Instant Messaging on Interpersonal Relationship: How It Brings Intimacy and Negative Feelings?

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ABSTRACT

Nowadays, instant messaging (IM) has become very a popular and common application in everyday life. With more and more features and functions integrated into one single IM client, the technology is perceived to be useful for interpersonal communication by offering more usability and convenience. However, the negative impacts caused by IM usage should not be overlooked. The purpose of this research is to find out whether IM can really improve our interpersonal relationship, especially in two perspectives: social intimacy and negative feeling about IM usage. Research data were gathered by conducting in-depth interviews with 10 informants. These 10 people cover different backgrounds, genders, age groups and levels of usage. The research shows that the IM has both positive and negative effects on social intimacy and consequently on interpersonal relationship with many negative feelings about IM reported. The research suggests that people should find out a proper way to use the IM technology and also have better mutual understanding with other IM users. Future research should consider a quantitative method in order to assess the overall opinion about the use of IM more scientifically and accurately.

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Keywords: instant messaging, interpersonal relationship, intimacy, negative feelings

INTRODUCTION

Instant messaging (IM) is a type of very popular and commonly seen communication services via the internet to enable people to create a private or group chat space (Ramirez, Dimmick, Feaster, & Lin, 2008). Although it has overlap with mobile phone, short message service (SMS), and e-mail (Lo, 2006), there is little substitutability between them for the specific features that IM possesses.

For IM users, functions and convenience are considered the most important factors in determining their usage. What's more, as a channel of online/virtual communication, IM has been found very useful in the situations when it's not convenient or comfortable to talk face-to-face.

IM interactions are more like informal face-to-face communication - being simple, brief, spontaneous, and rich in context. The ability of IM to support synchronous communication in distributed settings makes its communication environment very attractive (Zhou, 2005).

IM is also considered less intrusive than email, phone call or video conference, for it allows multitasking and more complex activities such as coordinating with multiple partners in different places via different channels with different purposes (Contreras-Castillo, Pe´rez-Fragosob, & Favelac, 2006).

Meanwhile, IM can be used for relational maintenance in many situations including school, work, and social relationships (Chung & Nam, 2007; Lam, 2009). However, according to Avrahami and Hudson (2006b), IM might also have negative impacts over interpersonal relationships. For instance, at the early stage of development, the IM systems provide limited awareness, which always results in messages arriving at inconvenient or disruptive times. What's more, the ubiquity of IM has increased the expectations of interpersonal connectedness. One result of this kind of expectation is the rise of anxiety and other negative feelings in people who do not know to use it properly. For example, people are expecting quick and easy interpersonal interactions with IM because it is named "instant". However, many people complained that IM

clients, although named "instant", had made users more anxious when they had to wait for replies from others for a long time.

While the previous studies of IM share a common focus on the advantages of IM, this study will explore the potential for IM to influence interpersonal relationships: while instant messaging is supposed to be fun, why it makes people feel uncomfortable?

LITERATURE REVIEW

The Latest Development of Instant Messaging

In terms of its nature, IM should be positioned somewhere between synchronous communication (e.g. face-to-face, phone call) and asynchronous communication (e.g. email, blog, private message, bulletin boards), which enables geographically distributed parties to engage in nearly "real-time" interactions. It can be seen as a hybrid of SMS, email, chat room, telephone, etc. Webcam, voice chat, video conferencing can also be used in IM communication. Transferring files in various formats like video, voice, office documents is very easy because there is usually no limit on the file size. Animated emoticons are provided as substitutes of facial expressions, which is more vivid and entertaining than texting. What's more, IM not only offers multi-media functions but also multitasking interactivity where user can communicate with more than one person at a time (Zhou, 2005; Avrahami & Hudson, 2006a; Lo, 2006; Chung & Nam, 2007; Lin, Sun, Lee, & Wu, 2007; Ramirez & Broneck, 2009; Schwarz, 2011).

Over the last few years, IM has been developing rapidly. Some functions of IM even excelled other traditional interpersonal communication models such as telephone and e-mail. According to Patterson et al. (2008), 70% of participants in their research reported using IM the same or more than email, and for 73% of participants who used IM every day, it was displacing email usage.

The functions of IM are designed for enhancing users' social activities by providing more opportunities and convenience for interpersonal communication (Lo, 2006).

For example, a "buddy-list", the user's list of contacts, is often embedded in IM clients to facilitate interpersonal communication, with which the user can easily initiate a conversation with others by sending text messages or other multimedia channels (Avrahami & Hudson, 2006a; Chatterjee, Abhichandani, Li, TuIu, & Byun, 2005).

Some IM clients automatically provide different online-status indicators depending on predicted responsiveness, so that the users are informed of the online availability of others included in his or her contact list (Avrahami & Hudson, 2006a; Jacobson, 2007). Basically, there are two kinds of status cues: 1) a simple indication of whether the user is "online", "busy", "away", or "offline"; 2) a short phrase that allows customization for users to broadcast to their buddies; these status lines can also be used for activity recognition, place recognition, and interruptibility disclosure (Patterson, Baker, Ding, Kaufman, Liu, & Zaldivar, 2008).

In addition to real-time interaction, IM technology permits asynchronous communication. People can time-shift their conversations to a more appropriate moment (Patterson, Baker, Ding, Kaufman, Liu, & Zaldivar, 2008). For instance, the feature of "away messages" makes IM function as a kind of answering machine, which enables a user who is online but who is not available (or who does not want) to communicate in real time to inform others of her or his status and to automatically respond to instant messages sent to him or her (Jacobson, 2007).

IM protocols are kept in the conversation-window until it is closed and may be saved or copied. Users may choose to automatically save all chat logs for future consumption. In this way, IM has redefined memory as networked rather than personal (Schwarz, 2011).

Nowadays, many desktop IM practices have been adopted by mobile devices users. These mobile platforms include cell phones, tablets, and laptops, etc. (Patterson, Baker, Ding, Kaufman, Liu, & Zaldivar, 2008).

As IM plays an important role in our daily life and more and more people are addicted to it, more functions will be provided by IM clients. How could this digital communication innovation

and traditional communication work together, and what will be changed to human communication? Here comes the first research question:

RQ1. How does the latest IM development change our communication pattern?

Social Relationship

New technologies have changed our communication patterns and, thus, our interpersonal relationships. Although, face-to-face communication is an efficient to initiate and maintain relationships, but many recent findings have shown that computer-mediated communication (CMC), such as IM, is beneficial for interpersonal relationships (Chung & Nam, 2007).

Lin et al. (2007) point out that previous studies have indicated computer-mediated communication leads to "task orientation, lack of humanity, and lack of affection in the messages". Individuals' communication behaviours tend to be more detached in front of monitors or phone display screens (Rice & Love, 1987; Sproull & Kiesler, 1986). However, with technology innovation, both visual and audio contents can now be transmitted through IM clients, which enhance two-way communication and a sense of social presence. According to the social presence theory, when users are operating a medium instrument, "the sense of presence of face-to-face communication and social affection is missing" (Rogers, 1986). The invention of various types of instant messaging software applications is to meet the demand for social presence in computer-mediated communication, such as: ICQ, Windows Messenger, and Google Talk. These applications are faster and more convenient than emails and other traditional communication modes, attracting more users to the technology (Lin, Sun, Lee, & Wu, 2007).

As IM is becoming a popular medium for interpersonal communication, Avrahami and Hudson (2006a) indicate that IM communication characteristics differ significantly for users in different relationships:

Relationships in Schools

According to Leung (2001; 2007), IM is very popular with college students. Relaxation, entertainment and fashion are instrumental motives for IM use, while inclusion, affection, sociability and escape are the intrinsic motives. Specifically, affection and sociability are the major motives for students who are heavy users, because they have a high desire to meet new friends, express affection and show concern for others. Fashion and entertainment are motives for light users; they simply tend to use IM to stay fashionable and trendy.

IM usage among students is significantly related to "sociability". Chung and Nam (2007) suggest that students feel less lonely when they are engaged in IM chat because they know their buddies' online status and they can gain feedback. In IM chat, they can do video chat, send animated emoticons or play games together. More importantly, IM chat increases interactivity between users (Chatterjee, Abhichandani, Li, TuIu, & Byun, 2005; Quan-Haase, 2008).

On the other hand, some college students use IM because of "peer pressure". IM is so popular that if one is not using IM, he or she will be considered out-dated. This suggests that students tend to rely on IM to maintain social relationships with friends, and make new friends (Lo, 2006).

However, for students who are less self-disciplined and more addicted to IM, IM use might have a negative impact on academic performance (Huang & Leung, 2009; Fox, Rosen, Crawford, 2009; Lee & Perry, 2004).

Work Relationships

According to Mackiewicz and Lam's (2009) research, 26% of people who use IM for social communication also use it at work. It seems that this percentage will continue to grow as people in the workforce become more comfortable with IM and as teamwork makes the use of IM necessary rather than optional.

IM is diffused throughout the workplace and is useful especially for coordination and organization of meetings. According to Zhou (2005), the primary use of workplace IM is to support complex work discussions among a group of people, which seem to be very effective at discussing complicated topics compared to using only text messages. It's also used for communication between users who physically in the same space in order not to interrupt one another's work (Avrahami & Hudson, 2006b).

What's more, IM has been successful in establishing social bonds within work groups (Contreras-Castillo, Pe´rez-Fragosob, & Favelac, 2006). That means, IM use helps people to foster friendships in the workplace by increasing communication and connectivity with co-workers.

It's noteworthy that IM, a means to introduce levity and intimacy into the work day, is very effective in improving relationships in organizational communications (Ramirez & Broneck, 2009).

Social Relationships

As Schwarz (2011) claims, a large part of interpersonal interaction has recently been relocated to IM clients. People may enhance their interpersonal communication by using IM, leading to an increase in satisfaction with their social relationships in the virtual world. As Lin et al. suggest (2007), the use of IM as a communication channel induces a positive mediation effect, such as mood sharing, expressing thoughts, being cared for, and mutual understanding, leading directly to the individual interpersonal relationship The increase of users' satisfaction with their virtual interpersonal relationships has a positive effect on their interpersonal relationships in real life (Lin, Sun, Lee, & Wu, 2007).

Ramirez and Broneck's (2009) research indicates IM is employed in sustaining various social relationships. Interactions with friends and lovers are most frequently reported, yet those with acquaintances are also quite common; only family relationships are reported less frequently,

because interactions with family members are mostly with parents, who are older and less likely to use IM.

In addition, IM social interaction tends to be with existing friends rather than with strangers. Some studies have shown the use of IM can be effective at building high-quality friendships and have an overall positive impact on personal wellbeing. Furthermore, IM use may allow for weak relationships to be maintained at a higher level of trust (Pollet, Roberts, & Dunbar, 2011). What's more, IM allows users to communicate without paying long distance fees to maintain long-distance relationships (Lin, Sun, Lee, & Wu, 2007). And for adolescents, interpersonal interaction through IM can help them define the self-identity and social-identity (Lee & Sun, 2009).

Intimacy

According to Schwarz (2011), intimacy is usually an emotional effect of discrimination in access to information (i.e. accounts of either external events like interactions, or personal thoughts and feelings), and often strengthened by spatial seclusion. Privileges and discrimination in access to private information are the building blocks of modern interpersonal relations and intimacy. Hence, techno-spatial configurations that affect information-sharing patterns also impact intimacy.

The new practices of IM usage have introduced "network intimacy" - disclosure and closeness that take place under internet environment. This could be attributed to the perception that IM is a less formal tool, lending a kind of intimacy that is often absent from other types of computer-mediated communication (Contreras-Castillo, Pe´rez-Fragosob, & Favelac, 2006). The disclosure of information that is usually kept private defines interactions and relationships as intimate, differentiating them from casual interactions and relationships. Thus, network intimacy between friends, lovers, and family members is usually achieved through mutual sharing of information and emotions with intimate romantic interactions.

However, people are aware of the possibility that IM conversations may be shared, and spying techniques may be applied to this interpersonal sphere (Lewis & Fabos, 2005). As we shall see, this awareness will lead to increased performativity or self-censorship even between users in close relationships. Additionally, deception may easily happen since IM offers more physical distance and time lag compared to a face-to-face channel. With the above considerations, we are questioning whether the negative impacts from IM decrease the network intimacy demonstrated by previous studies? Here comes the second research question:

RQ2. With IM, whether intimacy between users has increased or decreased?

Negative Feelings about Instant Messaging

Obviously, IM also has its disadvantages. It is more or less vulnerable to viruses, spam messages, and abuse by other users. Users are unable to communicate with those who do not have the same application. There is also the risk of sending a response to an unintended buddy as a result of being overwhelmed by simultaneous conversations in ways of one-to-one, one-to-many, many-to-one, and many-to-many communication (Chung & Nam, 2007).

Instant messaging also places a lot of pressure on users to respond in an instant. Since most of the time users are aware of other users' presence, the receivers are expected to provide real-time response with a short period of time to think (Chung & Nam, 2007). The time latency in IM communication also causes "IM anxiety" to senders:

"The sense of anxiety and/or dread one feels when an IM is left unanswered for more than approximately 30 seconds. IM anxiety may be accompanied by unreasonably frequent glances at the IM window and an utter inability to perform any non-computer tasks."(Urban Dictionary, 2011)

People in more committed personal relationships may feel more obligated to use IM, and this kind of obligation also seems to have a strong correlation with bad experiences using IM (Patterson, Baker, Ding, Kaufman, Liu, & Zaldivar, 2008). This may lead to annoying distractions for

people who are engaged in work or study. The receiver has to choose between staying on task and engaging in conversation. Staying on task and not responding may come at a cost to the sender, who may need information or help from the receiver. The receiver may incur a social cost from being portrayed negatively. Engaging in conversation, on the other hand, will come at a cost to the receiver's ongoing task (Avrahami & Hudson, 2006b).

We also find that common assumptions about IM users and the established status cues are failing and users are from time to time embarrassed and interrupted with negative consequences (Patterson, Baker, Ding, Kaufman, Liu, & Zaldivar, 2008; Solomon, Newman, & Teasley, 2010). A research indicates that 92% of users had the experience of being interrupted by IM during work. 25% had been in a presentation in which the presenter received an IM and 5% had found themselves as the presenter in that same situation. In order to avoid interruption, 40% had to use a fake status and indicate that they are either away or offline when in fact they were not. Consequently, the inability to detect a buddy's status can often result in communication breakdowns with negative impacts on both parties (Avrahami & Hudson, 2006b).

For people who do not understand how instant messaging programs work, who do not know the linguistic styles conventional to instant messaging, or who are unaware of the reasons people post away messages, IM may easily cause misunderstandings (Jacobson, 2007; Slatcher, Vazire, & Pennebaker, 2008).

Although the negative feelings with IM use are discussed by a number of scholars, it's not yet academically defined, nor has it been scrutinized from comprehensive perspectives. In this study, we are going to focus on the negative psychological impact of IM by asking the third research question:

RQ3. How does the use of IM cause negative feelings?

Besides the above-mentioned factors, there are some other factors of IM may affect our interpersonal relationships. How will all these factors of IM affect both school/work and social relationships of users in general? Here comes the fourth research question:

RQ4. In general, in what way does IM affect our interpersonal relationship?

METHODOLOGY

As the research topic is more focusing on the psychological impact of instant messaging on the interpersonal relationship, and very few scholars have gone into this area with details and well-established quantitative scales, in-depth interview, rather than quantitative survey research, is therefore considered more suitable for this case. Only in this way can we have real-time interaction and feedback from the informants, with chances for direct observation and asking follow-up questions.

The interviews will start by asking the informants a list of questions designed according to the four research questions, covering (some may be overlapping) the perspectives of personal IM usage, how it affects intimacy, how and why negative feelings are caused, and how IM changes interpersonal relationships:

- *How did you learn about instant messaging?*

- *What are your reasons for using instant messaging?*

- *How much time do you spend on instant messaging in a typical day?*

- *How often do you modify your profile or status on IM platforms?*

- *Do you use emoticons?*

- *Do you think about your wordings during an IM conversation?*

- *How many and what types of IM tools are you using?*

- *What kind of IM tools do you use at school/work/home or on the go, respectively?*

- *What kind of IM tool is the most satisfying? Why?*

- *What kind of IM tool is the least satisfying? Why?*

- *How many contacts do you have on your IM buddy list?*

- Who do you communicate with on IM tools? Why these people?

- Who is the easiest for you to chat with using IM? Is there anyone who is difficult to chat with?

- How central is instant messaging to your interpersonal relationships?

- Do you see any problems with IM use?

- How long do you wait before you respond to an IM message?

- Do you feel anxious when you are waiting for someone to respond on IM tools?

- Have you ever pretended to be someone else in your IM chats?

- Have you ever deceived someone or being deceived by others on IM?

- Have you ever received a message from someone you would rather not communicate with?

- Have you ever encountered any embarrassing situation when using IM?

- Do you keep record of your chat history?

- Has your chat history ever been stalked by someone else?

- What kind of guidelines from school/work/family support or restrict your IM use?

- Does it affect your life if you can't use IM? How?

After that, some deeper follow-up questions will be asked with respect to their answers to those questions. The informants will also be asked to provide live demonstration or chatting records for further elaboration based on voluntarism.

In order to have a more comprehensive understanding of the research questions, the judgement sampling technique is applied. Ten informants were selected as a productive sample to answer the research questions. A framework of the variables that might influence the informant's contribution is developed for the purpose of selection procedure. The variables include age, gender, and level of usage (addicts, normal users, laggards).

Gender: F=Female; M=Male
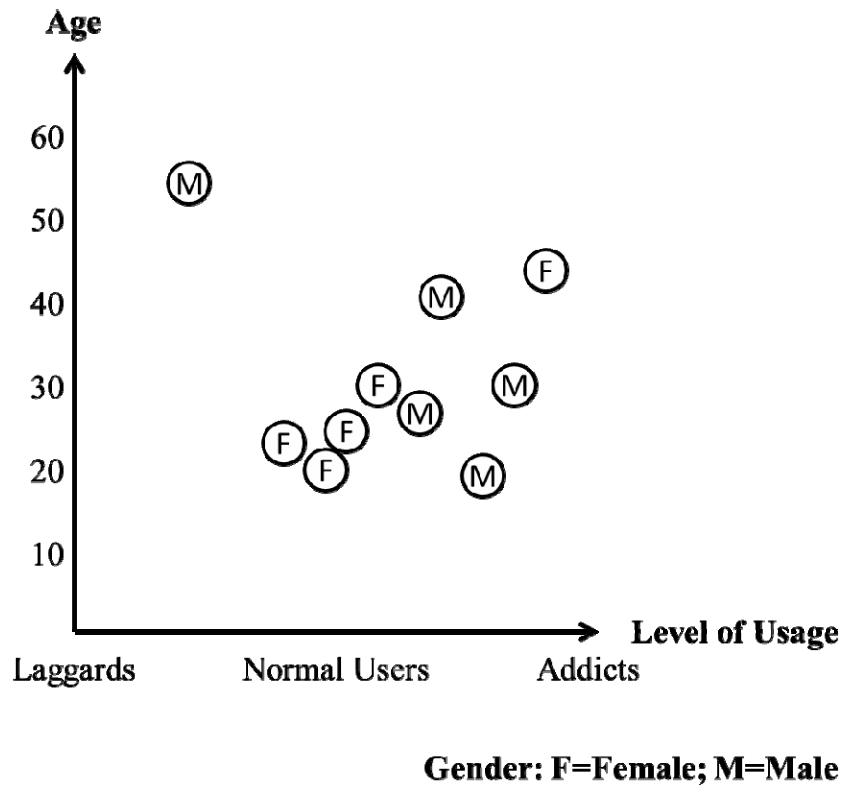
The profiles of the interviewees are listed as below:

(1) **Normal User A**:

She is a 20-year-old college student majoring in business. Normally she spends approximately one hour on them per day. The IM tools she uses the most is QQ and Sina Weibo IM. Since she is studying away from hometown, she can use the free video and audio chat functions on QQ to stay in touch with her family and long-distance friends. She also uses QQ group chat to discuss homework or call for activities with classmates. Sina Weibo IM is one of her favourite IM tools because it perfectly merges the IM with private mail functions and makes switching between online and offline chat very smooth.

(2) **Normal User B**:

She is a 22-year-old graduate student majoring in new media. She has such a strong interest in technology that she is always the early adopter of new innovations. She has tried out many IM tools but she thinks the switching cost is high by doing so because she has to rebuild the contacts whenever she moves to a new platform, and that's why she sticks to using QQ after all. For her,

QQ is like another contact book besides the one on her mobile phone; she uses that to retain her connections with acquaintances and virtual friends. In her schoolwork, QQ has been one of the most-used platforms for information exchange and group discussion. But she has also encountered a lot of annoying problems such as loss of chat history and weak connection when making conference call. Sometimes she has to look for other substitutes. She uses IM for 1-1.5 hours each day on average.

(3) **Normal User C**:

She is a 24-year-old engineer in the quality control area. For her, IM is very important because it helps her out in the long-distance relationship. She thinks IM is more money-saving than phone calls or SMS because there have been so many IM tools that enable voice call, photo transfer for free. IM has become a major part of her relationship; the same thing happens in her workplace. However, she does not want to be too addicted to IM, because for her, face-to-face communication and phone calls are more natural and interactive. She uses IM for approximately 1 hour each day.

(4) **Normal User D**:

He is a 26-year-old financial analyst. He likes IM because he feels more comfortable in written communication than oral communication. He uses IM for 1-1.5 hours per day with 2/3 of the time spent in workplace. For him, IM serves not only as a good channel to gossip with colleagues, but also as a time killer when he is free from work. However, he cannot feel freely when using IM for personal communications, because the boss is watching. What's more, he thinks his privacy is not secure enough, since he believes the company might be monitoring the employees' instant messaging.

(5) **Normal User E**:

She is a 30-year-old project officer in university. She seldom uses IM in workplace, but uses it a lot with her boyfriend. As her boy friend goes on business trip often, IM is one of the best tools for long-distance communication. As she notes, IM is perfect for lovers to chat during work hours

because it has times-shifting functions and will not cause interruption. She says, thanks to iPhone and its app store, there are so many free useful IM tools that can save both time and money. But she can hardly use it to communicate with family because her parents don't know how to use IM. Averagely she spends 1-1.5 hours on IM each day.

(6) **Normal User F**:

He is a 38-year-old studio manager of a TV station. He has very ambivalent feelings about IM: he loves IM for its convenience and useful functions, but he also hates it because people can easily cheat or lie via this kind of virtual communication. That's why he became self-restraint and very distrustful of others while using IM. Each day he uses IM for 1 hour at most.

(7) **Addict A**:

He is a 19-year-old college student majoring in computer science. He is so fanatic about all sorts of new information technologies and online games. His IM experience began with QQ when he was 8, and then he became so absorbed in all kinds of IM tools and has tried out MSN, Google Talk, Skype, Renren Instant Messenger, etc. His parents bought him a smartphone when he started university study, with which he used "WeChat!" and other IM tools a lot. For him, using IM tools, especially those on the mobile platform is the best way to keep contact with friends and maintain the relationship with his girlfriend. Typically he spends more than 2 hours on IM each day.

(8) **Addict B**:

He is a 29-year-old copywriter in an advertising agency. He is a heavy user of IM with more than 2 hours each day. He uses MSN and Whatsapp both during office hour and after work; but the usage is totally different. In workplace, the use of IM is very task-oriented for him; he uses it as an assistant to tackle problems and communicate with clients smoothly. Sometimes IM is the best choice to avoid head-on clash. But for his social life, IM helps increase intimacy with friends and family. With so many new functions on IM tools, he prefers text to audio or video. And he loves to use emoticons, for he considers emoticons as useful substitutes for facial expression

when he tries to express some certain emotions.

(9) **Addict C**:

She is a 42-year-old documentary producer, single, and affective. For her, IM is considered as one of the best ways to hook up and maintain relationships. But she always feels anxious about IM when others do not reply her in an instant. She likes to explore and tries out new IM tools and functions, and always makes the best of them. She spends 2.5 hours on IM each day on average.

(10) **Laggard**:

He is a 55-year old general manager in a trading company. He does not have much knowhow in information technologies and uses them for less than 1 hour each week, and he is fine without using IM tools at all. He does not think IM is better than face-to-face communication, and he insists that phone calls are much more effective than sending instant messages.

FINDINGS

Latest Developments of IM and Its Impacts on Communication Patterns

As of the first research question, the 10 informants' report is suggesting the following development trends in IM.

Firstly, IM tools design and usage are moving from the original desktop/laptop computer to the mobile platform. All of the informants had their first experience with IM on the desktop computer. For those informants in Hong Kong, most of them were talking about ICQ when they mentioned IM usage at the early stage. And for those coming from Mainland China, it's QQ that let them get to know the technology. It's seen as a copycat of ICQ. Another most widely used IM tool mentioned by many of the informants is MSN, which is a hero product of Microsoft, and considered one of the best IM tools that meet the needs of international users. It's very popular in the workplace according to the informants. But nowadays, as we may see, the mobile market of IM is skyrocketing. All of the informants except the laggard are using mobile IM tools, such as Whatsapp, which ranks the first in the Apple App Store, and eBuddy, the app that combines

multiple platforms of MSN Messenger, AIM, Facebook, etc. As we may easily notice, it's smartphone that makes the mobile IM tool possible. And thanks to that, IM is becoming really "instant".

Because of the arising trend of mobile IM tools, many of the IM developers started to target different platforms. Three informants said they used QQ on both computer and mobile phone. What's more, Tencent, the developer of QQ, launched another semi-independent app named "WeChat!". With this app, users may receive offline messages from QQ, and also use it as an independent IM platform to add new friends and chat. Compared with QQ, "WeChat!" brings in the audio note function, which makes it quickly surpass the QQ app, and as a result, gives users a more convenient and complete experience.

Besides those traditional IM developers are crossing the platforms, many social network sites (SNS) want to capture the IM market. As some of the informants mentioned, they are using the instant messaging services on Facebook or Sina Weibo. The IM functions on Facebook is merged with private mail, and the chatting can happen both online and offline. That means, if you talk to someone who is offline, your message will be sent as private mail; if the one you are talking to is online, the chat box is just like an IM tool.

In addition, the IM tools are working with multimedia contents, including text, emoticon, image, audio note, voice call, and video. For example, two informants told me that he used QQ for several purposes: text messaging, conference call (phone call or video), file transfer, etc. And Normal User 2 and Normal User 5 agreed that the combined functions are welcomed for simplifying our life by arranging things on the platform. For users, it's more interesting to use IM when multimedia functions exist. And they have choices of communication channels according to different circumstances.

The informants were talking about the new small gradual changes, new features and functions of IM. For example, WhatsApp, an instant messaging tool that operates like any regular chat app, features some special functions that similar apps do not have: Each WhatsApp chat

window has a timestamp that indicates when a chat buddy last accessed the app, or if connected, is shown to be "online". What's more, there are green checkmarks next to the messages you send functioning as message delivery acknowledgment indicators. When there is one checkmarks, it means the message has been successfully delivered to the server; when there are two checkmarks, it means the message has been successfully delivered to the device of the chat partner, but confusingly enough, it does not indicate that message was read.

According to the ten informants, there are a lot of benefits from the latest development trends of IM, and these benefits can be summarized as convenience, mobility, control, time-shifting, and money saving.

Convenience

The use of IM does not require much hardware or knowhow in IT; starting a conversation is as easy as double-clicking at the contact list. With the emergence of IM aggregator, rather than have two or more different IM clients running at once, users can manage multiple accounts in one place. These accounts can also be associated with a profile and easily connected or disconnected.

Mobility

Since many of the IM tools are going mobile, users are enjoying more mobility in daily life and interpersonal interaction. IM conversations are no longer limited to computers; it can be from computer to mobile, or from mobile to mobile.

Control

IM users not only have more control on interpersonal communications, but also more control on how these communications happen. For example, there is a blocking system for most IM tools which allows users to remove the others from their lists. This is very useful to avoid instant messaging from the ones you do not want to talk to.

Time-shifting

Actually, instant messaging is no longer necessarily "instant". Messages can be temporarily and automatically saved and restored. If the incoming message does not deserve immediate attention, the user may just ignore it and get back to the sender when he/she has time.

Money Saving

Compared with phone calls, IM users can pay less and use more. With the free video call functions, the IM tools can facilitate the users to meet someone without commuting expense.

Effects of Instant Messaging on Intimacy

The second research question is about to find out the effects of IM on our social intimacy. In different circumstances, IM has different effects on intimacy.

Normal User A, Normal User B, and Addict A, who are university students, contended that IM had prominently increased intimacy in school. For students who use IM mostly for gossip and discussion, "network intimacy" can be easily translated into real-life intimacy. IM has lowered students' communication costs and enriched the content and channels, which is welcomed by the youth.

In workplace, IM is often used as a tool to assist informal conversations and file transfer. It makes the communication more private and intimate, without disturbing the others when they are engaged in conference or tasks. Normal User C and D said IM brought fun to the workplace because people shared gossip or interesting topics when they chatted privately on IM. Addict B thought IM would make communication with boss less tense and more relaxed, in which way the employee-boss relationship could be improved.

In the social sphere, the situation is a bit more complicated. All informants claimed that IM had to some extent improve personal relationship with lovers and friends, for mobility and

convenience the IM tools offer. However, since IM allows people to send messages back and forth online with the chat history automatically stored in most cases, people are aware of the possibility that IM conversations may be shared, and spying techniques may be applied to this interpersonal sphere. Normal User A, Normal User B, Normal User D, Normal User F, Addict A, and Addict C admitted that they had stalked their partner's IM chat record; Normal User B, Addict A, and Addict C reported their IM conversation had been spied by their partner. Consequently, stalking will possibly break off the relationships, and the awareness of being stalked will lead to increased self-censorship or performativity between lovers.

Additionally, Normal User C, Normal User E, Normal User F, and Addict B said deception may easily happen since IM offers more physical distance and time lag compared to a face-to-face channel, which can do a lot of harm to interpersonal intimacy

Negative Feelings about Instant Messaging

Then third question asked about the negative feelings of IM usage. Interestingly and surprisingly, all of the informants report that they have bad experiences of various types with IM.

Anxiety

Normal User C, Normal User D, Normal User E, Normal User F, Addict B, Addict C, and Laggard said they would feel anxious if they didn't hear from the friends whom they sent an instant message to within 5 minutes. For them, the slight delay in communication indicates disinterest or rejection. Sometimes, the IM features that the developers may have thought would be useful when they were designing them will make users anxious. As mentioned before, the popular smartphone application Whatsapp features the online status indicator and delivery report with checkmarks. In this case, the indicators are informing senders whether or not they should expect an immediate response. However, according to Normal User A, Normal User C, Normal User D, and Addict C, these little features had become a source of anxiety attacks and passive aggressive behaviour; an innocent destroyer of fragile self-esteem.

Guilt

On the other hand, when all of a sudden there's an alert from IM, people may feel stressed because they are supposed to respond in an instant. Normal User C, Normal User D, and Addict B said they would feel guilty if they did not reply instantly for whatever reasons whenever they received an instant message.

Pressure

Since IM technology is fast changing, people are moving from one platform to another from time to time. For Normal User C, Addict A, and Addict B, they felt pressured when they were not using the same IM tool as friends or colleagues; that forced them to follow the others and the switching cost is high. When opening up a new IM account, they have to rebuild the contacts by adding friends one by one. Sometimes they have to use more than one IM client at a time to stay in touch with contacts on different platforms.

Distraction

According to Normal User B, Normal User C, Addict B, and Laggard, IM becomes very distracting when people are working. Whenever a message pops up, the alert ringtone or vibration would distract people's attention from work or conference, which is very disturbing and annoying for users and the people around him as well.

What's more, the pervasiveness of IM usage has caused "absent presence", which means one is physically present, but is mentally absorbed by a technologically mediated world of elsewhere. As Addict F said, people around the IM user of absent presence would have the feelings of being ignored or isolated.

Embarrassment

Both Normal User C and Normal User F had very embarrassing experiences with IM. Normal User C mentioned that when she was using her personal laptop for presentation to clients, an IM chat window suddenly popped up and she had to stop talking and shut down the window in a hurry. For Normal User F, every time the boss or colleagues passed by him when he was chatting on IM clients, he would feel really uncomfortable and think the others were peeping at his conversation.

Suspicion

Since IM conversations are virtual and invisible, it may cause partners to become suspicious of one another, and negatively influence mutual trust. Sometimes, deception really happens. Normal User F divorced his wife a few years ago because she was cheating on him. He found his wife always chatting with someone late at night. After stalking the chat record, he realized she was dating with another man. As the relationship going worse, he decided to divorce. Since then, he became very suspicious of girlfriends in the new relationships, especially on IM usage.

Confusion

As IM clients becoming multifunctional, new features are actually making the usage more complex. Addict C and Laggard always felt confused with the complicated functions. As these new functions are useless for them, their daily usage only involves one or two basic functions.

Impacts of Instant Messaging on Interpersonal Relationship

The fourth research question is set to find out the effects of IM on interpersonal relationship.

As some of the informants reported, IM is promoted as being "real-time", destroying the need to communicate face-to-face with others. It is possible for many of them to remember the days before the computer and Internet, where communication was conducted over the phone.

Now, instead of asking for someone's phone number, it is very popular for individuals to exchange IM account information.

With IM, it is possible and more convenient for friends, lovers, family members from long distance to stay in touch. Normal User C and Normal User E said a long distance phone call was expensive to communicate from long distances with lovers, however with IM, lovers could communicate with ease and did not need to pay any money. It is this simple characteristic that makes IM programs so popular.

IM clients allow for people to virtually remain in contact anytime, anywhere. The increasing amount of IM use was positively associated not only with verbal intimacy, but also with affective and social intimacy. Most of the informants agreed that IM promotes rather than hinders social intimacy, and interestingly, frequent IM conversation actually encourages the desire to meet face-to-face.

With the steep advancement of IM technology, their influences on interpersonal communication and relationships can easily be observed. This near-synchronous communication application has contributed to a sense of closeness between friends, colleagues, family and lovers.

In schools, as Normal User A and Addict A suggested, the intimacy in friendships is closely related to the amount of IM use. From an organizational perspective, according to Normal User C, Normal User D, Normal User E, Normal User F, Addict B, and Addict C, IM supports a variety of informal communication tasks in the workplace. This casual environment can create a more relaxed atmosphere for intimate communication. For people using IM at home, or in private space, as Normal User B and Addict B said, this kind of interpersonal communication always leads to more self-disclosure and possibility of developing more mutual understanding and trust.

CONCLUSIONS AND DISCUSSIONS

Reasons for IM's popularity may be that this type of communication is inexpensive compared to other forms of media such as phone calls. Besides economic factors, some attributes

of IM also contribute to the worldwide adoption of IM. Being near synchronous, IM may be used for one-on-one or in group communication, combining the features of telephone, email, chat rooms and others into one single application. IM also offers the ability to know who is connected and available for conversations, and the ability to communication in real time. Nowadays, IM software features audio and visual functions as well. Thanks to the above-mentioned advantages, IM has proven to be one of the most popular online applications.

In this research, we focus on the development trends of IM technology and the problems it has caused. The findings can be summarized as follows:

Firstly, the design and usage of IM are switching from desktop/laptop computer to mobile platform. Because of the rising popularity of mobile IM tools, many IM developers started to target the mobile market. Many social network sites also want to capture the market. In addition, many of the IM tools are designed to work with multimedia contents, including text, emoticon, image, audio note, voice call, and video. For these ten informants, the major benefits of the latest development trends of IM can be summarized as convenience, mobility, control, time-shifting, and money-saving. The technology has drastically changed human communication pattern in a way that face-to-face communication or phone calls are going to be displaced by IM tools.

Secondly, IM is good for enhancing interpersonal intimacy, either in school, workplace, or with lovers and friends. For its convenience, mobility and other functions, emotional intimacy between people are increased in a virtual world. However, we should not ignore the fact that IM could be threats to intimacy at the same time if it's not managed properly. The informants in this research were reporting that IM has increased the possibility of misunderstanding, deception, and suspicion, which may seriously do harm to intimate relations.

Thirdly, the negative effects caused by IM are rising and deserve more attention and social concerns. These negative psychological impacts are prevalent among IM users. For senders who are used to instant gratification and easy personal access, any delay in reply will cause feelings of anxiety. Receivers who cannot reply in an instant might feel guilty. Some people use IM because

of peer pressure; if he wants to stay in touch with others, he has to follow the trend and use the same IM client as the others. For those who are working or have to stay concentrated, IM becomes very distractive whenever a new message pops up. It's also very embarrassing that an IM alert interrupts a conversation or a conference, or your IM conversation is seen by others accidentally in a public area. IM might also engender suspicion between intimate relations, because the IM conversation always happens invisibly to others and thus increase the possibility of deception. As the IM technology innovates at a fast speed with more and more new functions being integrated into one single IM client, the complicated usage make people confused. Many functions that people do not need only make it confusing for users.

To summarize, IM is a technology designed for the good of users that may enhance interpersonal intimacy so as to improve the quality of interpersonal relationship. However, if not used properly, the negative feelings caused by IM may have the opposite effect.

For instance, most IM clients allow users to set online status indicators to signal whether they are online, busy or away, but people still always get annoyed and complain about being disturbed by other IM buddies when they do not want to chat. One reason for this problem might be the status indicator, however, are often inefficient as they require users to set them manually. Eight out of the ten informants report they use automatic methods for revealing online status, and they do not really care and check whether the status is properly set.

On the other side, seven of the ten informants pay attention to their buddies' status. Why do IM users pay attention to but then disregard the status of the receiver? Why do they choose to interrupt friends whose status is set to "busy"? Normal User F offers a good explanation for these annoying, embarrassing, and anxious situations: people sometimes do not consider "busy" and "away" as signals of relating to interruptibility, instead they are being interpreted as indicators of expected response time. When users say they are busy, they don't mean that they could not use IM, but rather that the senders should not expect an instant response.

Nowadays, although it seems impossible for us to get rid of the IM technology, and consequently, its negative impacts, we can still try to manage it properly by understanding the problems and the reasons behind for it to improve our quality of life.

LIMITTAIONS AND SUGGESTIONS FOR FUTURE RESEARCH

Compared with quantitative research, only a small amount of informants were invited to interview in this research, which cannot represent all IM users. As the interviews were face-to-face, the informants might be affected by the interviewer. With the limitation of time and social network, the numbers of people from different groups are not equal; findings from the groups that have less informants might not be representative enough.

A quantitative research with well-established measurement scales is highly recommended. Results will be more representative and objective with a large sample group. From this research we can see that people have different backgrounds had different point of views on the same problem; informants with more diverse backgrounds should be included. A qualitative research again is recommended after the quantitative research to seek empirical support for research hypotheses. Observation, focus group, or in-depth interview can help researchers understand the trends and problems of the technology better.

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