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Continuum
Journal of Media & Cultural Studies

ISSN: 1030-4312 (Print) 1469-3666 (Online) Journal homepage: http://www.tandfonline.com/loi/ccon20

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**To cite this article:** Jaime (Feng-Yuan) Hsu (2018) Negotiating gendered media: learning ICTs in transnational Taiwanese families, Continuum, 32:2, 239-249, DOI: 10.1080/10304312.2017.1409341

**To link to this article:** https://doi.org/10.1080/10304312.2017.1409341

Published online: 30 Nov 2017.

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CONTINUUM: JOURNAL OF MEDIA & CULTURAL STUDIES, 2018
VOL. 32, NO. 2, 239–249
https://doi.org/10.1080/10304312.2017.1409341

# Negotiating gendered media: learning ICTs in transnational Taiwanese families

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**ABSTRACT**

This article argues that the gender politics of information and communication technologies (ICTs) impedes the social process of digital empowerment in Taiwanese transnational families. It examines the changing patterns of ICT use of each family member when some family members migrate, and explore how learning to use ICTs for the purpose of transnational family communication is highly gendered. By conducting 18 in-depth interviews, I examine the accounts provided by the daughters regarding intimacy, ICTs and gendered inequalities in Taiwanese transnational families. I use *reducing digital inequalities* to describe that the daughters teach their parents how to use different kinds of ICTs for a fairer distribution of digital resources. Moreover, through two case studies of fathers with lower digital literacy, it examines how men distantiate themselves from ICTs to reclaim their masculinity. Through accounting their parents, the daughters are also constructing a new, mobile and digital savvy image as the freely moving single women's identity. This finding helps to fill the gap in the literature, which has thus far paid little attention to how such men reclaim their masculinity when they are computer illiterate. Furthermore, Taiwanese daughters experience mobility through ICTs and migration, which differentiates themselves from their parents' generation.

## Introduction: gender politics of information and communication technologies in transnational families

This article argues that the gender politics of information and communication technologies (ICTs) impedes the social process of digital empowerment in Taiwanese transnational families. It examines the changing patterns of ICT use of each family member when some family members migrate, and explore how learning to use ICTs for the purpose of transnational family communication is highly gendered. By conducting 18 in-depth interviews, I examine the accounts provided by the informants regarding intimacy, ICTs and gendered inequalities in Taiwanese transnational families. I use the term *reducing digital inequalities* to describe that the daughters teach their parents how to use different kinds of ICTs for a fairer distribution of digital resources.

This article analyses the intersection between the research areas of digital inequalities, transnational families and feminist science and technology studies. It highlights how the gender politics of ICTs contribute to the limited digital empowerment of mothers. Moreover, through two case studies of fathers with lower digital literacy, it examines how men distantiate themselves from ICTs to reclaim

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their masculinity. This finding helps to fill the gap in the literature, which has thus far paid little attention to how such men reclaim their masculinity when they are computer illiterate. In other words, while fathers observe that they are, to some degree, feminized due to their incompetence, they rehabilitate their masculinity by dismissing ICTs.

Transnational families are geographically separated households that maintain their intimacy through various communication methods or monetary transactions, such as remittance, letters and cheap phone cards (Madianou and Miller 2012; Parreñas 2005; Vertovec 2004; Wilding 2006). Focusing on Taiwanese transnational families, many analyses demonstrate that family care work is mostly distributed to mothers and filial daughters (Chee 2005; Lan 2002; Shen 2005; Wang, Chen, and Tang 2014). Daughters are also expected to take up the responsibility of care in the family, sometimes even becoming personal servants to their family members (Zelizer 2010). The gendered division of labour in families shapes transnational communication patterns as well as the migrant decision-making process. Evidence shows that mothers are more likely to abandon their own careers to attend to the 'parachute child' abroad (Chee 2005; Huang and Yeoh 2005; Yeoh, Graham, and Boyle 2002; Yeoh, Huang, and Lam 2005) and migrant mothers make barely affordable international phone calls home to demonstrate their affection (Lan 2006).

To overcome the geographical distance between family members, ICTs are indispensible resources to efficiently and economically maintain the close relations between family members. At the same time, efforts to keep the family 'together' are disproportionately made through women's unpaid domestic labour. This distribution of responsibility is highly gendered in many transnational contexts. Scholars note that left-home children expect their mothers to perform the care work, even though their fathers are close at home (Parreñas 2005; Uy-Tioco 2007). Access to ICTs, such as the Internet, has risen significantly and replaced other forms of transnational communication and ICTs play a major role in the emerging 'virtual intimacy' of transnational families. Recent empirical studies on ICTs in transnational families emphasize the 'co-presence' across borders, including phone calls, text messages, Skype and other kinds of new media (Horst 2006; Kang 2012; Madianou 2012; Madianou and Miller 2011; Parreñas 2005; Wilding 2006).

However, transnational communication is not unproblematic, largely due to the scarcity of digital resources. Digital resources are unequally distributed in different countries and amongst families from disparate economic backgrounds. Scholars have examined gender and class in digital inequities and the lack of infrastructure for families located in rural areas (Parreñas 2005; Wilding 2006). In addition to the focus on economic factors, however, digital inequalities are a conspicuously gendered social process in various social settings. Many research studies have investigated how gendered inequalities affect the quality of transnational communication (Hannaford 2014; Parreñas 2005).

Women in Taiwanese transnational families are assigned care responsibilities, which are mediated by use of ICTs; however, their access to ICTs remains impeded because of the structural limits on women and the masculine culture surrounding technologies (Lohan and Faulkner 2004; Shaw and Lin 2012; Wajcman 1991). Taiwanese women are constantly negotiating with the traditional values and the new femininities, especially with regard to mobility, care work and access to technology (Kim 2010; Martin 2016; Shaw and Lin 2012).

Freedom, mobility and individuality are the main components of the 'new woman' images in the media representations, as Shaw and Lin (2012) showed in their analysis of recent vehicle commercials targeting female buyers in Taiwan. However, the fashionable designs are still prioritized in the commercials rather than functions and technologies per se. Interviewing urban, middle-class and highly educated Taiwanese female audiences of the travel TV shows, Martin (2016) noted that 'mobile imaginary' plays a key role in their identity. Thus, Australian working holiday visa provides an opportunity for the single young women in Taiwan to travel from imaginary to lived experiences, especially when daughters strategically work abroad to avoid parental control, marriage and care obligations (Asis 2002; Lan 2006; Le Espiritu 2002).

In particular, the mobility afforded by ICTs is constantly negotiated through gender and generational dynamics. With regard to media technologies, survey studies have examined the digital divide and found that women's Internet usage time is on average lower than men's in Taiwan (Ling 2012). However, few

studies have addressed the gendered aspects of digital inequalities in transnational families. Focusing on Chinese migrant families based in London, Kang (2012) argued that mothers are silenced in the process of transnational communication because they are not digitally empowered.

While the digital divide refers to the difference between those with access to a computer or the Internet and those without, digital inequalities are found to take many forms. DiMaggio et al. (2001) suggest a shift from the digital divide to differentiated use, which can provide a more nuanced account of the consequences of ICTs. Their study sheds light on how to approach the differentiated use among female and male users, especially the gender difference in using ICTs, and exposes the digital inequalities under the veneer of equal access. They also identify that social support, which provides a secure and positive environment for learning how to use communication technologies, is crucial to digital empowerment. Scholars have found that social support largely explains mothers' ability to use computers (Kang 2012).

Nonetheless, social support is not an easy option for gaining access to ICTs, as the feminist science and technology studies have already established that women are not inherently incompetent at computers, but discouraged from learning because of the structural limits on women and hostile environments (Cheng and Wu 2005; Wajcman 1991, 2014). These structural limits, which refer to the opportunities for women to learn technologies, are sometimes interrupted by many other social factors. Taiwanese sociologists have found that some mothers do not have sufficient time to learn because they have to do a 'second shift' in the family home (Cheng and Wu 2005). Therefore, in this case, the gendered inequalities in the family impede the mothers' further digital empowerment.

While scholars have focused on the unfavourable situation for women in learning ICTs, they have paid little attention to fathers' incompetence. However, this does not mean that women are always less capable of using ICTs; what happens if it is the men who are incapable of using ICTs while women can use them without difficulty? How would the men justify themselves?

The nuance in the social process of learning ICTs is the focus of this study. While the literature on gender and technology has explored different dimensions in gendered and digital inequalities, this study provides a close-up description of the gender dynamics of the learning process of ICTs and investigates how ICTs are gendered through social practices and discourses. By analysing the social process of learning to use computers and other kinds of communication technologies, it helps understand how the digital and gendered inequalities are thus reproduced through this social process.

## Method

This study is part of a larger research project on the transnational families of female Taiwanese working holidaymakers and the interviews were conducted between January and September 2014. In 2004, Taiwan became one of the eligible partner countries in the Working Holiday Program launched by Australian Government, which allows young adults to work and travel around Australia extensively. Taiwanese young adults between 18 and 30 can apply for working holiday visa and work in Australia for a year if granted. They can also apply for extension if they find a sponsor, but the maximum will be two years in total. Overall, Australian working holiday visa has the lower application requirements compared to other countries and thus provides an opportunity for young women to migrate temporarily.

From 2012 to 2013, Taiwan was top three countries with the most applicants for working holiday visa, according to the data from Australia Department of Immigration and Border Protection issued in 2014. Furthermore, when 52.4% of all the visas issued are to male applicants, Taiwan reversed the general trend and has 21,271 female applicants, which was 6781 more than the male applicants from Taiwan. The report by Australia Department of Immigration and Border Protection even stated that 'Overall, Taiwan provided the largest number of females' (Australia Department of Immigration and Border Protection 2014, 48). As scholars have noted that college degrees are no longer considered valuable for precarious job markets in East Asian countries such as Japan and South Korea (Kawashima 2010; Kim 2010). East Asian women, in particular, are mostly 'underemployed' and suffer from the flexible contractual jobs more than their male counterparts, which pushes them to the overseas job market

(Kawashima 2010) but this also gives them the opportunity to renegotiate their identity as a caretaker in families (Kim 2010).

The study comprised 18 semi-structured interviews, informal visits to families in Taiwan, and online interaction with family members. Most of the interviews were face-to-face and others were conducted via Skype because the informants were in Australia. Because working holidays to Australia are a highly feminized form of international mobility in Taiwan, this study focuses on the female visa holders to understand the feminized migration. Also, two interviewees are lesbians, and one is bisexual.

The average age was 25.11, and their age ranged from 20 to 27 years. Six participants did not have work experience before going to Australia. Others had worked briefly for one to two years. Three were young professionals who worked in audit firms. In Australia, they were female migrant workers, and mostly worked in restaurants or hotels. Three of the participants worked on farms. With regard to educational status, all participants were college graduates at the time of interview. One was in graduate school. More than two thirds had attended national and private universities.

They mostly came from nuclear families, and their socio-economic status ranged from lower- to upper-middle class. Their parents are all fifties to early sixties, with high school or some college equivalent degrees. The family structures in this study include middle-aged parents, siblings in Taiwan and single or coupled female working holidaymakers working and living in Australia. Sixteen participants lived with both of their parents and siblings before going to Australia. Two of them come from extended family.

Among the 18 informants who were interviewed for patterns of transnational communication, 16 reported that they contact their families in Taiwan at least once a week with a few exceptions when the Internet was not easily accessible in the countryside. Only two of my informants contacted their families via landline or email once a month or less. However, most informants reported that they occasionally refused to contact their overseas family to avoid confrontations with their left-behind parents.

The tools utilized in transnational communication included Skype, LINE on computer or Smartphone, international phone calls, Email and landlines. For the informants interviewed, Smartphones and computers were mostly the same, because applications like Skype and LINE are available on both. Most of the informants chose between several technologies to talk under different circumstances, but they normally used Internet-based tools, like Skype and LINE. For example, four informants who normally used video calling reported that they would make voice calls to their mothers on Skype or on the telephone when they were sick, because they did not want to worry them. Only one informant insisted on calling her parents' landline in Taiwan, because she tried to avoid conversing with them, even though her parents knew how to use Skype.

There are several stages of redistribution of digital resources in transnational families. The first stage is when the family is going transnational; the family members have the opportunity to gain more access to ICTs. Most informants reported that they had taught their parents how to use the computer and Skype before going to Australia, in order to reduce the cost. Skype, in particular, is a crucial software in the transnational process.

Of the 18 informants who discussed their parents' digital knowledge, 13 reported that their fathers had better computer skills and were more interested in computers than their mothers. Two informants even reported that their mothers did not possess a mobile phone. The remaining four reported that their mothers had a higher level of digital competence while their fathers were, in fact, computer illiterate.

## Reproducing gender inequalities while reducing digital inequalities: negotiating im/mobilities in transnational families

Gender inequalities are reproduced in the process of reducing digital inequalities in my sample. With regard to parents, especially mothers, their digital empowerment, in the context of transnational families, was initiated because of their daughters' international mobility. A daughter's decision to go to Australia opened up the opportunity for their parents to learn computers or other communication technologies because of the need for transnational communication.

At the same time, through daughters' accounts of their parents, they, as single, highly educated and mobile women, also show how 'mobility' is the key component to differentiate themselves from the older generations, especially mothers (Kim 2010; Martin 2016; Shaw and Lin 2012). Therefore, the digital empowerment of these parents depended on daughters' mobility. Without this international mobility, they would not have needed to learn ICTs to maintain distant intimacy.

The main reason for mothers to learn how to use computers and Skype is that their daughters were leaving home. One of my informants, Ms Ko, clearly elaborated on this process. She had formerly worked in a company and lived with her parents before going to Australia. Her parents did not know how to use computers, let alone Skype, before she taught them:

> I think, they are capable of learning it, but they don't want to learn at all. If I were not leaving home for Australia, they would never learn it. Learning it is actually another burden for them … For them, the easiest way is to make phone calls, so just call me. I do not have to force them to learn.

In this example, the telephone is clearly not the best option for her parents because of the cost, despite being the communication method that her parents are most familiar with. The only reason for her parents to learn how to use ICTs is to keep in touch with her. Therefore, her leaving provides this new opportunity for her parents to learn to use ICTs.

This case reflects that the distribution of digital resources is largely attributable to the children in families. Another informant, Amy, said: 'In my family, we only buy a new computer when I need one'. In cases presented in this study, children are the main users of the digital resources in families, while parents pay the bills. Also, this shows that the daughters are raised as digital natives, while the parents are digital immigrants. Therefore, having a computer at home does not encourage parents to learn how to use it. As the main computer user, my informant, Ms Ling, explained that she taught her parents how to use computers because she knew how to make them accept her old computers:

> They have a computer because I buy a new one, and leave the old one for them to learn. Only in this way would they like to learn it. They do not want to pay extra money to buy a new computer for themselves … when I'm going abroad, I tell them I'm going to buy a new computer, and force them to have my old computer. You have to understand their mentalities, and persuade them to learn it. Otherwise, how can I keep in touch with them?

Ms Ling correctly identified herself as the main computer user in her family and employed this strategy to make her parents learn how to use the computer and Skype.

More importantly, daughters actively pursue the international mobility by travelling to Australia. Martin (2016) argued that mobile imaginary is key component of female identities among the younger, middle-class and single women, but at the same time a fantasy. However, my interviewees, the female working holidaymakers in Australia, not only use the institutional opportunities to experience mobility, also show their mobilities in another form, media technologies. Having identified my informants as the actors who distributed digital resources and provided social support, the next section examines how my informants reproduced gendered inequalities in the process of reducing digital inequalities in the home.

Because my informants were the main computer users in their families, their understanding of their parents' different ICT capabilities was crucial to the social process of redistributing digital resources in transnational families. Many of my informants described their mothers as 'can not learn it well' on the one hand, while fathers were expected to be more interested in ICTs, especially in computers. One informant, Lucy, only taught her mother how to use the computer once: 'I taught my mother how to use Skype on the computer, only once, but she did not understand; you have to teach her many times'. In a more extreme case, Ms Ko did not invest any effort into teaching her mother: 'because my mother does not know how to use a computer. I only taught her how to send a text via LINE. I think Skype is way too difficult for her'. Ms Ko did not provide social support because she thinks it is 'too difficult'.

When I asked Amy if her mother knew how to use a computer, she replied: 'of course not, I set it all up for her.' With regard to Ms Ling, who knew how to encourage her parents to use a computer, she said she only taught her father how to use it, because her 'father is more interested in learning it, my mother might not even know how to type on her phone.'

Ms Chiu's parents both worked in the largest telecom company in Taiwan, and knew how to use computers and other ICTs. Although they had a similar level of computer competence, Ms Chiu reported

that 'my parents both know how to use LINE and Skype, they both work in the Formosa telecom … my father is very interested in computers, but my mother is not that interested'.

My informants placed emphasis not only on competence, but also on 'personal interest'. They considered their fathers to be more interested in technology. This conforms to the masculine culture of technology, while the discrepancy between competence and interest further shows the 'differentiated use' among fathers and mothers. Kang (2012) described such differentiated use as 'ghettoized learning', which means that women's learning of ICTs is restricted to certain types of software and leads to limited empowerment, especially when their motives are mainly to maintain intimacy among family members.

## Dismissing and bluffing: reclaiming masculinity through words

What if the father is the one who does not excel at the computer? Focusing on the intersection between gendered and digital inequalities, past research has seldom paid attention to male users' incompetence, and how they reclaim their masculinity without becoming familiar with technologies.

Four out of 18 informants reported that their fathers had a lower level of ICT competence than their mothers. In these cases, however, they construed their fathers as 'not wanting to learn' rather than 'not able to learn it well'. In the process of reducing digital inequality in transnational families, the ICTs remained part of the masculine culture that discourages mothers from further digital empowerment. Moreover, in Taiwan, women are gaining more access to technologies after economic development, such as vehicles and computers, female customers are still expected to care about designs of technologies rather than the technicality (Shaw and Lin 2012). However, when certain technologies are used to express hegemonic masculinity in the context of Taiwan, such as motorcycles (Lo 2010), other technologies may be 'feminized'.

Ms Hsiao example provided a different insight into fathers' indifference to Facebook or LINE, which is that fathers do not use these Internet tools to maintain intimacy. Fathers do not have the responsibility of care in the family, compared to mothers, who actively engaged in virtual intimacy.

> My father disdains to use Facebook. I don't know why he is proud of not using it. My mother is very trendy. I don't need to teach her how to use Facebook, she learned it herself, and forced me to befriend her. She can easily find me using LINE or Facebook.

Feminine technologies are defined not only by its female users, but also those are culturally viewed less technical, militarized and 'hard' (McGaw 2003). As Ms Hsiao has elaborated, her mother and father have a disparate understanding of Facebook and LINE, because of their different needs. Her mother uses it fervently because it is convenient for contacting family members. While mothers are exploring the opportunities that digital tools offer, fathers think they are above these technologies that are utilized by women for 'trivial' purposes in my sample.

The case of Ms Lan shows quite the opposite to the previous interviewees. Because her maternal aunt had married in the U.S. and had been an emigrant for more than 10 years, her mother had been using Skype or similar software to keep in touch with her. In contrast, her father was computer illiterate. However, her father used his dismissive attitude towards communication technologies to maintain his pride.

> My father is very conceited. He says it's easy. But that's exactly why he does not want to learn it. He cannot admit that he does not know how to use it. I think he must have a sense of inferiority, and he tries to cover it by bluffing … he thinks he can get in touch with me through my mother, because she knows how to Skype.

Ms Lan's trenchant account of her father's resistance to learning computers raise a new possible relationship between masculinity and computers. First, her father's masculinity is threatened because he is computer illiterate. To protect his pride and masculinity, he bluffs that it is easy for him. At the same time, this relation between masculinity and technology is constructed through feminizing social media in this case.

However, the strategies employed by fathers to avoid losing face do not contribute to positive digital empowerment. The cultural equations of technology and masculinity emphasize hegemonic masculinity

wherein men excel at computers and scientific knowledge (Lohan and Faulkner 2004; Wajcman 1991). The affinity between technology and masculinity causes these men to distantiate themselves even further from 'feminized' technologies. This then becomes a typical case whereby men's internalized hegemonic masculinity hinders their empowerment in my sample and thus exerts an oppressive power on these less privileged men. Instead of admitting and redressing their inability, the examples reflects how fathers reclaim their masculinity symbolically by dismissing communication technologies and bluffing in order to live up to the expectation of true masculinity. In this way, these men, in fact, fall victim to the same masculine culture that is hostile to women's digital empowerment.

Past research has focused on women's social learning of ICTs. This finding adds to the relative paucity of related research in less tech-savvy men and the strategies they use to reclaim their masculinity. The research elaborates the different paths for limited digital empowerment between women and men. For mothers, the hostile environment sometimes precludes them from social support in social learning of ICTs. In contrast, men intentionally reject social support, feminizing and trivializing media technologies to protect their sense of masculinity. Although men and women's paths diverge, therefore, the consequences are similar.

This does not suggest that digital resources are equally distributed to fathers and mothers. In addition to the gender politics of social learning of ICTs, the next section examines the intersectionality and other structural limits on women, which elucidates why women's access to digital resources is more likely to be hindered than men's. I investigate the intersectionality between gender and class in specific cases to extrapolate why women are less likely to need and be interested in ICTs.

## Gendered mobility: intersecionality, generation and technology

Why do mothers not require the use of ICTs in some cases? Apart from being discouraged in the gendered process, a few of my informants' mothers were more structurally limited. I use the term 'gendered mobility' here to describe the structural limitation on mothers' access to ICTs. Gendered mobility refers to how mothers' geographical mobility is limited to family space and depends on other family members, such as husbands or children. Therefore, ICTs, particularly mobile devices, are not necessary for mothers, due to their limited mobility. Gendered mobility not only captures how mothers' mobility is mostly bounded within the family space, but also implicates that the placement of computers in households is unfavourable for mothers.

> My mother does not use a cell phone. If she is not at home, she is always with my father. So, if you want to find her, just call my father's cell phone number. She never uses a cell phone herself. That's how we find her.

In Ms Zeng's case, her mother is a housewife, whose mobility is very much bounded within the family space. As I noted before, the mothers in my sample are in an older generation, who were born in the 50s and 60s. Ms Zeng's mother is in her fifties and was not highly educated as Ms Zeng. Traditional gender roles limit their mobility (Shaw and Lin 2012). Her mother does not need to learn how to use a cell phone, because she spends most of her time at home. In contrast, her father's mobility is independent; it is not limited to the family space. In these circumstances, it is easy for Ms Zeng to ascribe her mother's digital illiteracy to the close relationship between her parents, and ignore the gender structure that impedes women's mobility and autonomy.

Depending on her father's mobility, her mother's mobility is thus gendered and, at the same time, restrained. As this example shows, women's gendered space and mobility affect their access to ICTs. While their geographical mobility depends on other family members, their 'virtual mobility' is also circumscribed and dependent. Moreover, the vast differences between women from these two generations, between mothers and daughters in my sample, also reflect female 'im/mobilities' in Taiwan (Martin 2016). When daughters in Taiwanese families strategically use Australian Working Holiday visa to negotiate gendered mobilities, Taiwanese mothers from another generation re-negotiate their mobilities and conform to traditional femininity afforded by ICTs in my sample.

Partially due to gendered mobility and dependence on family members, the lack of interest mothers show in learning ICTs is, in fact, embedded in the larger gender structure and inequalities that occur within families, particularly the spatial limitation on women's mobility. Taiwanese women, conforming to traditional femininity and gender role, are more likely to perform unpaid care work at home than men, because of the gender division of labour in families and the relatively low earning potential of women in the job market.Ms Ling's case is another example of the intersectionality of gender, generation and class that partially contributes to digital inequalities. Her family's economic background is different from Ms Zeng's middle-class family. Ms Ling's family runs a local business in her hometown, and thus her parents' house is also used for business purposes. The house is divided into a business space and a family space, which is common for small local business owners in Taiwan. Their store is on the first floor, while the second and upper floors comprise the family space. Ms Ling's mother does not know how to use a computer and does not possess a cell phone.

Interviewer: Did you teach your mother how to use a computer?

Ms Ling: My mother asked me to teach my father. I asked her if she wants to learn it as well. But she said: it is good enough that your father knows how to use it.

Interviewer: Does your mother use a cell phone?

Ms Ling: My mother doesn't even have a cell phone. Because my family runs a local store, they only need a landline. My mother does not leave the store unattended by herself. If she leaves, she is always with my father. So, my father has a cell phone … I call them after I get off work in Australia. I would not expect them to be always online, because they stay in the store most of the time. And their computer is on the second floor.

The intersectionality of gender, generation and class circumscribes her mother's mobility to within the store. Female labour, especially married women and single daughters, in Taiwan's satellite factory system was crucial to household economy in early 90s and many living rooms in the family space are used as factories for women to earn extra money for their families (Hsiung 1996). These traditional self-run business owners might not have economic difficulties in accessing ICTs, but their mobility is, in this case, limited to the store. That is to say, Ms Ling's mother might not be economically disadvantaged, but she is geographically restricted. Her mother interacts with customers in the store, while her father negotiates with providers or other business partners. This is the typical pattern of division of labour in self-run businesses in Taiwan. She is bounded within the spatial arrangement of the family and business space that is highly gendered. Communication technologies are thus rendered unnecessary.

A survey study in Taiwan also identified that self-run business owners' Internet usage time is the lowest among class categories (Ling 2012). In this light, the finding provides a detailed description that adds to past research. Spending most of their time in the store and interacting with customers, the owners have less time to use computers and the Internet, which articulates the gendered mobility of digital inequalities. Gendered mobility is part of the gender structure that limits women in the family space. Since mothers, particularly housewives, depend on other family members' mobility for their own movement and communication, ICTs do not benefit them. Thus, their lack of interest in ICTs is socially conditioned.

## Discussion

This article has argued that gendered and digital inequalities are tightly entangled, and less tech-savvy men and women are both disadvantaged because of the gender politics of communication technologies. As information and communication technologies are gendered through manifold social processes, including the hostile environment for learning and limitations on geographical mobility, reducing digital inequalities may sometimes contribute to the reproduction of gendered inequalities in families. It is critical to investigate these cases to explain and demonstrate the limitations on social support further.

This study has analysed the redistribution of information and communication technologies in transnational families, including computers, smartphones and other tools. Firstly, in the analysis of the

gendered process of learning, it has elaborated on how mothers are described as 'cannot learn it well' by informants while fathers are presumed to have a greater interest in ICTs, particularly in computers. Moreover, through the analysis, this study reveals how gender and generational dynamics impact the negotiations regarding 'im/mobilities' within Taiwanese families (Kim 2010; Martin 2016; Shaw and Lin 2012). In my sample, daughters uncritically accept the gendered mobility faced by their mothers, while they, the younger generation, are negotiating their own im/mobilities by transnational migration and being tech-savvy. This further reflects the generational politics of communication technologies between mothers and daughters.

Past research has focused on women's victimhood (Hannaford 2014; Horst 2006; Kang 2012; Parreñas 2005; Uy-Tioco 2007; Wajcman 1991; Wilding 2006), and ignored how masculine culture discourages men who are less tech-savvy from learning how to use ICTs (Lohan and Faulkner 2004). Examining the accounts provided by my informants, they construe their fathers' ambivalent attitudes toward ICTs as 'not wanting to learn'. This exposes the fragility of a masculinity that is easily threatened and how that masculinity needs to be protected and reclaimed by bluffing and dismissing ICTs. Bluffing and dismissive attitudes are two strategies used by fathers who are, in fact, computer illiterate to reclaim their masculinity without acquiring real digital literacy.

In addition to presenting the digital inequalities in families, this study has also investigated the reasons for mothers' lack of interest in ICTs. It has offered evidence regarding their gendered mobility, and how this discrepancy in mobility between men and women renders communication technologies unnecessary for women. If they are dependent on family members for their mobility and are geographically restricted, mothers do not consider ICTs important resources in their daily lives. Thus, although their daughters may want to teach them how to use ICTs, they refuse to learn.

These findings reflect that social support is not easily attained and accepted by many of my informants' mothers and fathers. This study recognizes the importance of social support but also highlights the limitations on these supports. While researchers stress the importance of social support (DiMaggio et al. 2001; Kang 2012), this study examined the difficulties faced when daughters try to reduce digital inequality in the home. Social support is sometimes impeded by the larger gender structure that should be addressed while reducing digital inequality.

Although this study has explained how the gender structure limits female agency for communication technologies, it is noteworthy that, in some cases, mothers have higher levels of computer skill, and their active interventions in the unequal distribution of digital resources are effective and crucial. In these cases, this study turns to fathers' 'active rejection' of learning ICTs.

The impact of the temporality of transnational families on mothers' digital empowerment should also be addressed. Past research has focused on how temporality shapes the patterns of transnational communication, but not digital empowerment (Madianou and Miller 2012). In the context of working holidays, most Taiwanese working holidaymakers return after one or two years in Australia. My informants who taught their mothers how to use computers or smartphones reported that their mothers stopped using them after they returned to Taiwan.

Mobility is constantly negotiated with gender, class and generation. Since the 'differentiated use' of ICTs is highly gendered and the acquisition of digital knowledge is ghettoized (DiMaggio et al. 2001; Kang 2012), it is reasonable for mothers to stop using them. The reason for their use is removed, particularly when mothers use ICTs to maintain intimacy between family members and leave other forms of digital literacy unexplored. Therefore, in the context of this study, temporality and gender politics intersect and there are limits on the duration of ICT use.

Amongst my informants, the exception was Ms Lan's mother, who had the autonomy to use the computer alone without difficulty. In this case, temporality affected the social process of learning ICTs. This reflects that this mother had more opportunity to practise how to use ICTs, since her family member had been away for a longer period of time. As discussed in the previous section, her mother has been using the computer to stay in touch with her sister, who studied and was married in the U.S., for more than 10 years. Her mother has been using many forms of transnational communication, particularly

the computer and Internet, more frequently and dependently than the other informants' mothers. The issues of temporality should be navigated fully in future research.

It should also be noted that the analysis and conclusion presented here are not universally applicable, as they are drawn from a specific context. Most of my informants' came from middle-class families. As this study examines how difference in class setting affects digital empowerment, the different impacts of various class settings should be investigated in further research.

The exploratory investigation into masculinity and technology has identified different reactions to the gender politics of communication technology between women and men. Since the masculine culture might discourage men from learning ICTs, a new research agenda should be applied to less tech-savvy men to investigate the complicated relationship between masculinity and technology.

All the informants were daughters who showed strong digital literacy. On one hand, the construction of freedom, individuality and mobility as a crucial part of younger, single women's identity in Taiwan, the future research should investigate further into female mobilities in East Asia and feminized migration from Taiwan. On the other hand, sons' perspectives are also lacking and this should be another avenue of future research, which could explore the different reactions to digital empowerment in families between daughters and sons. The interventions of sons into gendered and digital empowerment might contribute to discrepant consequences. Moreover, in my sample, most of the mothers are in their fifties and with high-school education. Family structures, age ranges of parents and children, and different transnational processes are also important factors that lead to different paths of digital empowerment. They have different communication needs and limitations on social support. Therefore, it is necessary to examine this in future research to provide a thorough investigation into this nascent and developing research area.

## Acknowledgement

Special thanks to Ting-Yu, Kang and Nien-Hsuan, Fang, Yen-Feng, Tseng, they supported and advised me throughout my postgraduate studies, which is why I could finish a master's thesis on female working holidaymakers' transnational families. Also, special thanks to Casey Brienza at American Sociological Association Annual Meeting in 2016. I am also indebted to all the helpful comments from *Continuum* reviewers.

## Disclosure statement

No potential conflict of interest was reported by the author.

## Notes on contributor

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