are connecting with via the mobile. Communities of contacts, friends, colleagues and strangers differ; from phone contacts, to Facebook friends, or the list of people followed on Twitter.

For some people, phone contacts and Facebook friends are “two completely different worlds”:

The majority of my mates that are on Facebook aren’t from here because I’m not from here originally, so they are all back down in my home town. So my mates that I have back down at home and my mates that I have here [in phonebook on phone] are two completely different worlds ... (Female, 24, Port Augusta; cf. Utz, 2007)

Facilitator: Do you ever use your phone to help connect up with social networking sites like Facebook?

Interviewee: Not ever ...

Facilitator: Would you say that either the friends or the contacts you have through LinkedIn—so the friends you have on Facebook or the work contacts you have on LinkedIn, are they replicated into your phone book, the phone book in your mobile phone?

Interviewee: Not all of them because there are some work contacts like on LinkedIn that are journalists and that sort of thing and they’re not really friends. I don’t really call them or anything like that. (Female, 25, Port Augusta)

For others, there are more subtle differences between classic phone book friends and the kinds of friends connected through online social networks:

It’s collective and you don’t feel as obligated to in-

clude them in your contact list because they can’t see when they have been blocked. So I have a very selective group of friends on my phone whereas the Internet, I’ll let anyone that I went to school with like 10 years ago go on. (Female, Gold Coast)

Facilitator: Are there any connections between that, you and the way you use Facebook and the way you use your phone?

Interviewee: I would say no just because there’s people, like there’s people I’m friends with on Facebook that we’re just friends on Facebook for the sake of being friends on Facebook and it would just always message each other or talk on the phone, that’s just how it is and somehow being Facebook friends ... it’s less of a friendship just because you’re friends with 100 other people you don’t speak to anymore. (Male, Marrickville)

For users of mobile social media, there are also key distinctions regarding friendship practices between Facebook and Twitter:

With my Facebook, that’s pretty much all my friends, and friends out of town, and all that. Twitter is more like celebrities and that, see what they’re doing ... a lot of my old school friends, in general, actually have all moved out of town, or out of state, most of them have. So I can catch up on them and talk to them, especially on Facebook, it’s like, I haven’t spoken to you for a while. So it’s good to yarn up with them, too. (Female, 27, Port Augusta)

I really enjoy the weird intimacy of Twitter because often these people, you like them and you really want to be their friend but you don’t ever have those sorts of interactions with them in real life. So you feel like they’re letting you into their world a little bit and that’s quite good. I feel like it’s really actually connected me to people in that way that I never would have had those interactions before, so that’s quite good. (Female, Melbourne)

Reflecting upon these respondents’ discussion of how they use and regard mobile social media, we would argue that the mobile phone is a strategic node in networks of friendship, and, for many, the critical cultural technology of friendships. The advent of social media on mobiles means that there is now a range of different ways that friendship is being constructed and experienced through these platforms. Our participants revealed highly considered and differentiated ideas of friendship that articulated with different spaces: “Facebook friends” were distinguished from “Twitter friends” and “people I see frequently face to face”. Friendship could take many forms, and shifted in character depending on how communication was made. What was clear was that the communities featuring in mobile social media are partial,

overlapping, and never static, and that the definitions of friendship were similarly varied and dynamic.

For the young people in our study, texting was commonly preferred to voice calls as the first way to get in touch. This is reminiscent of many studies of mobile text messaging. In his striking study on teen years as the acme of texting, Rich Ling suggests that:

In all likelihood, there will be a strong need for texting or at least mobile, asynchronous, point-to-point, text based mediation. SMS has filled this niche for teens. They are engaged in the establishment of a social sphere outside the homes of their parents and in their nascent romantic adventures. Those in their late teens/early 20s often are engaged in establishing themselves in their own homes for the first time. In this situation, the use of texting is a convenient way to mediate information. As they move into other phases of their lives this type of need is carried out using other forms of interaction, voice mobile, e-mail and the like (Ling, 2010: 289).

Our argument is that increasingly SMS are becoming almost identical to Twitter messages, or short Facebook posts. The mobile becomes just another place to tap into that constant stream of messages: some personally directed, some generally directed to a group, others widely broadcast, such as news updates and sports results. The edges of the mobile phone as a stand-alone technology (such as it ever was) are blurring. The mobile is now another container technology (Sofoulis, 2000) which is constantly receiving and transmitting into entirely different systems, practices and networks. Or, as one interviewee said:

I don't really mind if I lose my phone these days, because most of the people I want to reach are on Facebook, and people can still reach me there. It doesn't really matter if it is via the phone or not.

In sum, it is not that the mobile is not important, nor that it does not play a role in community formation and maintenance, but that we need to view them less as "things-in-themselves", and consider the embedded ideas and routines that cut across them (Sterne, 2006). The interpersonal aspect of SMS may remain, but it is embedded in a flow of mobile media information and practices.

CONCLUSION: THE CO-EVOLUTION OF MOBILE SOCIAL MEDIA AND FRIENDSHIP

The developments in mobile phone technology in the past decade have been impressive: the appearance and ubiquity of the camera phone; the rise of mobile data; the blossoming of mobile multimedia; mobile Internet redivivus; the iPhone's spur to the prospects of the smartphone; and, the cultural significance of mobile media platforms with the popularity of apps. Youth cultures have often been the sites where innovative mobile use is discerned, and indeed it is a preoccupation of mobile communication research.

Youth and its meanings are key to how mobiles have been perceived, debated, worried about, or celebrated across many societies.

In this paper, we have sought to offer a glimpse of the practices of social mobile media use in youth culture. We would argue that there are early indications here that the phone—as prized, essential technology of friendship and youth culture—is undergoing a metamorphosis. There are two bodies of literature that have delved into social networking systems and the cultures that have developed around these. A number of important studies have sought to understand cultures of friendship and the transformation of media represented by Facebook and the wide variety of kindred social networking systems centred thus far on the Internet (Boyd and Ellison, 2007; Boyd 2008a and b; Lewis et al., 2008; Tong et al., 2008). The concept of "friendship" prevalent in social networking systems has led researchers to investigate the various meanings this takes, the practices of friendships, and the changing nature of social connection it represents (Papacharissi, 2009; Valenzuela et al., 2009; West et al., 2009). There is a smaller literature on mobile social networking, especially covering early examples such as the US-based Dodgeball, but latterly the slew of location-based applications such as Brightkite, Foursquare, and others (Humphreys, 2007; Humphreys and Barker, 2007; Thom-Santelli, 2007). A different take is evident in the work on mobile social software ("*mososo*"), where the question of social connection has been typically framed about larger notions of friendship and publics (cf. Boyd, 2008b). For instance, while noting that the "use of mobile social media is only among a relatively small group of elite early adopters", Lee Humphreys usefully suggests that:

Rather than mobile social networks helping people to find the love of their lives or their new best friend, a more plausible and realistic role for this technology may be just to make the public social life of the city more familiar (Humphreys, 2010: 775).

Our study underlines that what is now occurring has moved well beyond the early experiments in mobile social software in a number of respects—not least in the sheer reach and growing pervasiveness of current mobile social media. Such developments encourage us to bring together still disparate, if slowly merging, lines of inquiry into friendship, from their current bases respectively in studies into mobile communication and media (and mobile social software), or research on Internet-based social networking systems. As Wang and Wellman argue, the "nature of friendship networks will continue to evolve alongside the Internet, the transformation of social structure, and the cultural norms around these increasingly mediated communication practices ... people's social connectivity is quantitatively—and probably qualitatively—different than before" (Wang and Wellman, 2010: 1164). The swift evolution of mobile social media is intricately bound with developments in thinking about friendship, connection and intimacy.

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The Media Convergence Lifestyle Profile in Thailand

Nowadays, the Media Convergence Mediated (MCM) technology such as Internet phone or multimedia phone can serve people's up-to-the-minute communication needs. The purpose of this study is to understand the lifestyles and behaviour of next-generation consumers who use new media (Internet phones or MCM). The objectives are: (1) to understand the next-generation lifestyle profiles, their mobile usage, and the content they consume; (2) the differences between MCM users and non-MCM users; and (3) to test the Composite Audience Profile (CAP) model. Quantitative research, using factor analysis and other statistical methods, was designed and results showed that demographic variables and psychology aspects of MCM users and non-MCM users are somewhat different. Findings show four types of lifestyles among MCM users and three types of lifestyles within non-MCM users. Nonetheless, there are still many pertinent research issues regarding next-generation consumer lifestyle profiles, next-generation technology, new media, media usage, as well as cultural and social impacts that are left to be explored.

PARICHART SAITANOO
YUBOL BENJARONGKIJ

Recently, Thailand has entered a media convergence technology era that serves the next-generation customers' "mobility, anywhere and anytime" lifestyle. Thai telecommunications service providers now offer consumer services on a convergent communication network, with devices and content. Concurrently, innovation technology for next-generation consumers and convergence technology, very popular as new mediated technologies today, have led mobile phone manufacturers to create new generation mobile phones such as smart phones, Internet phones and multimedia phones. These have brought many new services to Thailand, such as mobile Internet, mobile broadband multimedia, mobile commerce, and mobile entertainment. New non-voice communication forms and culture such as MSN, chat, BlackBerry culture, vote, web-boards, and social networking are introduced into Thai society; all have greatly impacted people's lifestyles, both socially and culturally.

The research objectives were set as follows: (a) to test how a Composite Audience Profile (CAP) Model explains the lifestyle profiles of the Media Convergence Mediated (MCM) users in Thailand; (b) to categorise next-generation consumers' or MCM users' lifestyles

profile and to understand their patterns of usage and media content they consume; and (c) to study the differences between MCM users' and non-MCM users' lifestyle profiles.

The expected contributions from this research are: (a) to develop a new CAP model to explain the lifestyle profiles of new generation consumers who use MCM technologies (MCM users or Internet phone users); (b) to understand the characteristics of new-generation consumers who use MCM technology (Internet phone) in Thailand in terms of psycho-graphical aspects and emotions; (c) to expand the knowledge of Thai new generation consumers who use MCM technology today and in the future; (d) to support media planners, in both public policy and commercial areas in Thailand to understand the new breed of consumers and to help them cope with their new ever-changing media use behaviour; and (e) to study the impact of new mediated technologies in Thailand in order to manage future opportunities, to prevent and solve social problems, and to pave the way for future studies of the development of new communications technology.

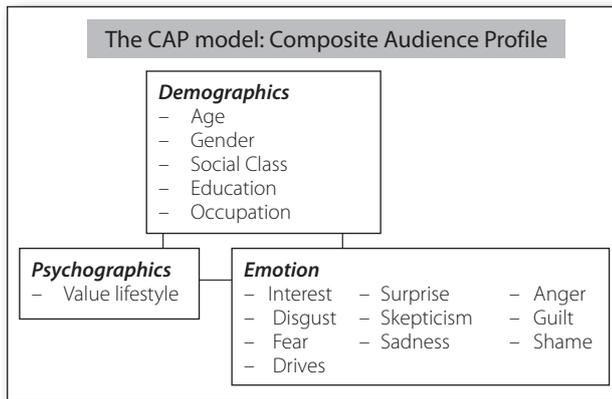
LITERATURE REVIEW

Composite Audience Profile

The Composite Audience Profile or CAP model (Scott and O'Hair, 1989) is the analytics concept of the receiver pattern; it was developed from public relations, communications, and advertising concepts. In this research, the focus was on demographic and psychological factors such as the receivers' lifestyles and emotions which affect the receivers' media exposure. It allows better understanding of communicators for their receivers.

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FIGURE 1
The CAP Model



Source: Scott and O’Hair (1989: 215)

Demographic factors are general consumer characteristics: age, gender, income, social class, education, and occupation. Using the demographic base provides a complete understanding of user differences and is useful for dividing the overall consumers for the targeting media. However, with increased social mobility and the blurring of class divisions, the social class segmentation system is not as accurate as it used to be (Pickton and Broderick, 2005).

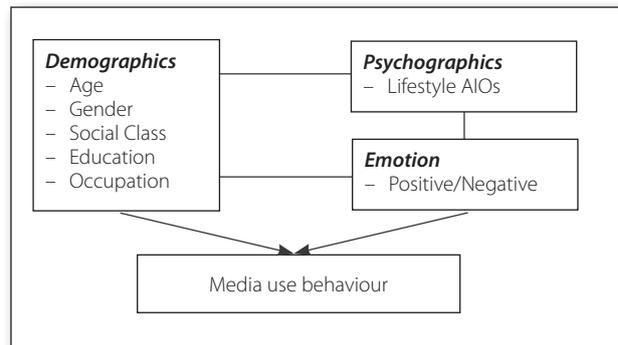
Psychological factors, which have developed into psychographics or lifestyle concepts, are analysed from (1) time usage with activities, (2) money spent, and (3) interests. Consumers’ needs, opinions, attitudes, and values are developed from the concept of basic needs (Maslow’s hierarchy of needs). These factors merged with the nine different lifestyles of Reisman et al., and William D. Wells and Douglas J. Tigert (1971). They presented the popular pattern of analysis called AIOs (Activities, Interests and Opinions). The analysis categorises consumers into different lifestyle group (Solomon, 2007).

Emotional factors were introduced by Titchner, who noted that emotion is different from thought. It expresses or affects the feelings or it is the response of those expressions or affects. Emotion is the expression of feelings, a deep-seated mind condition that is a transitory state. This is a very important composite in receivers’ analytic procedure (Scott and O’Hair, 1989). Moreover, Michael Solomon (2007) found that contemporary consumers’ behaviour chooses the product by emotional rather than rational motives, which shows how important the emotional factor is when trying to understand product consumers.

CONCEPTUAL FRAMEWORK

This study develops the Uses and Gratifications Approach originated by many studies during the 1970s. Herzog found that receivers can make their decision to select and expose to the media their own needs (active audience). Moreover, Katz and others constructed an instrument that measures media usages and gratifications; it showed that the differences of humans are social and

FIGURE 2
The media convergence lifestyle profile and media use in Thailand, Conceptual framework



mind conditioning leads to different needs. Thus, the media usage of each individual can be quite different (Benjarongkij, 1991).

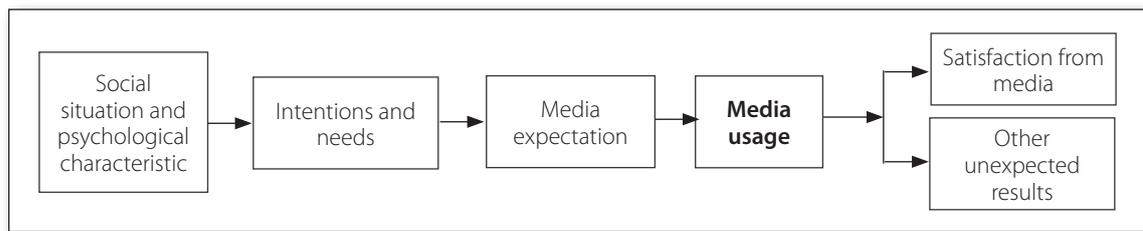
As the CAP Model can explain the behaviours of product consumers, this study proposes that the CAP model be used to explain the behaviours of media users; in this case, MCM users and non-MCM users in Thailand. At the same time, the concepts of new media as proposed by Marshall McLuhan (1964), McQuail (2005) and Derrick de Kerckhove (2008), which state the effect of new media on their consumers; they explain that a cyber society is becoming the new society that makes human relationship patterns change into social network relationships. This effect on Internet usage occurs at the individual and the social level.

The study of consumer lifestyles relates to the choice of time allocation and purchasing behaviour of the consumers in order to further explain why people buy or use certain products. One of the most effective methods of lifestyles patterns study is AIOs. AIOs are a type of psychological approach that attempts to categorise the consumers by using three variables: activity, interest and opinion. The analysis is done by collecting data from a large scale sampling group. In doing so, the researchers are able to categorise the characteristic of the consumers. The consumer segmentation with the AIOs approach is computed by using questionnaires to measure opinions along with time allocation, interests, and attitudes towards self and society of the respondents (Solomon, 2007).

There is further development of lifestyles research afterward such as VALS2™ model from the SRIC-BI institute (SRI Consulting Business Intelligence), formerly Stanford Research International (SRI). However, the model is licensed for SRIC-BI use, and unavailable for external researches. Although VALS2™ currently uses 39 factors (35 psychological factors and four demographical factors) as variables in consumer categorisation, the variables should be selected according to the valuation and culture of each region (Solomon, 2007).

Thus, media convergence lifestyles in Thailand research utilise AIOs lifestyles to analyse the media convergence mediated lifestyle users.

FIGURE 3
Katz's Model of Use and Gratification



Source: Katz and others (Benjarongkij, Y., 1991)

As for the study of emotion variables, emotion can be classified into six characteristics: (a) overt behaviours or specific thoughts; (b) emotional experience (positive or negative); (c) emotions related to passion, not actions; (d) emotions arising in part from a cognitive appraisal of a situation; (e) emotions that are accompanied by bodily responses; and (f) emotions that vary in intensity (Bernstein et al., 1991). Also, the consumers' behaviour chooses the product by emotional rather than rational motives; moreover, the consumers can have positive emotion experience towards the products such as "fun", which later leads to purchase (Solomon, 2007).

Therefore, this research categorises emotion variables into positive emotions and negative emotions characteristics in order to analyse the consumer experience of MCM users.

HYPOTHESES

- H1: *There is a significant difference in demographic factors such as age, gender, education, occupation, work position and income between MCM users and non-MCM users.*
- H2: *There is a difference in psychological factors in terms of lifestyle patterns between MCM users and non-MCM users*
- H3: *There is a significant difference in psychological factors in terms of emotion between MCM users and non-MCM users.*

RESEARCH METHODOLOGY

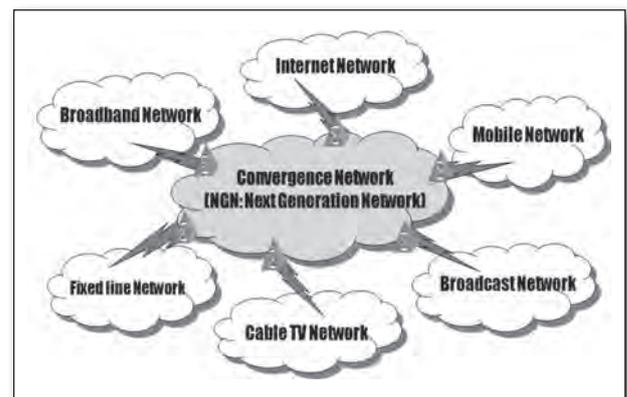
Definitions

Media Convergence Technology means technology that brings together all the networks. It allows the new generation devices to receive and send signals or information that is voice, non-voice, and multimedia with no-limits on the Internet database or network technology.

MCM means new generation mobile phones such as smart phone, Internet phone, PDA, etc. All of these mobile phones can be used as voice communication, non-voice, and multimedia accessories. Moreover, it can be used with the Internet database and hi-speed Internet technology such as 3G and WiFi.

MCM users in this research means the users of Internet mobile phones or smart phones, communication devices that support media convergence

FIGURE 4
Media convergence technology network (NGN) concept



technology, which allows wired and/or wireless communication on any platforms such as voice, data, VDO, TV, Internet and mobile technology, etc.

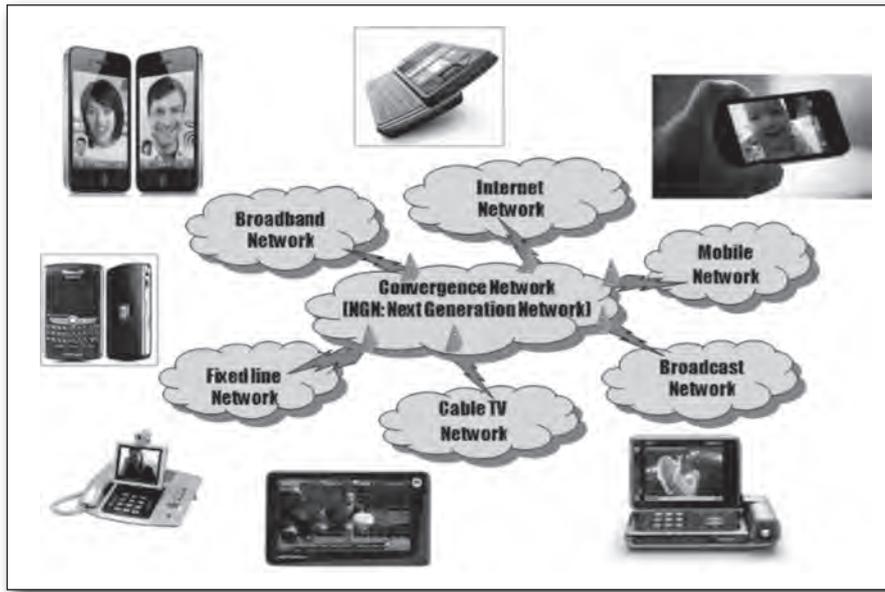
There are no previous researches regarding "MCM users". However, the researcher specifically defines the terms of MCM users from data and phenomenal cited in Steinbock (2005) and Bates and Gregory (2001). Apart from academic texts, the data is collected from seminars, interviews of researchers and an expert from the National Telecommunication Commission of Thailand.

The media convergence phenomenal can be summarised as follows: (1) Previously, the telecommunication system and equipment are separately developed (fixed line, mobile, Internet, TV, VDO, etc., and (2) later, the concept of media convergence emerges—the telecommunication systems are combined into a single structure called "Next Generation Network" (NGN) or "Convergence network" to support all kinds of communication and mobility, which allows simultaneous signal transfer from fixed-line telephones, mobile phones, radio, television, cable TV networks and Internet.

In engineering terms, media convergence has been developed for decades. The communication service provider has gradually integrated communication network in order to provide convenience lifestyle for the customers. Up to now, all communication networks are connected.

With the completion of media and content

FIGURE 5
Media convergence mediated (device or use terminal)



convergence, proper communication devices to ensure media convergence experience have also been developed such as Internet phones and smart phones. Many Thai consumers are interested in communication devices that support media convergence such as Internet phones and smart phones. Therefore, MCM users are increasing in population, as more people engage in media convergence network via such devices.

In Thailand, True Corporation Public Co. Ltd. decides to step into the media convergence era by integrating fixed line telephone networks, mobile phone networks, Internet network, cable TV network along with wired and wireless hi-speed communication into one system. Also, the telecom operator can serve the intentions of consumers at both the individual and organisation levels as follows: (a) Various content that fulfil the needs of consumers in different lifestyles; (b) communicators with different means of communication to serve the consumers accordingly; (c) community that shares mutual interests; (d) convenient commercial systems; and (e) access ability

that efficiently allows people to “connect” regardless of any platform or technology limitation.

Lifestyles dimensions

In the process of questionnaire design for AIOs lifestyles analysis, the researcher has done in-depth interviews with MCM and non-MCM users. The lifestyles dimensions are described in Table 1.

Emotion variables

As for emotion variables, the data from in-depth interviews with MCM and non-MCM users are implemented in the questionnaires as follows:

- Positive emotions: interesting, exciting, confident, proud of it, enjoy, fun, unique, admired, techno-savvy, indispensable, brighten up, elated
- Negative emotions: boring, tedious, timid, humble, frustrated, dull, shy, detested, techno-phobic, dispensable, depressed, lonesome

TABLE 1
Lifestyles dimensions

Activities	Interests	Opinions	Demographics
Work	Family	Themselves	Age
Hobbies	Home	Social issues	Education
Social events	Job	Politics	Income
Vacation	Community	Business	Occupation
Entertainment	Recreation	Economics	Family size
Club Membership	Fashion	Education	Dwelling
Shopping	Food	Products	Geography
Sports	Media	Future	City size
	Achievement	Culture	Stage in life cycle

Source: Lifestyles dimensions by Wells and Tigert (1971)

Research questions

The research questions were as follows:

- Can the CAP Model explain the lifestyle profile of the MCM users and non-MCM users in Thailand?
- What are MCM users' and non-MCM users' lifestyle patterns?
- What are the media usage patterns and content they consume?
- What are the differences between the MCM users' and non-MCM users' lifestyle profiles?

The research methodology was a quantitative one; a questionnaire was distributed to 820 respondents. Data analysis was done using factor analysis and other statistical methods. Sampling groups are respondents aged 15–60 years old who use mobile phones and consume MCM technology in their daily lives in the Bangkok Metropolitan area and provincial area. The self-administered questionnaire was directly distributed to the users and posted on different types of popular Thai websites.

The researchers used quota sampling to indicate the proportion of the MCM users and the non-MCM users as 1:1; 416:404 ($\alpha = .05$, $e = +/- 5$ per cent). There are two kinds of data collection; 500 field study samples and 320 online-study samples (through popular websites). The data was collected within two and a half months—actually 77 days—from 1 December 2009 to 15 February 2010.

Questionnaire

There is no previous study regarding the lifestyles profile of media convergence users in Thailand. In the process of literature review, the researcher considered the existing methodology of lifestyle AIOs. However, the questions were not compatible with the lifestyles of next-generation users.

Therefore, the questionnaires used in this research were designed by the researcher by using in-depth interviews on lifestyles patterns, emotions, feelings and media usage from 10 MCM users, whose media usage was categorised as “heavy users”, and 10 non-MCM users.

Furthermore, current social and socio-psychological issues that have been debated in the mass media, website and seminars since August–October 2009 were included in questionnaire design in order to produce up-to-date AIOs questionnaires for Thai society.

The questionnaires were designed to be self-administrative and were divided into five sections. Section 1 consisted of five screening questions to categorise the sampling group into MCM users and non-MCM users. Section 2 consisted of one question (12 choices) regarding emotion and feelings. Section 3 contained three questions (96 choices) of AIOs lifestyles. Section 4 had a total of two questions (40 choices) regarding media and content usage behaviour. Section 5 concerned seven questions on demographic factors of the sampling group. This comprised 18 questions and 148 choices overall.

Measurement instrument pretest

Before data collection, the questionnaires were pretested for validity and reliability. Each scale and variable was revised and tested to be validated and reliable. The pretest was processed as follows: (1) Validity test: the validity of the questionnaires regarding the construction, content, and concurrence was revised on the basis of approval from the experts in related fields. After this process, the questionnaires were tested for their reliability; and (2) Reliability test: the validated questionnaires were computed with Cronbach's coefficient alpha to test the reliability of each psychological and emotion variable. Forty respondents were requested to do the questionnaires. The data were then analysed by using SPSS statistical software. The Cronbach's coefficient alpha must be higher than .70 for the instrument to be reliable; in this case, the reliability was >0.8.

FINDINGS

Mobile phone usage

The findings revealed that 71.5 per cent of the sample owned one mobile phone; 25.5 per cent of the sample owned two mobile phones; and 3.2 per cent of the sample owned three mobile phones.

Characteristics of MCM users or Internet phone users and non-MCM users or those who do not use Internet phones are as follows:

- 50.7 per cent of the sample use Internet phones (MCM users); 49.3 per cent of the sample do not use Internet phones (non-MCM users).
- 72.6 per cent of the sample use Internet phones (MCM users) working on GPRS/ EDGE; 13.7 per cent of the sample work on GPRS/EDGE/3G/WiFi; 10.1 per cent of the sample use 3G/WiFi.
- 42.8 per cent of MCM users did not use the Internet phone to connect to the Internet within the last week; 27.2 per cent of the sample often use the Internet phone to connect to the Internet (5–10 times a week); 16.6 per cent of the samples use the Internet phone to connect to the Internet sometimes (4–5 times a week); and 4.3 per cent use the mobile phone to connect to the Internet as much as they want.¹

The results are shown according to the research questions as follows:

RQ1 Can the CAP Model explain the lifestyle profile of MCM users and non-MCM users in Thailand?

The results of CAP Model test—demographic aspects, lifestyle aspects and emotion aspects—are described as follows:

Demographic aspects

- Age: Table 2 presents the percentage of analytical age aspects comparing MCM users with non-MCM users.

TABLE 2

Age (years)	MCM users		Non-MCM users	
	Freq.	%-age	Freq.	%-age
1. < 15	2	0.5	7	1.7
2. 16–20	40	9.6	40	9.9
3. 21–30	273	65.6	211	52.2
4. 31–40	89	21.4	100	24.8
5. 41–50	9	2.2	32	7.9
6. > 51	3	0.7	14	3.5
Total	416	100.0	404	100.0

Most MCM users are between 21–30 years old (65.6 per cent), 31–40 years old (21.4 per cent), and <15–20 years old (10.1 per cent). Most non-MCM users are between 21–30 years old (52.2 per cent), 31–40 years old (24.8 per cent), and <15–20 years old (11.6 per cent).

- Gender: Table 3 presents the percentage of analytical gender aspects comparing MCM users with non-MCM users.

TABLE 3

Gender	MCM users		Non-MCM users	
	Freq.	%-age	Freq.	%-age
Male	173	41.6	156	38.6
Female	243	58.4	248	61.4
Total	416	100.0	404	100.0

The breakdown of MCM users and non-MCM users are as follows: Women (58.4 per cent; 61.4 per cent) Male (41.6 per cent; 38.6 per cent).

- Education: Table 4 presents the percentage of analytical education aspects comparing MCM users with non-MCM users.

TABLE 4

Education	MCM users		Non-MCM users	
	Freq.	%-age	Freq.	%-age
Below bachelor degree	39	9.4	65	16.1
Bachelor's degree	276	66.3	286	70.8
Master's degree	98	23.6	51	12.6
Doctoral degree	3	.7	2	.5
Total	416	100.0	404	100.0

Sixty-six per cent (66.3 per cent to be exact) of MCM users have a Bachelor's degree, 23.6 per cent have a Master's degree and 9.4 per cent have less than a Bachelor's degree.

Seventy-one per cent (70.8 per cent to be exact) of non-MCM users have a Bachelor's degree, 12.6 per cent have a Master's degree and 16.1 per cent have less than a Bachelor's degree.

- Occupation: Table 5 presents the percentage of analytical occupation aspects comparing MCM users with non-MCM users.

TABLE 5

Occupation	MCM users		Non-MCM users	
	Freq.	%-age	Freq.	%-age
Civil servant/ State enterprise	45	10.9	81	20.0
Private corporation	198	47.9	152	37.6
Entrepreneur	46	11.1	33	8.2
Students	115	27.8	125	30.9
Housewife	2	.5	7	1.7
Others	7	1.7	6	1.5
Total	413*	100.0	404	100.0

*Occupational MCM users were missing 3 samples.

Forty-eight per cent (47.9 per cent to be exact) of MCM users work in private corporations, 27.8 per cent are students, 11.1 per cent are entrepreneurs and 10.9 per cent work as civil servants or in state enterprises.

Thirty-eight per cent (37.6 per cent to be exact) of non-MCM users work in private corporations, 30.9 per cent are students and 20.0 per cent work as civil servants or in state enterprises.

- Position: Table 6 presents the percentage of analytical position aspects comparing MCM users with non-MCM users.

TABLE 6

Position*	MCM users		Non-MCM users	
	Freq.	%-age	Freq.	%-age
Administrative staff	187	65.6	158	60.1
Junior management	40	14.0	42	16.0
Middle management	10	3.5	25	9.5
Upper management	4	1.4	4	1.5
Highest management	44	15.5	34	12.9
Others	0	0.0	0	0.0
Total	285	100.0	263	100.0

* Students did not respond to this position item.

In terms of work position (students excluded), 65.6 per cent of MCM users hold administrative positions, 15.5 per cent are in higher management and 14.0 per cent are in junior management. Non-MCM users found in the study are administrative staff (60.1 per cent); junior management (16.0 per cent); and higher management (12.9 per cent).

- Household income: Table 7 presents the percentage of analytical household income aspects comparing MCM users with non-MCM users.

TABLE 7

Household income (baht)	MCM users		Non-MCM users	
	Freq.	%-age	Freq.	%-age
< 15,000	59	14.3	82	20.4
15,001 – 50,000	142	34.5	159	39.6
50,001 – 100,000	108	26.2	82	20.4
100,001 – 200,000	49	11.9	53	13.2
> 200,001	54	13.1	26	6.5
Total	412*	100.0	402**	100.0

*Number of missing values is 4.

**Number of missing values is 2.

Results show that most MCM users live in families that earn: Below 15,000 baht a month (14.3 per cent), 15,001–50,000 baht per month (34.5 per cent), 50,001–100,000 baht (26.2 per cent), > 200,001 baht (13.1 per cent).

Non-MCM user families earn: Below 15,000 baht (20.4 per cent), 15,001–50,000 baht (39.6 per cent), 50,001–100,000 baht (20.4 per cent), and 100,001–200,000 baht (13.2 per cent).

- Residence: Table 8 presents the percentage of analytical residence aspects comparing MCM users with non-MCM users.

TABLE 8

Residence	MCM users		Non-MCM users	
	Freq.	%-age	Freq.	%-age
Bangkok and its suburbs	354	87.6	341	84.6
Provincial area	50	12.4	62	15.4
Total	404*	100.0	403	100.0

*Number of missing values is 12.

**Number of missing value is 1.

Both MCM users and non-MCM users live in Bangkok and its suburbs (87.6 per cent and 84.6 per cent respectively).

Psychological aspects (Lifestyle AIOs)

- MCM users: MCM users were analysed using factor analysis. Results showed that they were categorised into four types of lifestyles, namely: (1) Internet and me come one, (2) Cautious Internet user, (3) Traditional media and Internet user for work and entertainment, and (4) Social and charity concern.
- Non-MCM users: Non-MCM users were analysed using factor analysis. Results showed that they were categorised into three types of lifestyles, namely: (1) Traditional media and cautious Internet users, (2) Living in cyber world, and (3) Internet users for work, entertainment, and charity concerns.

Emotional aspects

The researcher categorised the amount of the MCM users and the non-MCM users by the degree of emotional aspects. It was set that respondents whose emotional aspects > 0.000, will be categorised as having positive emotional aspects, and those with emotional aspects ≤ 0.000 will show their negative emotional aspects. The research found that MCM users and non-MCM users have different emotional aspects (in both positive and negative ways).

Table 9 presents the percentage of analytical emotional aspects comparing MCM users with non-MCM users.

TABLE 9

Group	Negative		Positive		Total	
	n	%	n	%	n	%
MCM users	49	6.0	367	44.8	416	50.7
Non-MCM users	176	21.7	228	27.8	404	49.3
Total	225	27.4	595	72.6	820	100.0

$\chi^2 = 101.143, df = 1, p\text{-value} = 0.000$

MCM users have a proportion of positive emotional aspects (44.8 per cent) more than the proportion of MCM users who have negative emotional aspects (6.0 per cent). In the case of the non-MCM users, the proportion of positive emotional aspects (27.8 per cent) is close to non-MCM users who have negative emotional aspects (21.7 per cent).

RQ2 What are MCM users' and non-MCM users' lifestyle patterns?

MCM users' lifestyle patterns are described as follows:

The researcher determined the means of each component and analysed the factor of MCM users. The factors were divided into four groups:

- Group 1: "Internet and me come one". This group trusts completely in the Internet and cyber society without the awareness of threats or dangers arising from the use of Internet. They spend much of their

time with Internet until it becomes a big part of their lives. They cannot live without the Internet. Their lifestyle relies on the Internet and the virtual world more than the real world. The result found that their lifestyles, thought patterns, and communication patterns have changed.

- Group 2: “Cautious Internet users”. This group uses Internet cautiously and are aware of problems with the Internet. They also pay attention to their family, house, work, achievements, and environmental concerns. The results found that their lifestyles, thought patterns, and communication patterns still qualify as normal lifestyles.
- Group 3: “Traditional media and Internet users for work and entertainment”. This group uses Internet in their work life and for entertainment. They use Internet as an alternative media. They spend their time under normal lifestyles, outdoor activities and use traditional media to listen to the radio and watch TV.
- Group 4: “Social and charity concerns”. This group uses the Internet for work and relaxation. They use Internet as an alternative media, lead normal lifestyles, love to share, and enjoy public charity.

Non-MCM users’ lifestyle patterns are described as follows:

The researcher determined the means of each component and analysed the factor of non-MCM users. The factors were divided into three groups:

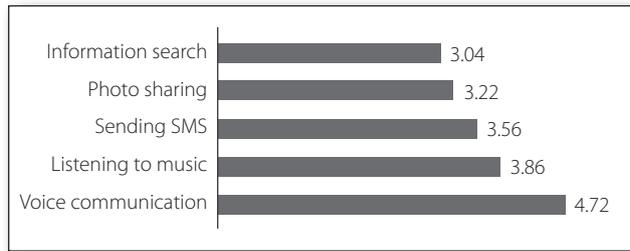
- Group 1: “Traditional media and cautious Internet users”. This group uses Internet in normal lifestyle and they are cautious about problems from the Internet. They use traditional media (reading newspapers, listening to the radio and watching TV). They love face to face communication more than writing. This group lives a normal lifestyle and spends their time working, on outdoor activities, travels and leisure.
- Group 2: “Living in cyber-world”. This group trusts completely in the Internet and cyber society without the awareness of threats and dangers arising from the use of Internet. They also spend their time exercising. They love to interact with Internet for entertainment by reading e-comics and novels online.
- Group 3: “Internet users for work, entertainment and charity concerns”. This group uses Internet in their work and for entertainment and leisure as an alternative media. They spend their time living normal lifestyles, on outdoor activities, social and charity concerns.

RQ3 What are the media usage patterns and content MCM users and non-MCM users consume?

Mobile phone use behaviour patterns are as follows:

FIGURE 6

MCM users and their mobile use behaviour pattern

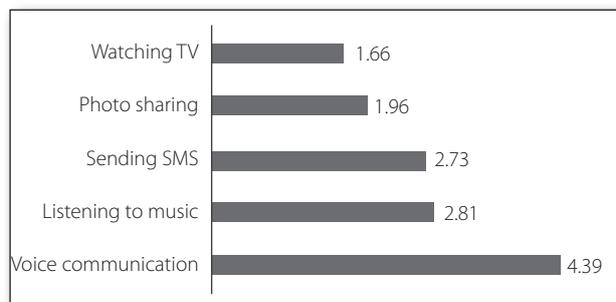


Note: Assign score of 0 to “never use” and 5 to “use as much as they want”.

MCM users use the Internet mobile phone for voice communication, listening to music, sending SMS, taking photos and uploading/downloading them, and searching for information.

FIGURE 7

Non-MCM users and their mobile use behaviour pattern



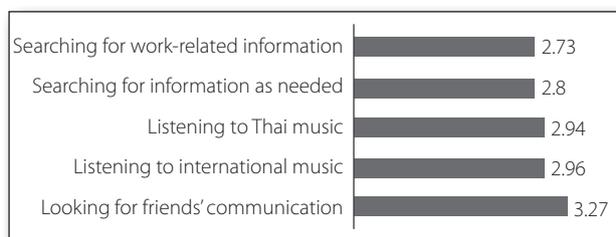
Note: Assign score of 0 to “never use” and 5 to “use as much as they want”.

As for non-MCM users: they use the mobile phone for voice communication, listening to the music, sending SMS, taking photos and watching free TVs.

Mobile content use behaviour patterns are as follows:

FIGURE 8

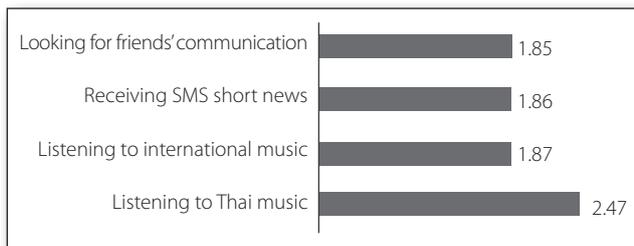
MCM users and their content use pattern



Note: Assign score of 0 to “never use” and 5 to “use as much as they want”.

Mobile content use behaviour of MCM users: they use the Internet mobile phone to look for their friends’ communication, listen to international music, listen to Thai music, search for information as needed, and search for work-related information.

FIGURE 9
Non-MCM users and their content use pattern



Note: Assign score of 0 to "never use" and 5 to "use as much as they want".

Mobile content use behaviour of non-MCM users: they use the mobile phone to listen to Thai music, listen to international music, receive SMS short news, and look for their friends' communication.

RQ4 What are the differences between MCM users' and non-MCM users' lifestyle profiles?

The differences between the MCM users' and non-MCM users' lifestyle profile are described by the components of the CAP Model: demographic variables, psychological (Lifestyles-AIOs) and emotional aspects of MCM users and non-MCM users based on the hypothesis test below:

Hypothesis Test

H1: There is significant difference in demographic factors such as age, gender, education, occupation, work position and income between MCM users and non-MCM users.

In terms of demographic characteristics of MCM users and non-MCM users, most are different:

- Age ($\chi^2 = 31.211$, $df = 5$, p -value < 0.01)
- Education ($\chi^2 = 21.532$, $df = 3$, p -value < 0.01)
- Occupation ($\chi^2 = 21.646$, $df = 3$, p -value < 0.01)
- Household income ($\chi^2 = 18.107$, $df = 5$, p -value < 0.01)

The result showed gender and work position of MCM users and non-MCM users are not different.

Most of MCM users are male, at working age, with education higher than Bachelor's degrees, most of them work for private enterprise or are entrepreneurs with higher incomes than the non-MCM group.

H2: There is a difference in psychological factors in terms of lifestyles patterns between MCM users and non-MCM users

Lifestyle (AIOs) of MCM users and non-MCM users are different. As analysed, the factors of MCM users were divided into four groups of lifestyles, as shown in Figure 10.

The factors of non-MCM users were divided into three groups of lifestyles, as shown in Figure 11.

H3: There is a significant difference in psychological factors in terms of emotion between MCM users and non-MCM users.

FIGURE 10
MCM users and their lifestyles pattern

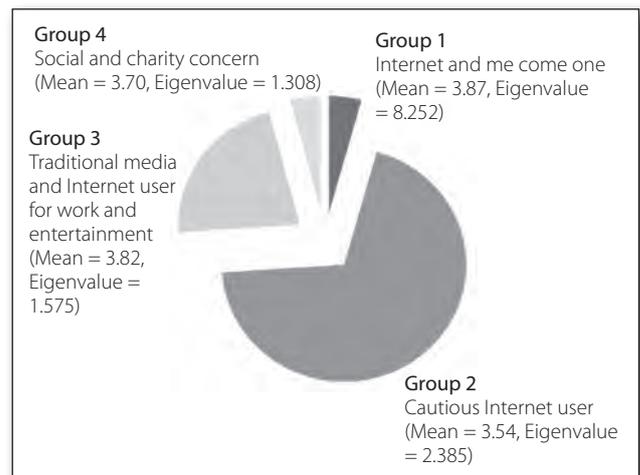
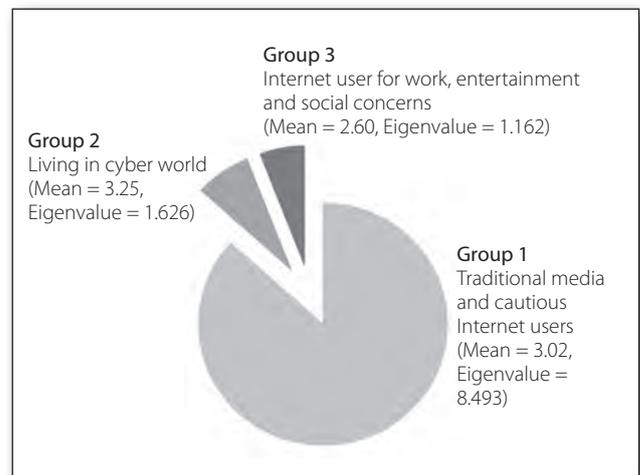


FIGURE 11
Non-MCM users and their lifestyles pattern



The emotional aspects of MCM users and non-MCM users are significantly different both positive and negative emotional aspects ($\chi^2 = 101.143$, $df = 1$, p -value < 0.01). Moreover, MCM users have proportion of positive emotion more than negative emotion (44.8 per cent and 27.8 per cent respectively).

The results show that the MCM users' and non-MCM users' lifestyle profile are different.

DISCUSSION

CAP Model makes us understand the next-generation consumer better

The CAP model can be used to explain the Thai MCM users or next-generation consumer lifestyle pattern. Moreover, the CAP model makes us understand and become aware of the differences between the lifestyle pattern of MCM users and non-MCM users (the conventional generation group). Also, this research employs a CAP Model to examine new technology, new media and content use between the new generation that utilises and consumes MCM, and the conventional generation that disregards

new media. The results show the difference in individual and socialisation characteristics in terms of thought patterns, communication patterns, attitudes, beliefs, family relationships and learning processes.

The mentioned outcome is empirically observed in the AIOs clustering as follows:

MCM users group (Group 1), “Internet and me come one”, consider taking their own naked photos and spreading them through websites as a common matter. Also, the respondents believe that the study of geographical map is unnecessary. The respondents feel that Internet can provide more knowledge than teachers can. Moreover, the MCM users think that online retail business provides more income and financial stability than jobs with salary. They also think that people from their social network know more about them than their own family members. They would rather be “texting” with friends than engaging in face-to-face communication. Moreover, they prefer to constantly use chat, MSN, BlackBerry Messenger. Finally, their parents frequently use forward e-mails than oral communication for didactic purposes.

On the other hand, non-MCM group (Group 1) “Traditional media and cautious Internet users”, considers that society is demoralised by the Internet. Also, they blame Internet as the cause for linguistic degradation. The respondents from this group often follow news from newspapers, radio and television (traditional media). They prefer face-to-face communication rather than “texting” messages. Moreover, family is their greatest priority. They consider their home as the best place and they choose to stay at home more than going out; they also go to department stores in order to make a purchase, etc.

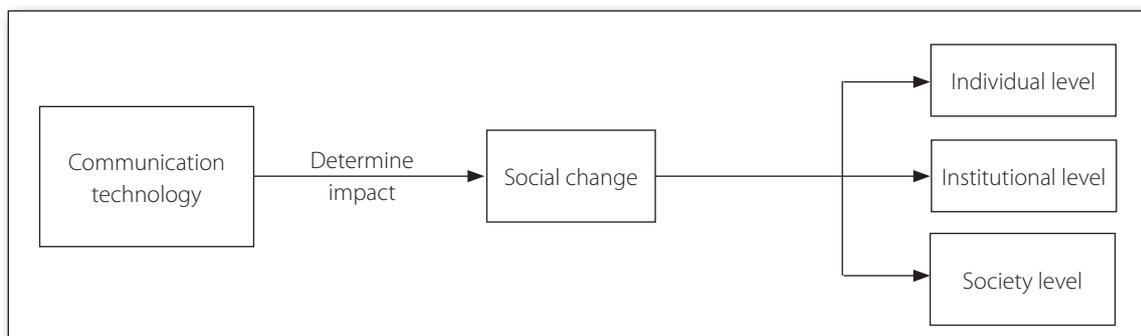
The result found that the next-generation lifestyle, thought patterns, communication patterns, attitudes, beliefs, family relationships and learning process have changed while the conventional generation is living in the real world and spending their time working, on outdoor activity, travel and leisure as normal lifestyle.

In the analysis of CAP Model, the phenomenon of perception discrepancy among respondents with different lifestyle profiles occurred, which can be explained by two communication theories—Communication Technology Determinism along with Uses and Gratification concept. The researcher found an interesting outcome as follows:

The lifestyles profile of MCM user Group 1, “Internet and me come one”, supports the Communication Technology Determinism of Toronto School, which believes that technology is the determinant human behaviour and impact to society and culture. McLuhan (1964) proposed that the communication technology will connect people around the world to aggregate as a “global village” and will later become a “virtual community”. Later, Derrick de Kerckhove (2008), the current director of Toronto School, explained the further research on this issue saying that communication technology would become an essential part of human organ and psyche such as hand, brain, cognition and decision making, etc. Communication technology will affect and influence the individual, society and culture as seen in Figure 12. This research found that the results regarding the lifestyles profile phenomenon from the MCM user Group 1, “Internet and me come one”, is consistent with the theory.

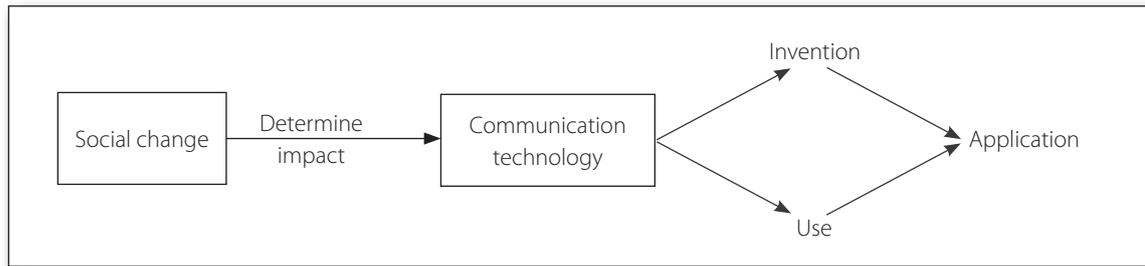
On the other hand, the lifestyles profile of non-MCM Group 1, “Traditional media and cautious Internet users”, supports the Uses and Gratification theory. Katz and others believe that the consumers are active receivers who can choose the media and content that match their intention (Benjarongkij, 1991). Furthermore, the social and psychological conditions influence the diversity in media usage and behaviour of each person, which lead to satisfaction from the media along with other unexpected outcomes. In this research, the phenomenon in lifestyles profile of the non-MCM user Group 1, “Traditional media and cautious Internet users”, who are prudent in using and weighing the pros and cons of next-generation technologies, and choose to consume the media according to their preference, can be explained by this theory.

FIGURE 12
Communication Technology Model (A)



Source: Kaewtep, K. (1998)

FIGURE 13
Communication Technology Model (B)



Source: Kaewtep, K. (1998)

Moreover, this study allows the researchers to approach and understand the next-generation consumers along with pros and cons of new media literacy. Also, the result presents trend of issues, which concerns not only individuals, but also entire social and cultural levels, e.g. family relationships, learning processes, workplace relationships, and social networks. Most of all, the study reveals ethical issues and socialisation change, which can be adapted to deal with upcoming issues for new audiences, new culture, and new technology innovations.

Implications and limitations

The guidelines for integrating CAP model into communication theory are as follows:

1. Create an individual and give the individual a name;
2. Examine demographic data: age, income, occupation etc.;
3. Examine psycho-graphical data: interests, attitudes, values, lifestyle etc.;
4. Determine the emotional response desired of the target market and incorporate these into the message that will be delivered to the target market or audience;
5. Tailor the message to meet the characteristics of the individual created;
6. Deliver the message as if talking to that one individual;
7. Develop a response mechanism to determine if the message was accurately received and the appeals or emotional characteristics were achieved;
8. Change the message if desired outcome was not achieved; and
9. Return to step one if needed (Scott and O’Hair, 1989).

From the application of CAP model in marketing communication and public relations above, the result shows that CAP Model possesses strong points in providing more details of the target’s individual lifestyles profile.

However, studying emotional response, which are ephemeral expressions of human (transitory states), may contain some limitations. The explanation of this research is applicable only for certain topics, media or subjects within the duration of the research. As new communication technology emerges, the result and some components of the model may be affected. Thus, the research should be continually conducted once there

are major changes in communications technology.

Mobile use behaviour of the MCM users and the non-MCM users are different. It was found that the samples used mobile phones for voice communication, but they will use them to listen to the music or take a photo. Moreover, the MCM users often upload and/or download photos and searches for information.

For mobile content use behaviour of MCM users, it was found that they use their Internet mobile phones to communicate with their friends, listen to music, search for information and search for the information for work, whereas non-MCM users use their mobile phones to listen to music, receive SMS, short news, and look for their friends’ communication.

The results found that there is also usage tendency of Internet mobile phone, or MCM, apart from voice communication. The augmented use of MCM in non-voice communication proves that the communication behaviour of the next-generation is gradually heading towards the change. This supports Steinbock’s (2005) research that voice communication will gradually decrease to 20–30 per cent and non-voice communication will increase to 70–80 per cent.

Media convergence network as the next-generation network allows the new generation mediated for consumer to communicate whatever they want. Not only Internet phone but also a lot of innovation mediated—the 4th Generation mobile phone, iPad, iBooks, net book, notebook etc., which can serve unlimited communication lifestyle. The further study to find the correlation and effects of new technology, new generation consumers and new media is still a challenging issue for future communication researchers. Furthermore, researchers may develop new methodology in order to efficiently approach the new technology, new mediated and the receivers, the senders, media and the effect of media usage in various dimensions.

The study had some limitations. There is no license available for fully operational 3G network for private telecommunication service providers in Thailand as yet. Therefore, 3G network in Thailand is still in its trial period. Moreover, the cost of a handset is very high. Once 3G network services are fully launched and operating, there should be another study next generation consumers using a Composite Audience Profile Model.

NOTE

1. 3G network in Thailand is in trial period, but users can use internet phone with WiFi spot technology for hi-speed internet.

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Mobile Communication, Political Participation and the Public Sphere

South Korea's Experiences

How does mobile communication change the way we engage in public debate and political action? This paper attempts to answer these questions by examining South Korea's experiences. Over the last decade, Korea was transformed into a mobile-rich society, and at the same time growing political participation and social movements energised the public sphere. The paper argues that the explosion of mobile use in Korea was deeply embedded in the country's political and economic structure. A "government-industry ICT complex" played a critical role in the diffusion of mobile communication. Yet the impact of mobile use on the public sphere mainly depended on the way the burgeoning civil society responded to the opportunities emerging from new technologies. Three examples of the political use of mobile communication—texting and political mobilisation, mobile phones and street political gathering, and mobile broadband and live-streaming of candlelight vigils—are illustrated to highlight the evolving relationship of the political process and mobile use.

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Technology and media affect how people express and exchange political ideas and engage in political action. For decades, information and communication technologies (ICTs) have significantly reshaped political participation and the public sphere. Some of the latest examples are voter mobilisation using social networking sites in the 2008 United States (US) presidential election and citizen online journalism in Iranian election protests in 2009. Now as mobile communication has become an indispensable part of our daily life, the question raised is how mobile communication affects our political life. How does it change the way people engage in public debate and political action and affect the structure of the public sphere?

This paper attempts to address these questions by examining the experience of South Korea ("Korea" hereafter). Korea provides a unique opportunity to investigate the interaction between mobile transition and political development. Over the last decade or so, it has undergone a dual transition of digitalisation and democratisation. On the one hand, it has been

transformed into one of the most mobile-rich societies in the world. Mobile phones are no longer a luxury but a must-have. High-speed mobile broadband services, in addition to the country's much-touted fixed broadband network, are available in major metropolitan areas. The socio-cultural impacts of this transition have drawn a good deal of scholarly attention (Haddon and Kim, 2007; Hjorth and Kim, 2005; Kim, 2002). Yet, political transition was no less dynamic. Following decades of military dictatorship and authoritarianism, the public sphere has been regained and energised by rising political participation, emerging civil and social movements, and growing awareness of individual freedom and free speech. And, as exemplified by the major political events of the last decade, mobile communication played no small role in this political development.

Building upon the recent studies that document and analyse those events in a great detail (e.g. Choi, 2008; Lee and Bae, 2008; Lee and Jung, 2009; Song, 2007), this paper emphasises that the explosion of mobile communication and its political use was deeply embedded in the political, economic, and social structure of the society. A "government-industry ICT complex" played a critical part in the diffusion of mobile communication. At the same time, its political use and impact on the public sphere largely depended on the way the burgeoning civil society responded to the technological opportunities that emerged from the new mode of communication. By contextualising the use of mobile communication at different political junctures within broader political and media changes, we argue that the trajectory of a national

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public sphere is uniquely shaped by the interaction of political and media development.

For the rest of the paper, we first discuss recent theoretical developments pertaining to the effect of the mobile phone and ICTs in general on political participation and the public sphere. Korea's mobile revolution is then examined with emphasis on its distinctiveness in order to provide a context for the country's experience in the political use of mobile communication. Three specific aspects of the use—texting and political mobilisation, mobile phone use in street protests, and the live streaming of candlelight vigils—are presented to illustrate the evolving relationship of political and media development. Finally, theoretical implications are discussed.

THEORETICAL BACKGROUND

Initial reactions to the effect of ICTs on political participation and the public sphere largely diverge into two contrasting views (Albrecht, 2006; Anduiza et al., 2009). The optimistic view, on the one hand, emphasised the potential of ICT-mediated communication in disseminating political information and ideas faster yet in a less costly manner, and a high hope for a participatory democracy rejuvenated by cyber-activism (Rheingold, 2003). Sceptics, on the other hand, argued that ICTs would bring forth the decline of civic engagement and the decay of the public sphere by detaching individuals from intimate interactions in their local communities (Putnam, 2000) and grounding political activism on a shallow coalition among the like-minded (Sunstein, 2007). Recent studies, however, try to move beyond the dichotomy of optimism and pessimism, shedding light on a more complicated picture of the way ICTs affect our political life (see Anduiza et al., 2009, for a review).

First, more attention is paid to the interaction of online and offline spaces in political participation and action (Wellman, 2010). It is suggested that online political activities are not separated from but closely related to real-world experience. For example, the Internet is likely to provide those who are already politically active offline with a greater opportunity to augment their offline participation than those who are not. Despite the possibility that the Internet would generate a new avenue of political participation for the disenfranchised in traditional media outlets (Anduiza et al., 2009), it is found that the Internet is more likely to enforce offline political action rather than replacing it. Online political activity is to a large degree “an extension of offline activity” (Wellman et al., 2001: 448).

Second, moving beyond a dichotomous portrayal of cyberspace between well-connected communities and atomised individuals, recent studies suggest the presence of “networked individualism” (Boase et al., 2006). While people are getting more individualised and able to free themselves from place-bound, in-person interactions with personal tools of telecommunication, it is suggested that they are not simply isolated but rather connected to a broader social network that otherwise would or could

not have been tapped. As a new type of “socialness” emerges with a reconfigured social network grounded on distant connectivity (Fortunati, 2002), the structure of the public sphere faces transformation. A place-bound public sphere would no longer be as stable and a single dominant place for public discourses as it used to be. It coexists with information- and network-based public spheres, increasingly organised through the globalised media system (Castells, 2008). This transformation invites the question of whether a greater use of ICTs makes the public sphere more fragmented and fluid, as new political spaces constantly emerge across different forms of media often only to quickly disappear or get abandoned at some point (Carty, 2010; Sunstein, 2007). While the decentralisation of the public sphere can increase the inclusion of peripheral voices and diversify the political process (Benson, 2009), the public sphere can also be “balkanised” into separate, like-minded, ideological enclaves (Chang, 2008).

While sharing many commonalities with other ICTs, the aspects specific to mobile communication are highlighted with regard to its impact on the political process. Its horizontal and personalised mode of communication is considered to contribute towards the democratic process (Fortunati, 2002; Gergen, 2008). It is also believed that its wider adoption and ability to directly and immediately contact citizens compared to the computer can facilitate a more socially inclusive public sphere (Fortunati, 2003). In contrast, the fact that the network of mobile contacts tends to consist of tightly-knitted family and friendship ties raises the concern that it might lead to a closed circulation of limited information within micro-segmented groups, often without assuring credibility (Gergen, 2003; Paragas, 2003). Despite its growing adoption, access gaps in mobiles among different social and age groups still matter (Kim, 2003).

In an effort to gauge the effects of mobile communication on the public sphere, one of the difficulties cited is its continuous transformation, from simple voice to data services based on Wireless Application Protocol (WAP) and now to the convergent environments brought about by broadband and smartphones. As technology changes, political usages shift (Gergen, 2008). Therefore, the question remains how such technological shifts would impact the way the mobile shape our political spaces; for example, would the convergence of the mobile and the Internet make the public sphere more democratic and inclusive (Fortunati, 2003)? Further, it is asked how technological development co-evolves with political changes. Finding the answer to these questions requires historical and comparative perspectives, which are found in short supply in mobile communication studies (Gergen, 2008; Hermans, 2008).

In moving into such a direction, a growing attention is paid to cross-national, cross-cultural differences in the way new media influences the political deliberative process (Bimber, 2003). The use of mobile phones is highly dependent on the specific social context they are brought into (Katz, 2008). How they are used and the specific purpose of the usage varies by society rather

than being determined by technology alone. The effect of mobile communication on political participation may depend on the existing structure of political participation. The use of new media could be greater in a society where the existing channels for participation are less open (Bimber, 2003), or political liberalisation may facilitate greater free communication among citizens, including using the mobile (Paragas, 2003). Likewise, whether the rise of online communities would lead to an inclusive or divisive public sphere may hinge on the existing social contexts that affect the structure of the public sphere in a given society.

This focus on specific social contexts of mobile use echoes an increased interest in the historical evolution of a national public sphere and its relations with media development. Criticising the normative embrace of Habermas's public sphere concept (1989) which, though, was grounded in the historical experience of modern Western Europe, many scholars recently pay attention to the historical singularity of the public sphere and its evolution in a national context (Benson, 2009; Rajagopal, 2006). Starr (2004), for example, finds that unlike in Western Europe, the public sphere in the US was created at the turn of the 20th century by the state as part of a nation-building project. This generated the specificity of American democracy, in which the public sphere relies on media institutions, not individual members as it did in Europe. A national public sphere evolves with changes in the media. In examining the emergence of "split public sphere", Rajagopal (2001) shows the role of a newly commercialised Indian television system in the rise of politicised Hindu religious nationalism. This co-evolving relationship of media and political changes found another example in the role of televisions in the ascendance of American civil rights movement (Gergen, 2008). In this way, the empirical approach of this kind brings our attention closer to the variance in the internal structure and boundary of the public sphere (Calhoun, 1997), questioning the normative acceptance of the concept.

In short, the literature surveyed above suggests that the use of mobile communication and its effect on the public sphere can be shaped by the historically specific context that it is brought into, not determined by its technological attributes alone. Thus, the political consequence of mobile use should be examined through analysing the historical confluence of political changes and media development in a given society. This literature informs the sections to follow where we place the Korean experiences within the context of co-evolving relationship between mobile transition and political development.

THE MAKING OF A MOBILE-RICH SOCIETY

Korea is one of the most mobile-rich countries in the world. As of 2008, the country had more than 46 million mobile cellular subscribers and 93.8 subscribers per 100 people. As third-generation (3G) mobile broadband subscribers reached a 20 million milestone on June 2009, high-speed data services became available to

approximately 44 per cent of mobile subscribers. Mobile hotspots are sprouting in major urban areas. A recent international comparison places Korea among the high performers in mobile broadband (Berkman Center of Internet and Society, 2010). All these mobile networks are linked to the country's much-touted fixed broadband network. Mobile subscribers are served by globally competitive local mobile phone manufacturers.

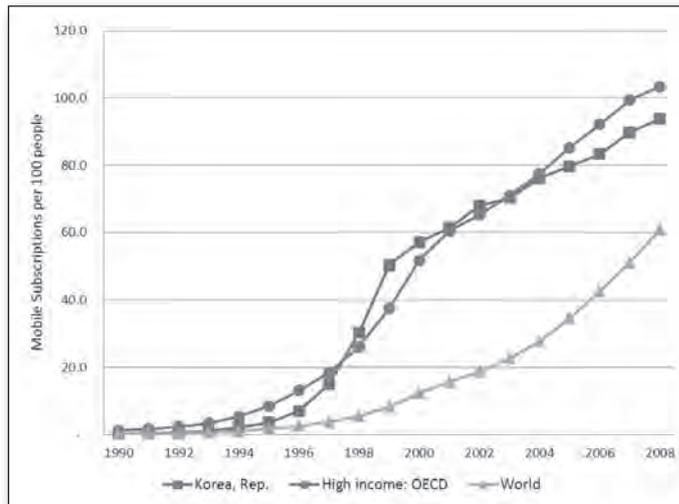
Korea's impressive transition to a mobile-rich society has several distinctive features. First, the highly compressed process took place in a very short period of time and concurrently on multiple technological fronts. Figure 1 compares Korea with the Organisation for Economic Co-operation and Development (OECD) countries and the world as a whole in terms of the diffusion of three major ICT services—mobile cellular, fixed broadband, and the Internet. It shows that for only five years from 1998 to 2002 Korea made a dramatic progress in making all the three services widespread across the population.¹ As of 2008, Korea was slightly behind the OECD average only in mobile cellular penetration although its rate was still very high. In the other two categories, it by far exceeded the average of OECD countries and of the world.

Korea has not only increased mobile accessible quickly but also climbed up the technological ladder in a fast manner. As in Figure 2, since it commercialised a digital cellular service based on Code Division Multiple Access (CDMA) technology first in the world, the country has continued to upgrade to high-end services, including Wideband-Code Division Multiple Access (2002) and High-Speed Downlink Packet Access (2007) services. In parallel, the first public Wi-Fi access service was launched in major cities in 2002, and Digital Multimedia Broadcasting (DMB), a locally promoted mobile broadcasting service, followed in 2005. WiBro, the Korean equivalent of WiMAX, was introduced in 2006 to offer high-speed Internet access (18.4 Mbps for downloading and 4 Mbps for uploading) to the device moving at a speed up to 120 km/h. As a result, the country's major metropolitan areas have turned into mobile "hotspots" where Internet access is near-ubiquitous, from a cafe, in the car, and on the streets.

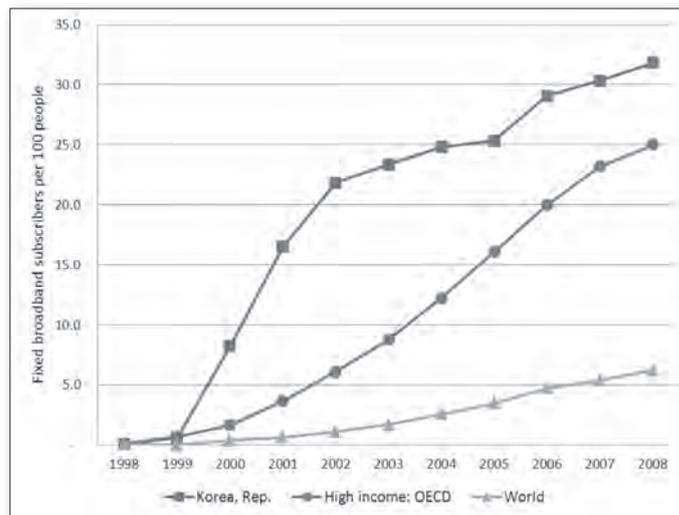
The second characteristic of the transition is the concurrent diffusion of fixed and mobile broadband services, which has enabled most Koreans to stay online around the clock regardless where they are. Korea's rapid deployment of fixed broadband is well known and frequently acclaimed as one of the success stories in the country's ICT policy. Since its first introduction in 1999, the broadband service quickly became popular (see Figure 1(b)), and as a result of aggressive and competitive network deployment by telecom companies, now many Korean homes are connected online via a 100 Mbps optical link. Over the fixed-mobile broadband infrastructure, various Internet services have mushroomed, from free public e-mails and online communities (locally dubbed "cafe") to pioneering social networking sites, as presented in Figure 2. Many, if not all, Koreans can access both fixed and mobile services quite seamlessly and use

FIGURE 1
Diffusion of telecommunication services: Korea in comparison

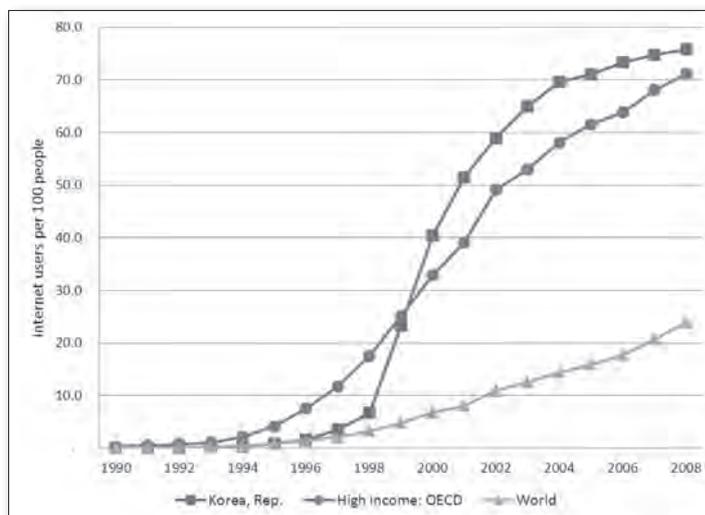
(a) Mobile cellular subscribers, 1990–2008



(b) Fixed broadband subscribers, 1998–2008

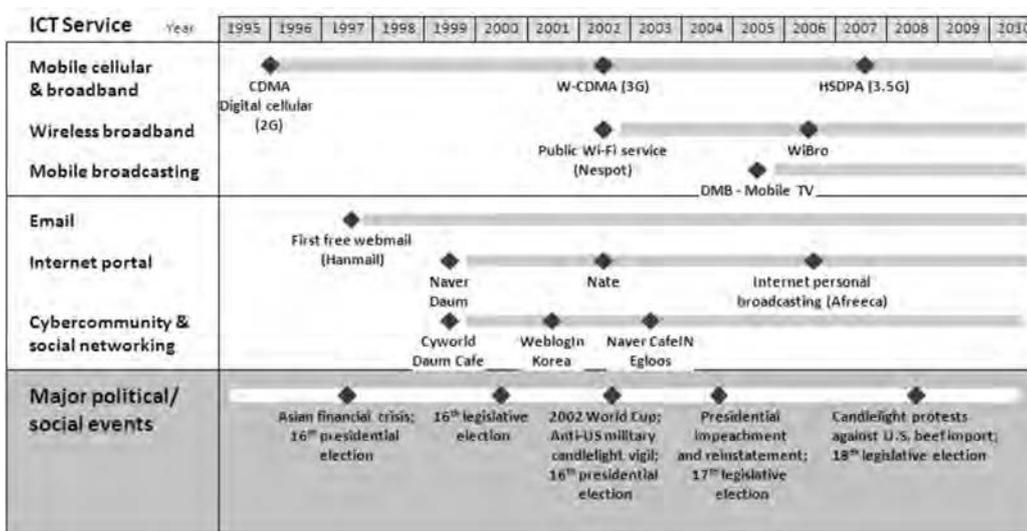


(c) Internet users, 1990–2008



Source: Compiled from the World Development Indicators (WDI), World Bank

FIGURE 2
The timeline of ICT services and major political/social events in Korea, 1995–2010



Source: Compiled from various sources

them in a complementary fashion, as exemplified by the interconnected use of camera phones and web-based social networking sites, notably Cyworld (Haddon and Kim, 2007; Hjorth and Kim, 2005). Cyworld’s unlimited photo-uploading service facilitated the extensive use of camera phones among the young, but it would have not been fully utilised without the country’s high-speed broadband network.² This, in fact, distinguishes Korea from others where the mobile fills the gap unfulfilled by underdeveloped wired services.

As a result, from 2001 to 2007 mobile phone use increased from 107 minutes to 143 minutes per month, although it is not particularly inexpensive in Korea compared to its peers.³ The average Korean used the Internet daily for nearly seven hours in 2005, double that of 2002, consuming 30 per cent of their daily active time (Hwang and Yoo, 2007). This growing use of ICTs has expanded the telecommunication market. Telecommunication revenue reached five per cent of the country’s gross domestic production (GDP) in 2007, the highest among OECD countries, with the mobile service accounting for 45 per cent of the total, up by 50 per cent in a decade (OECD, 2009).

Finally, this compressed and convergent transition was largely driven by the “government-industry complex”, which for decades led Korean economic development based on the export dynamism of the high-tech ICT industry. While the critical role of the developmental state in Korea’s recent ICT expansion is well documented (e.g. Lee, 2009), the close alliance of the government and the industry in promoting ICTs as the driver of its export growth has been nothing new since the 1970s when Korea began to move up the value chain from low-tech sectors like apparel to television and white goods, and later semiconductors and mobile phones. A similar developmental motivation was behind the government’s move to commercialise then largely

untested CDMA in the early 1990s (Lee, 2003) as well as the country’s latest pursuit for indigenous standards, including DMB and WiBro.

This close relation of the state and the industry in ICT development has clearly proven to be successful in boosting exports. High-tech exports accounted for a third of manufactured exports in 2007, up from 16 per cent in 1988 (World Bank Group, 2010). In 2009, the world’s second and third largest mobile phone manufacturers from Korea—Samsung and LG—represented three out of 10 mobile phones sold in the world (Gartner, 2010). And in this development strategy, the domestic market provided local firms with a protected consumer market and technological test-bed for new products. At home, the two global phone makers enjoyed comfortable market positions, combined representing about 78 per cent of total domestic sales in 2009. Market concentration looks barely different in telecom services. Two leading conglomerates (“chaebol”)—SK Group and LG Group—and a privatised incumbent—KT Group—dominate both fixed and mobile service (see Table 1).

These distinctive characteristics of Korea’s mobile transition have set, in several directions, the conditions for the political use of mobile communication. First, its supply-driven nature saturated the domestic market with advanced service and gadgets. Given the emphasis on success in the world market, any technology introduced should be competitive at that level. The government made no delay in issuing new service licenses even when the commercial viability of the service was questionable. Competition between cash-abundant conglomerates to pre-empt the market made new ICT services quickly available while keeping smaller players at bay. Local ICT firms, in turn, took advantage of the presence of advanced network infrastructure and tech-savvy consumers in the domestic market, utilising them as a launch pad for innovation and export. As suggested

TABLE 1
Major Korean telecom companies and market share as of May 2010

	KT Group	SK Group	LG Group	Total share
Fixed telephone*	KT (88.3%)	SK Broadband (9.9%)	LG Telecom (1.8%)	100.0%
Fixed broadband access	KT (42.9%)	SK Broadband SK Telecom (resale) (23.3%)	LG Telecom (15.6%)	81.8%
Mobile telephone**	KT (31.4%)	SK Telecom (50.7%)	LG Telecom (17.9%)	100.0%
Wireless broadband (WiBro)***	KT (90.0%)	SK Broadband (10.0%)	—	100.0%

* Local, long-distance, international subscribers.

** Including 3G subscribers (W-CDMA, cdma2000 1x).

*** As of the end of 2009.

Source: Korea Communications Commission (June 2010)

by socio-cultural perspectives, some of the country's distinctive cultural traits might induce the quick embrace of the new medium (e.g. Kim, 2002). But, such accounts fail to fully explain the abundance of advanced mobile services at the outset despite the fact that some of them have proven commercially little viable. In a similar vein, while peer pressure at the micro-social level clearly played out in the quick adoption of new services, much of that pressure, in fact, originated in the society-wide pressure and catching-up mentality left by decades of ICT-driven economic development, which was epitomised by a popular campaign slogan in the 1990s, saying "Late in Industrialisation, but Let's Go Ahead in Informatisation."

Second, the mobile transition entangled with the major structural changes in Korea. The mobile sector provided the country with a much-needed growth engine when it struggled to ride out the worst economic crisis it ever had. More important, along with ICTs, it has generated a young, educated, and highly ICT-literate workforce across different technological fronts. On the consumption side, mobile communication has critically assisted new generations of socially and culturally liberal and individualistic people and their mobile lifestyles, which led one to declare the "birth of neo-nomadism" in Korea (Yun, 2007). Along with the affluent middle class grown out from decades of startling economic growth, these new social forces have become the key players in the mobile transition not only as producers and consumers, but also as new political actors (Han, 2007).⁴

Finally, it was amid all these social changes that Korean online civil society suddenly blossomed. It had been suppressed for decades of military dictatorship through a combination of political oppression, export mobilisation, and, critically, media control. Following democratisation and the retreat of the state from media censorship in the 1990s, the increased media window enabled by the Internet and broadband network has led to the rise of alternative, grassroots online journalism (Chang, 2005; Hauben, 2008; Song, 2007). The first web-based news media of this kind, *OhMyNews*, was established in 2000

and attracted a great deal of attention at home and abroad for its pioneering experiment of "citizen reporters" [*simin kija*], whereby the majority of its news articles were voluntarily contributed by ordinary citizens (Kang and Dyson, 2007; Kim and Hamilton, 2006). Its unexpected success soon drew similar attempts—initially by the progress-minded and soon followed by the conservative (Chang, 2008). The ensuing rapid growth of independent online news media has challenged the longstanding dominance of mainstream news media, which was also hit by the surge of Internet portals as the major channel for news consumption (Lee and Lee, 2009), thus reshaping the structure of producing and exchanging public discourses.

In short, Korea's mobile transition stands out in terms of its compressed pace and convergent direction as well as its close link to the ICT-based economic development strategy driven by the state-industry alliance. This distinctiveness set the conditions for how mobile communication affects the political process—the saturation of advanced mobile services, the society-wide pressure to adopt them, and the rise of tech-savvy young generations equipped with the mobile. Finally, democratisation and social and cultural liberalisation led to the revitalisation of civil society and the public sphere, yet these changes significantly depended on the country's burgeoning ICT infrastructure, as illustrated below.

MOBILE COMMUNICATION, POLITICAL PARTICIPATION AND THE PUBLIC SPHERE: KOREA'S EXPERIENCES

This section introduces three recent examples of mobile use in Korea, whose unfolding critically influenced political participation and the public sphere. First is the use of short text messages in political mobilisation, which appeared in the 2002 presidential election as well as subsequently in mobilisation for many political gathering. The second example shows how the availability of mobile phones changes the dynamic of massive street protests

in comparison with pre-mobile urban demonstrations. The last example is the live streaming of street actions using wireless broadband in candlelight vigils against importing US beef in 2008.

The examination of the cases in different junctures in both politics and technology allows us to trace the evolution of mobile use and its impact on the political process over time, as technology changes and people accumulate experiences. The cases presented are not independent but interconnected across time. One event inspired the next, and the latest is the outcome of collective learning through the experience of the media as well as politics. The political events surrounding these cases: the election of Mr Roh Moo-Hyun as President in 2002; his impeachment and reinstatement in 2004; and the political crisis of a newly elected government in 2008 ignited by the public discontent to its policy choices, were the key milestones in the Korean politics of the last decade. Therefore, many of the events have been researched in great detail; as noted above, our study relies upon those studies in describing the unfolding of each event. Similar examples for each case can be found in other societies, like the use of texting in the Philippines' 2001 People Power movement (Paragas, 2003). Yet, our focus in this paper is to examine the *evolution* of mobile use through the events and the *direction* each has accumulatively brought, and thus, to distil the distinctive nature of the way mobile communication interacts with politics in Korea.

Short text messages and political mobilisation

On the eve of Korea's 16th presidential Election Day in 2002, a coalition partner of Mr Roh Moo-Hyun, the candidate of the ruling party coalition, announced the withdrawal of his support to him. When this unexpected last-minute move put his election chances on the brink, his devoted supporters (a.k.a. "*Nosamo*"), who had been known for their effective use of the Internet in political actions (Kang and Dyson, 2007; Lim et al., 2004), deployed a massive final-hour overnight campaign. They sent out e-mails and short messages to his sympathetic supporters, as many as 800,000, mostly young, white-collar professionals in their 20s and 30s (Lim et al., 2004: 63), urging them to go to the polling stations to cast a vote and more importantly to pass the word along to their friends and family (Hong, 2005).

Throughout the final hours of the election, mobile phone calls and texting reached an above-the-average level, according to data from the country's largest mobile operator (Han, 2007: 67–68). Roh's supporters activated their personal contacts and used personal trust to mobilise support, as indicated in the following:

"I heard stories where Koreans would interrupt their ski trips and come into the city to vote because of panicked text messages from friends," says Jean Min, OhMyNews international director. "You might not trust what is coming out of the TV, but you take it seriously when the message comes from a friend." (excerpt from Hong, 2005)

The hour-by-hour progress of the campaign was closely monitored by those supporters at the *OhMyNews* website, which recorded a staggering 6.23 million visitors and 19.1 million page views for eight hours leading to the opening of voting stations next morning. Eventually, Roh won the election, yet only by a two per cent margin. It is believed that his election win would not have been possible without the Internet and SMS and, most of all, his supporters' shrewd use of the latest mobile technologies (Hong, 2005), opening "a new phase of participatory democracy in Korean society" (Kim, 2003: 318).

In fact, this ICT-oriented campaign strategy was indebted to the experience of online mobilisation that Korean civil society had accumulated through a series of events. It started from a sports event. Earlier in 2002, voluntarily organised young football fans proposed street cheering events to support the national soccer team in the FIFA World Cup Korea co-hosted with Japan. The events were so popular that according to an estimate, a total of 22 million people came out on to the streets of Seoul and other major cities for the country's seven football matches (Lowe-Lee, 2010). Then, the experience of street cheering was soon revived for a political purpose. In November 2002, a netizen proposed a candlelight vigil for two Korean schoolgirls hit and killed by a US military armoured vehicle earlier in June. His words spread quickly via an Internet instant messenger. On the proposed date, November 30, approximately 10,000 citizens gathered at downtown Seoul to pray for the victims (Han, 2007). A series of candlelight vigils lasted for a month to come, drawing more than 30,000 demonstrators at one point. People not only came out for street protests but many also placed a white or black ribbon (▷ ◁, ► ◄) on their instant messenger profiles to express their mourning, a practice now popular among Korean netizens. Candlelight vigils [*ch'otpul chiphoe*] have since become the most visible part of Korean civil society.

While building upon the non-mobile experience, mobile texting showed its particular strength in quick mobilising personal networks. Since the presidential election, it has been widely used in nationwide protests, during political crisis like the 2004 presidential impeachment, but frequently as small as the one described in the following news report:

Early in May 16-year-old South Korean Lee Chun-Kil slyly text-messaged his friend during class. ... "Gwanghwamun station. 6:00." ... The next day in downtown Seoul, 400 students gathered to protest the severe pressures they must endure for the nation's highly competitive college-entrance exam ... "I don't think the rally would have been big if we didn't have cell phones ... We would not have been able to spread the information about this as quickly." (excerpt from Hong, 2005)

Mobilisation experience using mobile phones was quickly spread and emulated even by teens, the avid users of mobile texting, who were not considered politically active in public.⁵ Now they are easily spotted at candlelight vigils.

Mobile phone use in street protests

The FIFA World Cup street cheering offered Korean people hints of how to use the latest technologies to spread the word and make people gather at short notice, functioning as “an intermediate phase of collective actions” (Han, 2007: 61). Korean civil society, particularly ICT-savvy younger generations, translated these hints into political purposes. Accumulated experience and confidence led to a series of candlelight street protests over the last decade. Mobile phones not only proved effective in massive mobilisation but also changed the dynamics of massive gatherings.⁶

First of all, people could stay connected while at a gathering. Even when thousands of people crowded the streets in downtown Seoul, they could easily be joined by their friends who came late to the rally. Furthermore, they could constantly communicate with and relay what was happening on the streets to the friends who were not in the rally. Mobile service got more sophisticated from SMS to multimedia messages and mobile blogs, so did the protesters' use on the scene. As handy digital cameras, or *dika*, and camera-phones became popular in the early 2000s, protesters took pictures of their own and their friend's presence at the rally as well as what was happening on the street and easily posted them on their blogs from where they were, just as would any other everyday experiences.

In fact, this is a stark contrast to massive street demonstrations throughout the 1980s up until the early 1990s. During this period, the street protest, or *kadu siwi*, was the political mainstay of the country's student activism against military dictatorship. Although it was illegal in most cases and thus participants had to run the risk of getting arrested, it was one of the few ways that protesters as a group could deliver their messages in public directly to citizens on the street in the period when anti-government messages were tightly censored under the state's media control. To avoid disruption by the police, the protest was secretly planned and tightly orchestrated. Protesters, mostly college students, were usually organised as a group in advance. They tried to maintain their line against the police that were attempting to isolate them from the rest of the public on the scene and scatter them out as soon as possible (Park, 2005). To do so, protesters, as well as the police, often resorted to physical confrontation and the use of weapons which on several occasions turned out to be lethal. Forced to constantly move, hide and regroup, protesters had virtually no tools and rooms to communicate with those who were not present on the rally, let alone little chance to immediately share their experience with others.

Mobile broadband and the live-streaming of candlelight vigils

In April 2008, a Korean TV network reported about concerns over the safety of US beef and questioned the government's trade negotiation about resuming imports, previously banned intermittently for years since the outbreak of the mad cow disease. This media

report drew a good deal of public attention, particularly among school-going teenagers and their parents, concerned that tainted beef might be used for school lunches. Active discussion followed amongst online communities, particularly on *Daum Agora*, one of the country's largest Internet discussion boards. Suddenly, what had appeared to be an agricultural trade issue rose to the centre of school teenagers' discontent about the government, simultaneously boiling up against the new education policy.

On May 2, around 10,000 people, mostly teenagers, showed up in the first candlelight vigil against the import of US beef in downtown Seoul. This initial action soon snowballed as more protesters came out every week, as social activist groups joined in, and the public's disappointment in a newly elected government grew. By May 24, 16 new protest gatherings had been held. On June 10, a historic day of the country's democratisation movement, massive political actions culminated with nationwide candlelight rallies. The organisers estimated that approximately 500,000 people took part solely in Seoul. While the mobilisation slowed down after the government's pledge for a revised trade deal, smaller protests continued until mid-August (Choi, 2008; Song, 2009).

To a large extent, the 2008 protest rallies were similar to the previous large-scale candlelight vigils that have become a cultural, as much as a political, phenomenon in Korean civil society. Cyberspace played a crucial role in drawing the public's attention to various social issues. In all these events, mobile phones and the Internet facilitated people to exchange information, debate ideas, organise protests, and mobilise on- and off-line.

At the same time, the latest incident demonstrated that the new level of sophistication the use of mobile communication has reached, further changing the dynamics of political participation in Korea. The most notable difference in terms of mobile use is that the 2008 candlelight vigils showed how mobile-fixed convergence could change the way people experience political participation. For months, many of the protest events were streamed live via the Internet. According to *Afreeca*, a user-generated video streaming service provider, a total of 17,222 live streams were posted on its website and watched by 7.8 million viewers during the period from May 25 to June 10 (Kim, 2008). Those who could not attend was able to follow the development of the rally in real-time on the screen.

This type of online live streaming of political events was first introduced in the 2007 presidential election by *OhMyNews*, and other online news media, political groups and individual video journalists soon followed suit. Two new media technologies played a crucial role: WiBro and Internet live video streaming. Generally, live actions are captured by video journalists on the rally scene and instantly transmitted via wireless broadband to the central server of a video streaming service. Then, the computer user can access the streaming service and watch the live scene of the protest over broadband at any place. WiBro significantly improved the speed and

reliability of the transmission from the scene compared to Wi-Fi, used earlier; getting rid of a key bottleneck in Internet live streaming. And the streaming service of user-generated content (UGC), like *Afreeca*, has enabled many small online news media and activist groups to distribute their own live video feeds without having their own media server, rarely affordable (Lee and Bae, 2008).⁷ This new technology and service, combined with the country's well-established fixed broadband network, provided a powerful tool for alternative visual media to reach people sitting in front of the desk at work, at home and abroad with live-feeds of street protest rallies, which would never have been in the protest organisers' minds of the 1980s. This was made possible by the combination of the latest ICT services brought to the Korean society, both fixed and mobile.

DISCUSSION

This paper examined how mobile communication has affected the dynamics of political participation and the public sphere in Korea over the last decade. It has identified the distinctive characteristics of Korea's mobile transition and how these interacted with political development in the major political events of the last decade.

First, our finding suggests that the political consequence of mobile communication is more likely to depend upon the capability of civil society to accommodate it in a way that promotes a democratic public sphere. The mobile transition in Korea was largely shaped by the supply-driven, export-oriented approach taken by the state and the ICT industry. It drove a fast transition to a mobile-rich society and saturated the market with advanced services even when domestic demand was uncertain. However, building a vibrant civil society and public sphere has never been an agenda of the ICT development project, particularly for authoritarian regimes. The aggressive pursuit of ICT-based development by the Korean government and business solely focused on reaping economic benefit with little interest in the political consequences, as found in other market-oriented authoritarian regimes (Corrales and Westhoff, 2006).⁸

However, as one of the economic consequences of a mobile-rich, ICT-intensive society, critical voices within Korean civil society found and created a space to express opinions, criticise government policies, and advance their political agenda. Korean civil society actively utilised the technological opportunities emergent from the ICT-driven development. Appropriating new technologies and services, civic groups and alternative news media were able to deliver messages directly to the public, bypassing the mainstream media. This generated political participation both online and offline, restructuring political activism and the public sphere. Through the process, the revitalisation of the public sphere was linked to the country's ICT infrastructure, driven by the state and business concerns. To some extent, Korean civil society may yet not be totally free from the society-wide pressure of not falling behind in adopting new technologies. The organisation and style

of social movement distinctive in Korea may facilitate the greater use and quicker embrace of ICTs, which begs a comparative research question with other societies.

Second, the political use of mobile communication in Korea has gradually been encompassed as one of the key components of alternative online media. Initially, it was mainly effective in mobilising political action at short notice, while the constrained user interface of mobile devices limited its ability to facilitate a discursive participation. However, this constraint has gradually diminished as mobile phones add new functions, such as the introduction of camera phones, mobile blogging, and recently smart features. As in the 2008 candlelight vigils, the constant interaction between online and offline spaces enabled by high-speed mobile networks has further facilitated a new type of online video journalism. It allows citizen journalists and activists to bypass mainstream mass media in displaying their actions and delivering messages. This is in stark contrast to the street protests of two decades ago, where such efforts were blocked by the police on the streets and by the state in the mass media. Now they can provide a live broadcast of entire street actions directly to millions of viewers as well as their own commentaries in between the live scenes. In this sense, the UGC infrastructure and mobile broadband network has opened a new space for alternative visual media, expanding the applicability of mobile communication in politics.

Much of the difference, of course, is attributed to democratisation that interspersed the two periods. However, mobile phones and connectedness enabled by them certainly played a role. Lacking physical confrontation and street chasing, candlelight protesters now have a free space on the streets where they can share their stories with their friends who are not present over the phone and via the Internet. They do not need to worry about getting separated from their group not only because the police no longer physically crack down as much as it did decades ago, but, more importantly, because even if they do, protesters can find a way to reassemble as long as they stay connected via cellphone.⁹ When and where to gather is not necessarily secret any longer as it used to be; people can join the protest as a group but also individually if they want.

In the evolution of mobile use, one distinctive characteristic is that in most occasions, mobile communication was used with the Internet in a complementary manner. It was largely due to the concurrent diffusion of advanced fixed and mobile infrastructure and services in Korea. From early on, *Nosamo* did not solely rely on either medium but used both to complement each other, just as *Cyworld* users do.¹⁰ As stated, mobile communication has its own advantages and disadvantages in relation to the democratic political process. However, the availability of both advanced fixed and mobile services blurs a strict distinction. President Roh's supporters activated their personal networks using texting, but also used e-mails and websites to spread the word, just as video journalists combined WiBro networks and UGC streaming services. This leads to the question of whether different types of media use might affect political participation and the public sphere differently.

Finally, in terms of the mode of political participation, the increased use of mobile communication generally helped promote political participation and the plurality of the public sphere. Teens and women (particularly those young and married), traditionally less engaged in politics, became connected and took part in public discussion through mobile phones and online communities. In fact, one noticeable aspect of the 2008 candlelight vigils was the active participation of non-political online communities in debating and mobilising actions. These are mostly online groups whose activities are built around exchanging information about specific interests, such as fashion, sports, celebrity gossip, etc. (Lee and Jung, 2009). Despite their non-political orientation, it is found that they tend not to be completely exclusive about specific topics. When a major social issue arises, political discussion piggybacks on the non-political exchange of information.

Another interesting aspect is that the seamless linkage of mobile and fixed networks has blurred the boundary of participation and non-participation, challenging conventional notions of political participation. In the live streaming of candlelight vigils, those who are in front of their computer are not protest participants in the conventional sense. They become "virtual" participants by instantly posting comments on discussion boards about the scene they just watched, or by responding to phone calls from their friends at the scene and the blog posts written by rally participants. They also relay them information not available at the scene, such as the overall situation of the rally (Lee and Bae, 2008: 69). Information and experience flow in both ways between "mobile" participants physically present at the rally and "fixed" participants virtually present online.

Despite the positive developments made in the use of mobile communication for the political process, they do not warrant unreserved optimism. While the mobile is quite accessible, inequality in participation should not be underestimated. Not only evident socio-economic inequalities in Internet use,¹¹ but also participatory gaps among those with Internet access (Schlozman et al., 2010) may be more critical in an ICT-intensive society like Korea than any other. Further, it should be noted that many advanced mobile network services like WiBro remains available only in major metropolitan areas. The credibility problem of the information circulated within a closed, fragmented mobile network, as noted in other cases (Paragas, 2003), is definitely an issue, although it may lessen if the recipient is willing to verify it through multiple online sources. Last but not least, as the mobile converges with the Internet and private talks mingle with public discussion, the issue of censorship and monitoring has become more critical. In fact, some online services that were widely used by the 2008 protesters were subject to government probes after the event, although it is unclear how much was politically motivated (Jung and Lee, 2008). In a society that suffered at length from severe media censorship, the media control issue is no less significant these days.

CONCLUSION

Overall, mobile communication has significantly changed the dynamics of political participation and the public sphere in Korea. The dramatic nature of the changes invites more investigations and promising future research. First, while we introduce the concept of the development of a national public sphere through the coevolution of politics and media, the idea should be elaborated not only conceptually but also empirically with primary data collection. For example, research on similarities and differences among Asian countries in terms of political regime and democratic transition as well as the diffusion of mobile communication can help understand the interconnected dynamics of the mobile transition and public sphere development at both national and regional level. Second, the concurrent development and complementary use of fixed and mobile services as found in this paper suggests a need to understand the entire ecology of media space: online and offline, mobile and fixed. People are versatile in mixing and matching different technologies and moving from one online cafe to another to get and share information. Placing mobile communication within the broader media ecology and comparing mobile-driven political action with that based on other forms of media would help obtain a fuller picture of the effect of the mobile on the public sphere in an era of convergence.¹² Finally, the qualitative aspect of online political participation should be further explored. How much actual change in policy and politics has been made by discussions in cyberspace and by actions on the streets? Does this development change the public sphere in a more democratic way, or is this just "fast activism" (Wellman, 2010), with little real consequence? We also need to be careful about the potential trade-off that the growing reliance of civil society on ICTs might have in terms of the quality of political action and discourse. These are the important questions to be addressed by future research.

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NOTES

1. This compressed ICT deployment is more striking because it occurred in the wake of the worst economic crisis ever experienced by the country in its post-war history.
2. According to a recent Nielson report, Koreans spend the fifth most time in the world on social networking sites, over five hours a day in 2009 (“Special report on social networking: A world of connections”, 2010, January 28).
3. Korea is above the average in both OECD’s low-use and medium-use price baskets for mobile service, while in residential fixed-line the country’s average price is below the average in all three — low-use, medium-use and high-use — baskets (OECD, 2009: 270–277). For very high-speed fixed Internet access, Korea is ranked to the third lowest country among 30 OECD countries in prices (Berkman Center of Internet and Society, 2010).
4. The picture has changed in the recent years, of course. The middle class was hit hard by the neo-liberal economic reforms of the last decade, and inequality between the wealthy and the poor has deepened. More and more young generations find it hard to get a stable job even after years of education.
5. A study finds that 90 per cent of Korean children aged 8–18 own mobile phones and 99 per cent use mobile messaging services, the highest among the six countries studied, including Japan, China, India, Mexico and Cyprus (GSM Association and NTT DoCoMo, 2010).
6. This is partly based on one of the authors’ personal observation of the 2004 Presidential impeachment protests and anti-US beef import candlelight vigils in 2008.
7. *Afreeca* was established in 2006, the same year when WiBro was launched and *Time* magazine chose “You” as the Person of the Year, referring to individual content creators on the Internet (Grossman, 2006). Piggybacking on the popularity of UGC in Korea and a “YouTube” phenomenon worldwide around that time, it started as a video streaming service in which individual users can upload their own videos and shows that others can watch in real-time. Yet the most of the content shared in the website is usually re-transmitted TV shows.
8. In recent years, the tight alliances appear to have gotten loose, as leading local producers rely more on the global market and the government no longer pushes massive ICT projects, feeling comfortable in a regulatory role. The rising popularity among Koreans of mobile gadgets and services from outside, such as iPhones, Facebook, and Twitter, adds complexity to the landscape of the Korean mobile market. It remains uncertain how these changes will affect the country’s mobile environment and the civil society’s use in the future.
9. Gergen (2008: 301) introduces a similar example of the new dynamism of urban demonstrations made possible by the use of mobile phones by the protestors.
10. Cyworld users may post several photos using the mobile but when editing, stylising, and uploading a large volume of photos, they tend to wait until the computer is available with broadband connection (Haddon and Kim, 2007)
11. According to the National Internet Development Agency of Korea, 90 per cent of the top income group (monthly income > 4 million Korean won) used the Internet, while only 26 per cent of the bottom group (< 1 million Korean won) did in 2007.
12. For this point, the authors are indebted to vibrant discussions in the “Innovations in Mobile use” workshop.

General

1. Media Asia publishes articles that deal with any aspect of media and communication in Asia. Contributions are accepted from the perspectives of both academics and media practitioners. An academic treatment should be around 6,000 words in length while a perspective piece may be shorter. The minimum length is about 3,000 words while the maximum is 8,000.
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9. Spell out acronyms the first time they appear in the text followed by their abbreviated form in parentheses.
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• **Articles in daily newspapers; no author**

A day of devotional frenzy (22 September 1995). *Hindustan Times*, p. 1.

• **Articles in daily newspapers; named author**

Yeo, G. (10 May 1999). Rail network to cover all of S'pore. *The Straits Times*, p. 1.

• **Books**

Ratnam, J. P., & Richard, T. F. (1985). *A sociology of violence*. New York: John Wiley.

• **Contributions to books**

Lozare, J. B. (1989). The concept and values of Socioplay. In A. B. Cheong & I. W. Allen (Eds.), *Social values in development* (pp. 1–150). Chicago: Chicago University Press.

• **Unpublished works**

Anwar, S. E. (1968). Modernization and youth. PhD dissertation. Bangladesh: University of Dhaka.

• **Internet resources**

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