Media, Culture & Society
http://mcs.sagepub.com/

Gendered media, changing intimacy: internet-mediated transnational communication in the family sphere

Tingyu Kang

Media Culture Society 2012 34: 146
DOI: 10.1177/0163443711430755

The online version of this article can be found at:
http://mcs.sagepub.com/content/34/2/146

Published by:
SAGE
http://www.sagepublications.com

Article

MEDIA CULTURE & SOCIETY

Media, Culture & Society
34(2) 146–161

DOI: 10.1177/0163443711430755
mcs.sagepub.com
SAGE

Gendered media, changing intimacy: internet-mediated transnational communication in the family sphere

Tingyu Kang
University of Oxford, UK

Abstract

This article explores the ways in which migrants use the internet to maintain family relationships and how the difference in digital knowledge and skills between men and women serves to transform the power dynamics in the family sphere transnationally. It examines the intersection of the research areas of transnationalism, digital inequality and family. While the discussion of digital inequalities is seldom embedded in the context of transnational families, research on migrants and their families rarely investigates the impacts of digital inequality on gendered power dynamics. Focusing on the context of Chinese migrants in London and their ageing parents in China, this study identifies how the supposedly feminine role of care and intimacy is now increasingly reassigned to male family members in a transnational process as the internet has largely replaced other media to become the most significant tool in transborder family communication. Women in transnational families are thus silenced. Three modes of coping skills have been adopted by these women; that is, absence, assistance and empowerment. By identifying modes of resistance, this article highlights spaces of agency under the gendered structure of family communication and their potential limits.

Keywords

family, gender, ICT, internet, migration, transnationalism

Communication in transnational families

This article explores the ways in which migrants use the internet to maintain family relationships transnationally and how the differentiated skills of internet use between men and women serve to transform the power dynamics in the family sphere. I examine the

Corresponding author:
Tingyu Kang, University of Oxford, School of Geography, OUCE South Parks Road Oxford OX1 3QY, UK.
Email: tingyu.kang@gmail.com

intersection of the research areas of transnationalism, digital inequality and family. While the discussion of digital inequalities is seldom embedded in the context of transnational families, research on migrants and their families rarely investigates the impacts of digital inequality on the gendered power dynamics.

Focusing on the context of Chinese migrants in London and their ageing parents in China, this study identifies how the supposedly feminine role of care and intimacy is now increasingly reassigned to male family members in a transnational process as the internet has largely replaced other media to become the most significant tool in transborder family communication. Women, particularly those of the older generation, find themselves gradually silenced in family intimacy because of the lack of digital literacy. This research then discusses three modes of coping strategies among the women and identifies possibilities of agency and resistance.

Transnational families are separated by long distances while maintaining their union through various communication methods. Several studies have identified that transnational families adopt various methods to maintain intimacy and take up the responsibility of care. Remittances, regular visits and face-to-face communication are critical in understanding how the split families are united, together with the underlying financial mechanism whether it is dual-earner families or 'astronaut families' where one parent working abroad (Chiang, 2008; Lan, 2003; Parreñas, 2005; Shen, 2005; Waters, 2002). Moreover, communication methods such as letters, phone calls, text messages and, more recently, emails, are all ways in which the transnationals maintain close ties with their families (Parreñas, 2005; Wilding, 2006).

Partly due to its recent emergence and partly because of an emphasis on physical presence in studies on family care, compared with other forms of transborder family communication, there has been relatively little discussion of ICT. Existing studies on new media in migrants' families employ the notion of virtual co-presence or connected presence to theorize the feeling of togetherness ICT brings about to overcome distance (Baldassar, 2007, 2008; Horst, 2006; Wilding, 2006). These concepts are adopted to examine the role of mobile phone calls, emails and text messages, and focus on the exchange of texts and sounds. In addition to textual and audio interactions, this study includes other emerging trends in new media that are popular among Chinese migrants, particularly video conferencing and web cameras. It should be noted that these media are adopted to obtain real-time visual and audio interactions and thus generate new uses of the body, which is a key component of care giving, and which was formerly invisible due to distance.

The transnational distribution of the responsibilities of family intimacy and care is largely a gendered social process. Among the astronaut families, where one parent is away earning, it is usually the fathers who play the role of breadwinner while the mothers take up the responsibility of child rearing. In the case of Hong Kong and Taiwanese families in North America, this often requires a woman to give up her career as a professional in Asia (Chee, 2003; Huang and Yeoh, 2005; Ong, 1999; Pe-Pua et al., 1998; Shen, 2005). In the cases of female-headed transnational families, where the mothers travel abroad to work and the fathers stay with the children, instead of the fathers having increased responsibility for childcare and housework, the role of caretaker in the family is still largely assigned to a female relative in the home country as well as the overseas mother. In addition to the help from female relatives at home, these overseas mothers seek to compensate for their

absence through various methods of contact to maintain family intimacy (Hondagneu-Sotelo and Avila, 1997; Lan, 2003; Parreñas, 2005). As a result, both feminist scholarship and migration studies have called for attention to these social processes through which the gendered norms of family intimacy and care are reproduced.

While the literature of gender and transnational families explores the division of family responsibilities such as care and earning, this study examines the ways in which transnational families are gendered from a different perspective. This study investigates how gendered norms in the family sphere are reproduced and/or challenged through differentiated communication ability between men and women.

As communication is critical to the process of care giving in transnational families, the role of the digital divide in this setting also requires in-depth analysis. Wilding (2006) has broadly examined various types of social inequalities in transnational communication. Her work identifies how, through computer-mediated family communication, scarce resources may be distributed in ways that not everyone considers appropriate. For example, some groups are less likely to communicate with their overseas relatives than others due to lack of access to the internet and/or mobile phones, and thus are less likely to seek financial and other resources from their overseas relatives. This research further narrows its scope and focuses on the role of gender in the context of coastal Chinese families. Expanding from Wilding's analysis of the impacts of digital divides, I further investigate the strategy of resistance and empowerment of these inexperienced users of the internet, thus demonstrating agency under the unbalanced power structure.

There is a need to distinguish the digital divide and other forms of digital inequality in the analysis of the role of the internet in transnational family communication. The digital divide refers to the inequality between people with access to a computer and the internet and those without it (Norris, 2001). In addition to access, digital inequalities have been found to exist in a variety of forms. First, among users who already have access to digital technologies, the efficiency of their technical apparatus varies. Having access to the internet does not necessarily mean it is adequate (Tsatsou, 2011). It is essential to distinguish broadband users from non-broadband users, as the benefits of internet use increase with the speed of connection (Horrigan and Rainie, 2002). Users who have exclusive use of a computer and the internet and those who have to compete with other users also need to be distinguished (Lessig, 1999).

Second, autonomy in using the internet is unequally distributed. Users' access to the internet at work tends to be under the constant surveillance of filtering or monitoring systems and hence their usage is often limited (O'Mahoney and Barley, 1999). Women users who access the internet from home may also be under the supervision of male family members who are more experienced with the technology (Lessig, 1999).

Third, the social support that provides a positive environment for internet use varies across groups. Evidence shows that early internet users surrounded by those with advanced technical sophistication obtain broad and high-level involvement in online activities (Kiesler et al., 2001; Kim and Jung, 2002; see also DiMaggio et al., 2001). Support from friends and family largely explains the extent to which a new user acquires digital competence later on.

Lack of access to computers and the internet is not particularly significant among the families I examined as they are predominantly from the middle to elite class in China's

coastal urban area. Almost all the informants' families in China have at least one computer in their homes.

However, this does not mean that the social stratification between age groups, generations and gender is not reproduced within and through the transnational process of family communication using ICTs. Rather, digital inequalities are experienced by the informants' families and impact on their family power dynamics in forms other than the ownership of hardware and software.

Methods

This study is part of a three-year research project based on Chinese professionals in London. Between autumn 2008 and autumn 2009, ethnographic research was conducted in London, which included 53 semi-structured interviews and participant observation in the informants' social scenes, business networking events and their family communication activities using Skype and other instant messaging services. I also observed online spaces which were discussed during the conversations or interviews with the informants, including their blogs where their family members comment.

The number of men and women in the fieldwork is approximately equal. These professionals are mostly young adults who left university in recent years. They have a wide variety of city jobs, from engineers, legal services, business consulting, accounting, to finance, with the majority of the participants in accounting and finance. The age of the informants who participated in semi-structured interviews ranged between 22 and 36. This relatively young age may be a result of the migratory history of the Chinese diaspora in Britain. That is, the typical story of Chinese migrants has changed from Hong Kong Chinese in the food and trade industry to mainland Chinese students coming for the UK's higher education, arriving only in the past decade and staying on in British cities upon completing their studies as working professionals. These informants are mostly from middle- to upper-class families in China, a social stratum which views Western education as a status symbol and desirable cultural capital central to the accumulation of capital for the families.

The informants have diverse migratory routes. While the majority of the informants are first-generation migrants who left their family and arrived alone for higher education, some of the informants migrated with their parents. Many of the informants migrated to Britain directly. Yet there are also informants who have lived, studied or worked in Malaysia, New Zealand and Singapore before they arrived in Britain.

Whereas the literature on transnational families largely examines families with one parent separated for earning, or families where both parents have left their young children behind to work away from the home country, it is also critical to understand the structures of care and intimacy of families with young adult children abroad and ageing parents in the country of origin (Baldassar, 2007; Climo, 1992).

The primary family structure in this study includes ageing parents in China and single, childless migrants working and living in London, most of whom have no siblings.[1] The straightforward structure of these transnational families partly results from the one-child policy of the People's Republic of China (PRC) which came into force in the 1980s. While these adult informants may be conceptualized as single householders, they maintain strong ties with their parents and sometimes other relatives outside their immediate families in China, both financially and emotionally, as reported in the following sections.

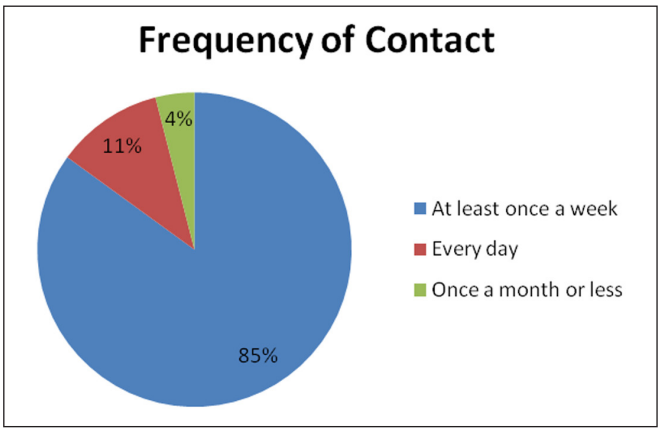

Figure 1. Frequency of contact with overseas family

Internet use: frequency and media types

There are close ties between the migrants and their families outside the UK. Among the 53 informants who were interviewed about their transnational family communication, 45 reported that they contact their family in China or elsewhere outside the UK at least once a week. Six informants regularly speak to their family every day before work. Only two migrants contact their overseas family once a month or less (see Figure 1). The general tendency of frequent networked communication with overseas families not only highlights the close tie between the informants and their family members overseas but also leads to the centrality of the internet in a transnational setting.

Common tools used in communication with overseas family members include the telephone and various internet technologies. Although almost all the informants have used both, the tendency to substitute internet tools for the telephone is significant.[2] Informants who arrived in the UK in the 1990s report that at first they relied on the telephone to communicate with overseas family members and that they have only turned to the internet in recent years. They obtained international telephone cards that allowed transnational communication at a local rate from Chinese convenient stores and restaurants in the UK. Yet, with the prevailing use of the internet to communicate across borders with no charge or almost no charge, internet use has increasingly become the most important method for transnational communication.

Among the internet tools, Skype is the most frequently used. Internet tools such as instant messaging services, emails, blogs and social networking sites are also adopted in family communication (see Table 1).

Ed is a 26-year-old accountant who arrived in the UK at the age of 17. He explains how communication methods for transnational contact have changed over the past ten years:

> I use Skype to contact my family.… Before Skype, I bought those cheap phone cards for international calls. Since I had Skype, I have not made calls from my landline. I don't even have a landline now. My company offers me a mobile phone so for calls within Britain I don't need a landline. For international calls, Skype alone is enough. It's free. Also, the quality is good. In the first few years the quality was not good, but now the quality is even better than those telephone cards.

Table 1. Internet tools adopted to contact overseas parents (excluding contact with siblings and other relatives)

	Number of adopting informants
Skype	49
IMs	19
Emails	11
Blogs	2
Social networking sites	1
No internet tools adopted	4
Total	**53 informants**

Note: The numbers in the different categories add up to more than 53 because people use more than one way of keeping in touch.

Quality and cost are reported to be the foremost reasons for the informants to switch to the internet in recent years. When a free online telephone system gradually enhances its quality, telephone calls – even at a low rate – lose their competitiveness among their transnational consumers.

As a result of these families' relatively high socioeconomic status and urban backgrounds, gender rather than class – among all the social stratifications – has the most significant differentiating effect on patterns of internet use in families examined in this study. However, gender seems to have different impacts within different generations of the informants' families.

The gender difference in digital skills tends to be insignificant among the informants in London. All the informants use the internet regularly both at work and during their leisure time and, therefore, both male and female informants tend to spend at least eight hours online per day, considering the nature of their work, their use of the internet after work and some of the informants' wired mobile phones. Both male and female informants tend to have an advanced level of knowledge and skills regarding digital technologies.

However, a strong gender difference is found among their parents, and sometimes their grandparents and other elderly members in their extended family in China. Compared with informants' mothers, who usually lack efficient digital skills, the fathers tend to switch to the internet from the telephone earlier. These fathers often work in ICT-using or even ICT-specialist industries and learn computer skills and knowledge about the internet primarily from work. They have access to the internet at work and often send emails, and sometimes use instant messaging tools during their work.

Among the 53 informants who talked in-depth about their family communication, 7 report that their mother or other elderly women in their families have good digital knowledge and skills that allow them to use the internet without assistance both at work and at home. Five of them report that their mother or other elderly women in their families have even more digital competence than their male family members. These women usually work in industries where digital technologies are central to their job description, including IT and financial services. Other informants' mothers and elderly female relatives tend to lack the opportunities to learn digital skills from work because they are housewives or work in less computer- or technology-centred industries.

Absence: the silenced mothers

This differentiated ICT literacy has led to various patterns of transnational family communication. The first pattern, absence, includes the female family members who have been entirely absent from online communication due to their lack of digital skills and knowledge. Among the 53 informants who were interviewed regarding their family communication, 8 reported that their mothers are largely excluded from this process. Informants who used to rely on telephone calls to maintain contact with families in China before the emergence of the internet report that it was the mother who used to play the role of maintaining intimate family bonding. However, with the rising popularity of the internet, migrants have largely discarded the telephone and turned to various internet tools for maintaining contact with family. As a result, the internet-mediated communication that the informants have with their overseas family is predominantly communication with male family members, who tend to have more advanced internet knowledge and skills compared to their female counterparts. The decreasing popularity of the telephone means that male members in transnational families are gaining a critical role in bringing family members together. The supposedly feminine task of affection and care is often reassigned to men in these transnational families.

Karl best explains this process. He is a 25-year-old former trader who has started his own business. He left for the UK when he was 17 for higher education while both of his parents stayed in China. His mother has become increasingly silenced in family communication since he switched to the internet from the telephone:

> I send messages or talk to my dad on Skype every morning. I use the telephone as well but very seldom. My mum does not use Skype. She doesn't know how to use the computer so I mainly talk to my dad. If there is anything important, he will tell my mum for me. If I really miss my mum, I'd call her [using the telephone]. But I seldom do so.… She has used the computer. She just doesn't like to use it because she is not very familiar with it. I used to talk to my mum a lot more when there was no computer and we all talked on phone.… My dad is quite busy working so he does not have much time for phone calls. Emails and MSN are a lot easier for him.

In this example, the telephone is used as a feminine communication method whereas the internet signals masculinity. This is partly a result of different digital skills between men and women and partly because of the temporal design of internet technology. Compared with telephones, the temporal design of the internet is suitable for working professionals who lack adequate time for transnational communication and, as in the case of Karl's family, are largely men. The fact that internet-mediated communication, such as emails and offline instant messages, does not require both the communicators to be present at the same time works for the professionals' tight working schedule.

Meng's story is another example with a different family structure. Meng is a 33-year-old business consultant who came to the UK in 2003 for a Master's programme in London. Both parents and an older sister remain in China. When he first arrived in the UK, it was reported that low-rate international telephone cards were still the most popular option for Chinese in London to contact overseas friends and family:

> At first I relied on the telephone. It wasn't expensive. But it was inconvenient. I bought telephone cards which were only sold in a number of shops. I still use them but less often now. I use the internet mainly to contact my sister and sometimes my father. But with my mother, I still need to buy telephone cards because my mother doesn't use the internet. It is very inconvenient. I work and live far away from Chinatown or any other places where they sell the phone cards.

Similar to Karl, Meng's mother has been increasingly silenced since the internet emerged as a key method of communication in a transnational setting. Yet, unlike Karl, in addition to gender, Meng's story also involves the role of age and generation. When comparing women from different generations, he suggests that whereas his mother lacks the ability to utilize digital technologies to maintain her voice in the transnational family, the sister's role in maintaining contact and intimacy online in the family remains significant. Although the telephone is adopted as a feminine communication tool, it should be noted that that this statement is more applicable in the older generations in transnational families.

Assistance: regaining the voice

The second pattern, assistance, demonstrates a more dynamic structure of domestic gender relations. In this pattern, rather than being entirely absent from online transnational communication, mothers manage to stay in touch with their overseas children with the help of other family members. Among the 53 informants who had an interview with me to discuss their family communication, 20 reported that the mothers usually contact them online jointly with other family members or with assistance from them.

Lacking familiarity with internet tools, these women only use the internet when the support of other male or younger family members is available. Instead of replacing mothers and obtaining the key role in emotional bonding in a family, these male or younger internet users utilize the internet together with the informants' mothers and contribute to increasing these women's exposure to the online environment. One informant, Mi, best describes the pattern of assistance from younger family members:

> My mother does not know how to use the internet but the good thing is she lives with my cousins. My cousins taught her what software to install and set up everything for her. She asks them to turn on the computer and web camera whenever she wants to talk to me. Sometimes even my grandmother joins them.

Mi is a 28-year-old manager in the IT industry whose mother lives with her extended family. The younger generation tend to have better digital knowledge and skills and are able to assist women from the older generations to keep in touch with the informant.

In addition to the help from internet users from the younger generation, male family members also assist the informants' mothers and other women from the older generations to use the internet to maintain family relationships with them. Hanson, a 25-year-old former accountant, explains how his mother starts to use MSN with his father's help:

> My dad is quite good with the internet. He is in the IT business. My mum is not so familiar with it, though. My mum does not have her own MSN account. She borrows my dad's MSN account and chats with me when my dad has time to get online and type for her. She speaks and he types.

> Sometimes we use the voice option so that my dad does not have to be around. He just needs to get online for her and let her use the account.… She usually waits until my father has free time to turn on the computer for her.

These examples demonstrate how the use of social support – technical and emotional help from family members who have more digital knowledge and skills – serves to enhance women users' wider and more intense exposure to the internet. Using the internet with the assistance of male or younger family members who are also experienced internet users functions as a way in which these new users can familiarize themselves with the technology.

However, this does not mean regained voice without constraints. The dependence on other family members often leads to a lack of autonomy in communication. Although not entirely silenced, these mothers or elderly women in transnational families have the chance to contact their overseas family members only when other male or younger family members are available. Their experiences of love, care and intimacy are arranged around the time-table of the young and the male in the family.

In addition to the time limitation, the content of communication via the internet is also largely dominated by men. Harry is a 29-year-old accountant who left home for postgraduate studies and stayed in London to work. He explains:

> My mum talks to me when my dad is online. She always sits next to my dad, listens to our conversation and interrupts. My dad talks a lot about work – his and mine. When he speaks with me, it's mostly about work and he'll give me some advice on my career. My mum will interrupt occasionally, trying to get a word in and ask questions about my recent life, such as weather, food, or my relationship with my girlfriend. My dad sometimes complains about her talking about insignificant things. [laugh] She doesn't ask about work.

In this example, the dominance is deployed in the form of surveillance of the contents of the female user's communication with the informant. Topics that are considered feminine are trivialized by the male family members on whom the women rely for digital assistance. As a result, women's practices of care and intimate emotions are closely policed during the online communication.

Although these mothers' internet use is largely limited, the informants develop various strategies of internet use in response to their mothers' weakened communication ability as a way to express affection and take care of their mothers' well-being. Laya's story is a typical example. Her mother has separated from her father and lives with her extended family in China. She explains how she manages to adjust her patterns of internet use in order to obtain quality time with her overseas mother:

> I manage to get up early and talk to my mother before work during weekdays. It's usually my uncle who helps my mother to use Skype and he is only available in the afternoon during weekdays. So I get up at about 6.00 a.m. when I want to talk to my mother. It's about 2.00 p.m. in China. I do talk to my mum at the weekends. But it would be great if we could talk not just at the weekends.

Upon perceiving her mother's limited autonomy over digital communication due to her dependence on others, Laya distinguishes the pattern of her internet use during weekdays

from that during the weekends in order to fit into their timetable. When asked why it is important to maintain contact with her mother both during weekdays and at the weekends, she explains how intimacy and care within the family is now maintained and expressed mainly through regular and frequent computer-mediated contact:

> It's important to contact my mother on a regular basis. In our generation, we are all the only kid in our families. My mother is not working and her attention is all on her child now. I'll talk to her about everything.… It doesn't matter what we talk about. It is the fact that I call and speak with her regularly and frequently that is important. That keeps her secure and happy.

In this case, the mother–daughter bonding is reported to be crucial to family intimacy partly because of this family structure. Maintaining contact with parents on the internet serves as a method through which she satisfies her overseas parent's emotional needs and takes care of her parent's well-being.

Development: empowerment and its limit

In addition to adjusting their own schedule of internet use, other informants adopt a more active method to address the unbalanced communication power in their families, thus further disrupting the gendered norms of family communication and showing agency in resisting the unbalanced structure of internet use. This is the third pattern of family communication, development.

In this category, informants respond to the weakened communicative role of their mothers by assisting them to gradually obtain long-term digital literacy of their own and regain their voice in transnational communication. In so doing, the gender norms of family communication brought by internet use are challenged. These women seek to gradually obtain digital literacy through various sources, most of which are offered by their tech-savvy sons and daughters overseas.

Upon perceiving their mothers' absence from the transnational family setting, some informants offer resources for their mothers as a response to their lack of voice in family communication. Charles spends long working hours in hospital, where overseas phone calls are not allowed but internet use is less restricted in terms of time and access. As a result of the restrictions regarding transnational communication at his work environment, he expresses frustration when talking about the fact that his mother only uses telephone calls to speak to him. Without his mother having autonomous skills and knowledge of internet use, it is more difficult for him to speak to her or engage in any other form of communication with her, as there are no other family and friends who are available whenever he and his mother need to speak to each other.

> I taught my mother how to use the internet. At first, she didn't know how to use it and only used the telephone to contact me. It was inconvenient. I don't really have time to talk on the phone. But I can still use MSN and the likes at work even in the surgery room.… My mum likes Skype now. It's easy for her. It's like the telephone. The only difference is you need to turn on the computer. So I taught her how to turn on the computer, click on the icon of Skype and use the web camera. My dad also told her where she can download useful programmes. Now she uses it all day. Sometimes it's with me but most of the time she is just talking to her sister.

In addition to delivering key information of preliminary knowledge and skills relating to a certain internet tool, as Charles does, other informants also transform the unbalanced distribution of digital power in their households by providing a long-term supportive environment for their mothers and other elderly women relatives to advance their digital literacy. Li's story is a typical example. She is a 27-year-old medical professional who migrated with her parents when she was 11 years old. While she does not need the assistance of digital technology to communicate with her parents, she was strongly emotionally attached to her grandmother in China who brought her up before she migrated. As telephone use also has its limits in terms of time and cost, she decided to help her grandmother to obtain digital skills. To do so, she has not only purchased the basic apparatus for using Skype and supplied the basic knowledge of Skype and similar software, she also provided an enduring communication environment where her grandmother can practise and advance her digital literacy regularly.

> I talk to my grandmother at least once a week. She knows a lot of internet tools, such as QQ, Skype, etc. At first, she just wanted to talk to us at a low rate but now she is getting to know more and more internet tools.… I guess what I can do is to stay online whenever she is able to go online. After all, I am the reason she wanted to learn about the internet in the first place. I figure if I stay online longer, she'd be more interested in going online. I also send her information about new functions and products of Skype to make sure she has updated knowledge about it. I love the idea that she has become good with the internet. There are so many things for her to spend time on with the internet. It's good for her. Elderly people may get lonely sometimes and miss their overseas children.

Assisting her grandmother to obtain digital knowledge and skills serves as a critical way in which Li takes care of the emotional needs of overseas family members. Li encourages and assists her grandmother to spend time on the internet to help ease her grandmother's loneliness and the pain brought about by the fact that she and her parents are not around. In so doing, care, intimacy and emotions are practised through helping mother and female relatives overseas.

Compared with the second pattern, where the women need to constantly negotiate their use of the internet with other family members and are largely constrained by their helpers, women in the third category manage to actively develop internet knowledge and skills of their own. They continue to advance their digital literacy even when the person assisting them is absent, which is different from the women in the second category. These cases tend to demonstrate a long-term effect of the helper's assistance with computer and internet use. The direct help with setting up the hardware and software is discontinued after these women's first few uses.

It is essential for the female internet users to combine the informants' efforts with resources obtained from other social networks of theirs, education institutions and other self-learning techniques. In Li's example, in addition to her efforts to provide a continuous environment for internet-mediated communication, it is important for her grandmother to actively seek assistance from her various social networks and participate in formal or semi-formal digital education.

> My grandmother is a very energetic lady. She even went to evening school to learn basic computer skills. My uncle bought her a computer and set it up for her. She is old and doesn't really work so she has plenty of time surfing on the internet.

While ICT education at an institution offers her preliminary computer literacy, it is also important to explore the online world independently and to have continuous contact within her technically advanced social network.

Compared with the first two patterns, women internet users in the third category adopt a strategy of resistance and demonstrate agency in the gendered structure of internet use. They obtain relatively more autonomy as it is not necessary for them to rely on a helper every time they use the internet. Among the 53 informants who talked in-depth about family communication, 12 report that their mothers or other elderly female relatives have actively sought to become digitally literate using various sources. The informants' assistance, together with the resources from other social networks and institutions, subvert the gendered family structure not only in the field of ICT usage but also in family communication. This autonomy allows the women to be free from male domination in transnational communication. The acquisition of digital knowledge and skills is, in this sense, empowering.

Gender ghetto in transnational communication

However, on a closer look, this agency and empowerment may have its limits. The digital knowledge and skills obtained by these women are often restricted to certain types of internet tools and certain social scenes. This study highlights the concept of 'ghettoized learning' to discuss the gendering process of segmented digital literacy.

In Charles's examples, the internet tools his mother is familiar with are often restricted to a number of online applications that are largely associated with audio and visual communication between two users, including the online telephone and video conferencing functions of Skype and MSN. As Charles identifies, although his mother seeks to improve her digital knowledge and skills by learning to use the computer and the internet, this learning process is discontinued when she becomes capable of using an internet tool that allows transnational communication.

James, a 30-year-old IT consultant, best describes this limited learning process. With her only child living abroad, James's mother seeks to advance her digital skills mainly to conduct transnational communication with him. As a result, her learning process ends once she acquires preliminary skills to conduct conversation and video conferencing on the internet.

James: Yes, my dad learned how to use the internet at work. My mum saw him using email with me so she wanted to learn. We told her how to download the programmes she needs, how to install them and how to use them. She has explored it by herself for a while and now has her own computer and installs Skype on it. All she does is chatting now.

Interviewer: So your father contacts you by email while your mother speaks with you with Skype?

James: My father also uses MSN, Skype and other stuff and it's not just with me. He uses them at work and with friends. My mother mainly uses Skype. That's all she does with the internet. I think she just sees it as a tool that allows her to contact me more often and more conveniently. It doesn't make any difference to her whether it is the telephone or Skype. She just treats it like a telephone.

As James has elaborated, the male and female internet users in the household have a different understanding and usage of digital tools. While the father has extensive exposure to various online applications, the mother only seeks to familiarize herself with one internet tool that allows her communication with her overseas son. She views the internet as a modern and convenient substitute for the telephone in present-day transnational communication and only learns to use those tools with similar functions as the telephone.

A gender ghetto is thus produced. It delineates the boundary of a feminine space in computer-mediated communication which is associated only with the exchanges of voices and images between friends and families. The obtained knowledge and skills of digital technologies among these women in this context are less likely to expand to areas outside video conferencing, instant messaging and online telephone. While these mothers manage to learn to use the internet to contact their family members overseas, there is significant difficulty in using internet tools involving text typing. Although some of the informants' mothers, like James's, use instant messaging tools, such as MSN, many of them prefer the function of audio communication and only type texts that are short. As Charles, Li and James all point out, their mothers or grandmothers spend most of their time online chatting.

Advanced internet literacy includes knowledge, skills and familiarity with a wide variety of internet applications, from emailing, gaming, posting on a newsgroup and browsing information-disseminating websites to participating in interactive websites in the Web 2.0 Yet, among the 12 cases that are categorized in the third group, all the internet tools that are mentioned in the mothers' learning process are interpersonal communication tools, including Skype, MSN, QQ and emails.

Not only do these women tend to be restricted to limited types of internet applications but their use of the internet is often within a number of social scenes associated with private, intimate social situations between friends and families. In the above three cases, the informants' fathers learn how to use the internet at work and are largely engaged with computer-mediated communication to maintain work-related interpersonal relationships. However, the acquisition of autonomous internet use among these informants' mothers is often incentivized by the need to contact the informants and other friends and family abroad. They spend most of their online hours on maintaining private, intimate relationships. Among the 12 cases in the third group, when asked about what their mothers do with the internet after gradually obtaining digital skills, only two of them reported that their mothers also use the internet on a regular basis to receive information or conduct communication outside the family sphere. This includes one mother who uses the internet to research information about real estate and another mother who reads news online. As a result, the supposedly empowering effects of gaining ICT knowledge and skills are largely diminished. They are marked by the lack of broad exposure to the online world.

Discussion

This study offers evidence regarding the differentiated ability to use the internet between men and women which is inscribed through a transnational process. Due to the relatively high socioeconomic status of the informants' families, the digital divide in relation to the materiality of computers and the internet apparatus is relatively insignificant and almost all the informants have networked computers in their home in China. However, other forms of digital inequality are prominent within the transborder households. Except for a small

number of women in transnational families who have good digital knowledge and skills, most informants' mothers and other elderly female family members have had difficulty communicating with their family members overseas since the internet largely replaced the telephone and became the method most often adopted in transnational communication.

In summary, the ways in which the informants and their mothers in transnational families cope with the difficulty can be categorized into three patterns – absence, assistance and empowerment. In the first category, women in transnational families have been absent from online communication with their migrant sons and daughters in the UK. As a result, they have been largely silenced since these families turned to the internet for transnational communication. In these cases, fathers' roles are gaining increasing significance in maintaining a family bond across borders.

Other women seek assistance from their family members in order to contact the informants online. This assistance is often from spouses and other younger family members and is primarily restricted by the time frame of those assisting and constantly under surveillance of the male and the young. To respond to this limited autonomy over transnational communication with their mothers, a number of informants have adjusted their patterns of internet use to fit into their mothers' usages. This is interpreted by the informants as a way to express intimate feelings towards family and take care of their mothers' physical and psychological well-being.

Largely through the informants' actively intervening in the unbalanced power in family communication, there is also another group of mothers who seek to develop their own digital knowledge, thus identifying the possibility of resistance and agency under the gendered structure of technology adoption. This transborder assistance is often combined with help from the mothers' social networks and formal and informal education in the hometown. This learning process is empowering in that the need to communicate within the family leads to the women having longer, more frequent and independent exposure to internet technology, free from the surveillance of those assisting them.

Through this analysis, this study does not view female users of the internet as passive victims of gender inequalities. It emphasizes the dynamics and theorizes transnational users of the internet as actors with the potential to renegotiate power and to intervene in the distribution of technological resources. However, this acquisition of digital knowledge primarily focuses on a ghettoized area associated with one-to-one personal communication, leaving other forms of online activities less explored – such as seeking information on various web pages, social networking on newly emerging websites or shaping public opinion on open online forums.

It should be highlighted that while mothers and other elderly women in China lack adequate skills and knowledge about information and communication technologies, young, skilled female migrants in London tend to demonstrate digital literacy that is as strong as their male counterparts. Female and male informants in this study are equally frequent users of the same or similar internet tools. Male and female migrants contact their families in China via the internet with similar frequency.

The only potential difference between the male and female migrants in London may be the ways in which they respond to their mothers' weakened role in transnational families. Among the 11 cases where the migrants report that they have adjusted patterns of their internet use to increase the time and quality of communication with their mothers or have

assisted their mothers to gain digital literacy, seven are female migrants. However, considering the relatively moderate difference in number, there is not adequate evidence to support the hypothesis that female migrants tend to demonstrate stronger bonding with family overseas on the internet.

It should also be noted that the conclusion drawn here may be particularly applicable to the context where this study is based. The high socioeconomic status of Chinese professionals' families makes the digital divide – the access to hardware and software – a less significant problem, thus highlighting the effects of differentiated digital knowledge. Further research is required in a different class setting.

The one-child policy also leads to a more straightforward structure of the distribution of family care, financial support and emotional interactions. There are diverse structures of family and internet use among transnational families around the globe which require further research. They have various communication needs, plans of distribution of family responsibilities and other aspects of gendered power dynamics in the family. For example, it has been found that life course has determined the migratory strategies of transnational families (Mulder and Cooke, 2009). While the informants have stayed in the UK from their teens to their twenties or mid thirties and their parents are mostly in their fifties and early sixties, the family responsibility of care may still be maintained simply through communication technology. Yet, for migrants who came to the UK for education before their teens and for informants whose parents are older and need intense care, the contents of care may largely vary and, hence, the contents and strategies of transnational communication may be significantly different. Further research is needed to continue to explore how digital inequalities impact on the family sphere in various family structures.

Acknowledgements

The author would like to thank Alisdair Rogers for his valuable comments. This work has been funded by Taiwan's Ministry of Education.

Notes

1. Most informants are unmarried migrants with no children. Only three informants, all male, have started families and have children of their own.
2. All of the 53 informants have used the telephone to contact home. Only four out of the 53 informants have never contacted their parents via the internet. However, they have all used the internet to contact other family members or friends in China.

References

Baldassar L (2008) Missing kin and longing to be together: emotions and the construction of copresence in transnational relationships. *Journal of Intercultural Studies* 29(3): 247–266.

Baldassar L (2007) Transnational families and aged care: the mobility of care and the migracy of aging. *Journal of Ethnic and Migration Studies* 33(2): 275–297.

Chee MWL (2003) Migrating for the children: Taiwanese American women in transnational families. In: Piper N and Roces M (eds) *Wife or Worker? Asian Women and Migration*. Lanham, MD: Rowman and Littlefield.

Chiang LN (2008) 'Astronaut families': transnational lives of middle-class Taiwanese married women in Canada. *Social & Cultural Geography* 9(5): 505–518.

Climo J (1992) *Distant Parents*. New Brunswick, NJ: Rutgers University Press.

DiMaggio P, Hargittai E, Celeste C and Shafer S (2001) *From Unequal Access to Differentiated Use: A Literature Review and Agenda for Research on Digital Inequality*. Report prepared for the Russell Sage Foundation. Available at: http://www.webuse.org/pdf/DiMaggioEtAl-DigitalInequality2004.pdf

Hondagneu-Sotelo P and Avila E (1997) 'I'm here, but I'm there': the meanings of Latina transnational motherhood. *Gender & Society* 11(5): 548–571.

Horrigan J and Rainie L (2002) The broadband difference. *Pew Internet & American Life* (June). Available at: http://www.pewinternet.org/reports/toc.asp?Report=63.

Horst H (2006) The blessings and burdens of communication: cell phones in Jamaican transnational social fields. *Global Networks* 6(2): 143–159.

Huang S and Yeoh BSA (2005) Transnational families and their children's education: China's 'study mothers' in Singapore. *Global Networks* 5(4): 379–400.

Kiesler S, Adaniuk B, Lundmark V and Kraut R (2001) Troubles with the internet: the dynamics of help at home. *Human Computer Interaction* 15: 323–351.

Kim YC and Jung JY (2002) Digital divide in a high internet penetration society: multi-dimensional examination of adolescents' internet connectedness in Seoul, Singapore and Taipei. In Hwang J, Yu J and Lee J (eds) *The Digital Divide of the Youth*. Seoul, Korea: Korea Institute for Youth Development.

Lan P (2003) Maid or madon? Filipina migrant workers and the continuity of domestic labor. *Gender & Society* 17: 187–208

Lessig L (1999) *Code and Other Laws of Cyberspace*. New York: Basic Books.

Mulder CH and Cooke TJ (2009) Family ties and residential locations. *Population, Space & Place* 15: 299–304.

Norris P (2001) Digital Divide? Civic Engagement, Information Poverty and the Internet in Democratic Societies. New York: Cambridge University Press.

O'Mahony S and Barley SR (1999) Do digital telecommunications affect work and organization? The state of our knowledge. *Research in Organizational Behavior* 21: 125–161.

Ong A (1999) *Flexible Citizenship: The Cultural Logics of Transnationality*. Durham, NC: Duke University Press.

Parreñas R (2005) Long-distance intimacy: class, gender and intergenerational relations between mothers and children in Filipino transnational families. *Global Networks* 5(4): 317–336.

Pe-Pua R, Mitchell C, Castles S and Iredale R (1998) Astronaut families and parachute children: Hong Kong immigrants in Australia. In Sinn E (ed.) *The Last Half Century of Chinese Overseas*. Honk Kong: University of Hong Kong Press.

Shen H (2005) 'The first Taiwanese wives' and 'the Chinese mistresses': the international division of labour in familial and intimate relations across the Taiwan strait. *Global Networks* 5(4): 419–437.

Tsatsou P (2011) Digital divides revisited: what is new about divides and their research? *Media, Culture & Society* 33(2): 317–331.

Waters JL (2002) Flexible families? 'Astronaut' households and the experiences of lone mothers in Vancouver, British Columbia. *Social & Cultural Geography* 3(2): 117–134.

Wilding R (2006) 'Virtual' intimacies? Families communicating across transnational contexts. *Global Networks* 6(2): 125–142.