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Who Benefits from Social Media?
The Role of Social Media Functions and Personality Traits in
Predicting Social Capital and Psychological Wellbeing

(誰がソーシャル・メディアの恩恵を被るのか？社会関係資本と精神衛生を規定するソーシャル・メディア機能と性格特性の役割)

by

Yu Guo

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Doctor of Philosophy in International Media and Communication

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CHAPTER 1: INTRODUCTION

1.1 Background of Research

Over the past two decades, the Internet has greatly changed our way of communicating and has revolutionized how we live every day. With the increasing number of Internet users, scholars have critically discussed the social and psychological consequences of Internet use. One topic that attracts fierce debate is how daily Internet use influences social relations (Miyata & Kobayashi, 2008) and whether Internet use improves quality of life (Kraut et al., 1998; Vergeer & Pelzer, 2009).

Compared with traditional media (e.g., television, newspaper, and radio), the Internet is the most easily accessible medium, making interpersonal communication incredibly quick and convenient. Previous studies have suggested that information and communication technologies (ICTs) allow the combination of breakthrough features of conventional media, which greatly facilitates information flow and person-to-person communication (Bargh & McKenna, 2004). These advantages of ICTs have created considerable opportunities for the formation and maintenance of social relations (Hampton, Lee, & Her, 2011) and have promoted a fundamental shift in the way that people choose to communicate with others (Ross et al., 2009). It is acknowledged that ICTs significantly contribute to the transformation of our social lives (Kraut et al., 1998; Putnam, 2000), which encourages sociologists, psychologists and computer-mediated communication (CMC) analysts to continuously find further

evidence supporting the sociopsychological impact of these new technologies (Antoci, Sabatini, & Sodini, 2012).

As representative ICT settings, social media have attracted millions of users worldwide. For example, three years ago, active Facebook users who visited their homepage every month had already surpassed one billion (AP¹, 2013). In addition to the social networking services used worldwide (e.g., *Facebook*, *Twitter*, *Google+*, *LinkedIn*, *Instagram*), the social media market also demonstrates a variety of cultural landscapes. For instance, *LINE Messenger*, with texting, sharing, and calling functions, and an abundance of cute stickers, has replaced *Facebook* and *Google+* to become the most popular social media platform in Japan (MIAAC², 2014). Starting with online forums and communities, Chinese social media have experienced 20 years of high-speed growth since 1994 (Xiong & Lv, 2013). *Renren* is the earliest local social network site (SNS) in mainland China, which attracted 280 million users by the end of 2013 (Nakao, 2013). *Weibo*, similar to *Twitter*, had 167 million active monthly users in 2014 (Sino Media, 2014). With the development of ICTs, more novel patterns of SNSs have been introduced. *WeChat* offers a mobile messaging service and has over 300 million active users (Millward, 2013), which is seen as the largest communication channel to overtake short message service (SMS). Currently, SNSs have become the major avenue for Chinese people's social lives.

Internet-based services have gradually changed the structural boundaries of the

¹ AP is the abbreviation for the “Associated Press” in the United States.

² MIAAC is the abbreviation for the “Ministry of Internal Affairs and Communications” in Japan.

online public sphere (Brundidge, 2010), introducing major challenges to the traditional patterns of communication and socialization. Social media are not only altering the public discourse but also setting trends in a wide range of topics (Asur & Huberman, 2010). For instance, psychologists are concerned that the blurred boundaries between real and virtual worlds may lead to illusory feelings of having support (Turkle, 2012). In addition, in the view of sociologists, wide use of social media might be an essential avenue for maintaining and creating social ties (Ellison, Steinfield, & Lampe, 2007), for seeking information (Ellison et al., 2011; Park, Lee, & Kim, 2012), and for participating in online civic activities (Park, Kee, & Valenzuela, 2009). Therefore, whether and how social media influences individuals' social relations and psychological wellbeing is worth examining (Ellison et al., 2007; Valenzuel et al., 2009; Valkenburg & Peter, 2007). In addition, due to the limited knowledge of the mechanism of social media effects, exploring whether effects vary according to specific contexts, individuals' intrinsic properties and particular patterns of use is necessary.

1.2 The Aims, Significance, and Originality of the Current Study

This study's focus is two folded and aiming to explore how social media use influences individuals' social ties and psychological health. First, as suggested in previous studies, the functions of social media use could be more significant predictors compared with general indicators of media use (e.g., amount of time)

(Papacharissi & Rubin, 2000; Shah, Kwak, & Holbert, 2001; Weiser, 2001; Williams, 2007). Social media provide diverse user experiences through the integration of multiple functions. Specifically, this research explores how different social media functions affect social capital and psychological wellbeing. Second, individual differences are investigated as moderators that alter the effect of social media use on outcomes. Specifically, five fundamental personality traits (i.e., extroversion, openness, conscientiousness, agreeableness, and neuroticism) are adopted from the well-known Five-Factor Model (FFM). In general, this research attempts to improve our knowledge of social media effects by highlighting the role of differentiated patterns of use and individual characteristics. A more comprehensive framework for predicting the consequences of social media use is expected from these findings, which will contribute theoretical and methodological implications to subsequent studies.

In addition, the remarkable development of social media in China also constitutes the significance of doing this research. With more than 632 million Internet users (CNNIC³, 2014b), China probably has the most energetic and promising market for social media. According to the report of the China Internet Network Information Center (CNNIC, 2014b), by the end of June 2014, the utilization rate of mobile phone had reached 83.4%, for the first time overtaking that of traditional personal computer (80.9%). A report by Nielsen also demonstrated that, for most Chinese netizens,

³ CNNIC is the abbreviation of “China Internet Network Information Center”.

logging on social media accounts has been an indispensable part of their daily lives (Nielsen, 2012). Social networking services become the common online destination among the Chinese users to disclose themselves, communicate with others, and search for information. Thus, analysis of a representative sample of Chinese social media users is expected to enrich the world database of social media research.

Regarding the originality of the current research, the following aspects are worth noting. First, different from many previous studies, the current research did not treat the frequency or duration of social media use as an independent variable; instead, this research first proposed the concept of social media functions as predictors of differentiated outcomes of social media use. This research assumed that the time displacement hypothesis may not apply to research on social media effects. Second, in addition to the focus of behavioral differences, this research also paid attention to differences among individuals' intrinsic characteristics. Thus, the results of this research will also provide references to answer a common question: who benefits from social media? Third, with respect to the dependent variables for life satisfaction and social capital, this research did not treat individuals' psychological wellbeing as a separate variable from social capital; they were instead, included together in a structural equation modeling (SEM) framework. Lastly, the discussion of social media's effects in a Chinese context will also greatly enrich the diversity of current social media research.

1.3 Organization of the Current Study

As demonstrated in Figure 1, there are seven chapters in this dissertation. Following the above introduction, Chapter Two reviews the theories for understanding social media effects and explains the concepts of social capital and psychological wellbeing. Based on findings of Ellison et al. (2007) and other previous studies, Chapter Two reviews the relationships between social media use, two types of social capital (i.e., bridging social capital and bonding social capital), and psychological wellbeing.

To test the validity of the proposed model, the current research conducted a pilot study on Chinese international students in Japan before the national survey. Chapter Three briefly introduces the procedures, methodology, and results. Implications and limitations of the pilot study are also addressed.

Drawing insights from the pilot study, in Chapter Four, research questions and assumptions regarding the relationships among social media use, personality traits, social capital, and psychological wellbeing are proposed.

Chapter Five outlines the methodology of the current research and introduces procedure and participants of the national survey, measurements of relevant variables and data analytical strategies.

Chapter Six presents the results of this research, including an overview of the descriptive results, results of preliminary analyses, and results of hypotheses testing.

Chapter Seven discusses findings and implications of this research. Specifically,

this chapter goes further on how social media functions affect individual-level social capital and psychological wellbeing. It also presents explanations of the moderating role of personality traits in the relationship between social media use and the outcomes. Limitations and future research directions are also discussed.

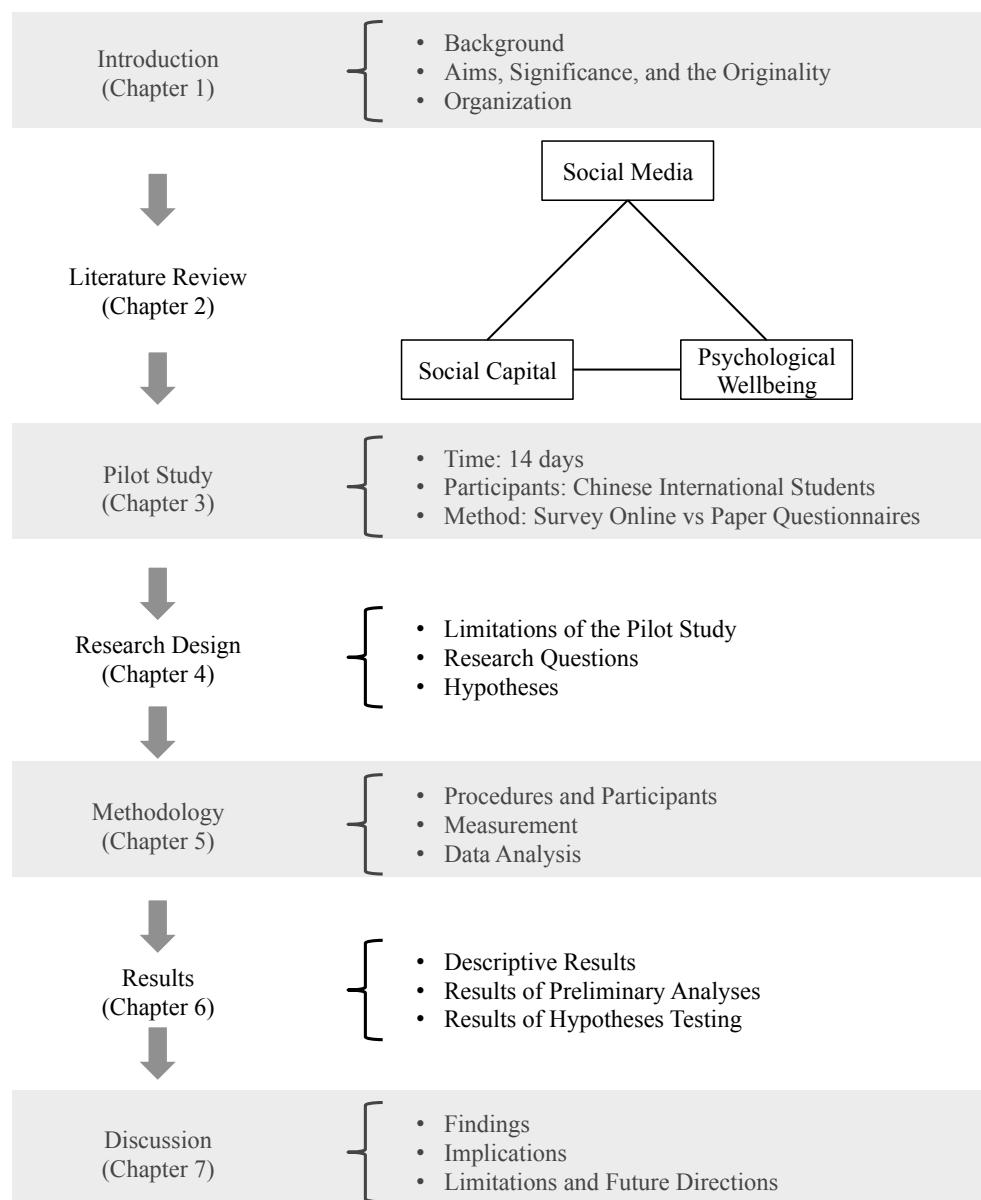


Figure 1. Structure of contents.

CHAPTER 2: LITERATURE REVIEW

2.1 Theoretical Basis for Social Media Research

2.1.1 A Shrinking World of Weak Ties

In 1929, the concept of “a shrinking world” first appeared in *Everything is Different*, a book by Hungarian writer Frigyes Karinthy. In this book, a short story entitled “Chain-Links” (Karinthy, 1929) anticipated that, along with the development of various modern technologies, the world was “shrinking”, and the distance between people was decreasing because of the growing density of social networks. As prophesied, after decades of ICT development, the Internet is making our world shrink. Karinthy’s idea was considered the ideological source of the “six degrees of separation” that made a great impact on the establishment of social network theories.

The concept of “six degrees of separation” originated from the famous “small world experiment” by American social psychologist Stanley Milgram. In 1967, after Milgram moved to Harvard University, he conducted the experiment attempting to investigate the average path length between any two people. After several “letter delivery” experiments, Milgram surprisingly found that the average path length of delivering a letter to an unknown recipient was only 5.5. The results suggested anyone could connect with a target contact through a maximum of six persons. Thereafter, Duncan J. Watts from Columbia University followed Milgram’s experiment and launched a worldwide project to test the “searchable” property of social networks. He found that only a few steps (five to seven) were required for people to deliver a

message through their network of acquaintances to a distant stranger (Watts, Dodds, & Newman, 2002).

To some extent, these experiments corroborate that “a shrinking world” is becoming a reality, given the increasing number of linkages among individuals. In this research, “linkages” represent the interpersonal ties embedded in our social networks. Sociologist Granovetter (1973) noted in his paper *“The Strength of Weak Ties”* that, although weak ties might be inferior to strong ties in terms of closeness and stability, they are likely to play an essential role in bridging the gaps between individuals and small groups. Weak ties have their own advantages, including lower costs and wider distribution, which makes these ties more important in expanding informational networks, raising social mobility, and increasing communication efficiency. “Six degrees of separation” and the “strength of weak ties” share the same core idea that social relations enable interconnected and intricate social networks. Later, the proposition of social capital theory by Putnam (2000) also underlined the importance of social relations. Based on the different strength of social ties, Putnam (2000) divided social capital into two categories: bridging social capital (representing weak ties) and bonding social capital (representing strong ties).

ICTs currently break the barriers of long distance communication, allowing a more convenient and effective way of connecting. Considering the numerous social media uses, the “six degrees separation” has been successfully practiced in the virtual world. For instance, the average distance between two Facebook users might be fewer

than six people, perhaps as few as four (Barnett, 2011). Social media are broadly defined as a collection of online communication channels, applications and platforms that enable users to create contents and share information (Asur & Huberman, 2010; Mangold & Faulds, 2009). There are varied patterns of social media, such as SNSs, microblogging, forums, social bookmarking and Wikipedia (Mangold & Faulds, 2009), which make the communication process fun and facilitate the transfer of texts, videos, photos, audio, and other digital information.

Basically, any web service allowing people to generate or share content with other users can be called social media. Kietzmann, Hermkens, McCarthy, and Silvestre (2011) defined social media using seven building blocks (see Figure 2): “identity, conversations, sharing, presence, relationship, reputation, and groups”, and suggested that each of the building blocks represented a social media activity. By summarizing the definitions provided by scholars, advertisers, and business managers, the author argues that social media have the following major characteristics:

- (1) They encompass a wide range of digital content formats;
- (2) They allow users to create or share contents;
- (3) They facilitate online conversation and enable users to participate in socializing;
- (4) They are adaptable to various devices including PCs, tablets and mobile phones (Cohen, 2011).

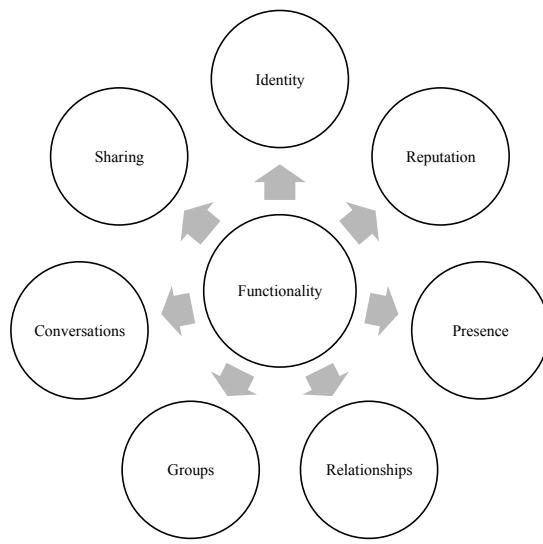


Figure 2. Social media functionality (Kietzmann et al., 2011, p.243).

SNSs could be the most representative format among various social media outlets. Regarding the history of SNSs (see Figure 3), the earliest SNSs were matchmaker communities and dating websites with features such as self-created profiles and visible relationship statuses. Later, similar web-based services appeared. Launched in 1997, the first recognized SNS was *SixDegrees.com*, on which users could have friend lists and build personal profiles. Designed to connect friends and founded in 2002, *Friendster* had major success and attracted 115 million registered users by the end of 2009. With its rapid growth, in 2004, *Friendster* encountered technical troubles as its registered members approached the maximum load of the website. As a result, it was quickly overtaken by subsequent rising stars, including *MySpace* and *Facebook*. *MySpace* was launched in 2003 with a distinctive feature that let users personalize their profiles according to their own needs. Similarly, *MySpace* users could also frame

their pages by adding HTML. Such personalized features rapidly made *MySpace* mainstream social networking service. In addition, during the same period many other websites with social media features, including *Flickr* (photo sharing) and *YouTube* (video sharing), were launched and became popular.

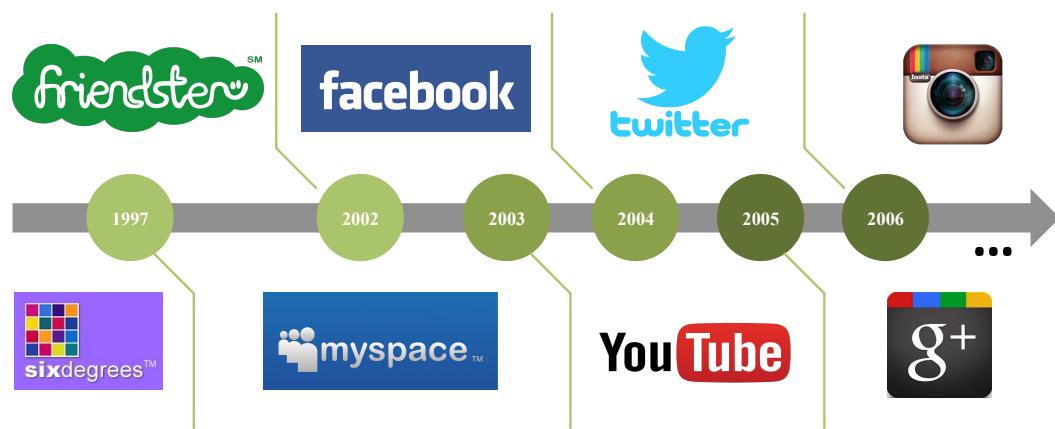


Figure 3. History of social media representatives (logos are from the Internet).

Among the most representative SNSs formats, the “*Facebook*” was originally designed as a niche private network for Harvard University students. To join the *Facebook*, an email address with *Harvard.edu* was required. After a period of development as a private community, *Facebook* began to expand its service to other organizations in 2005. Eventually, it became a global SNS and is currently used worldwide. *Facebook* encourages users to add real profile information, making it a major platform for self-presentation.

More recently, microblogging has become another popular social networking service. Though different, microblogging is derived from traditional blogs. It restricts the word count of each message to 140 characters, permitting a more convenient way

to send messages. *Twitter* is the most representative microblogging service, and in late July 2014, it had 255 million active monthly users who posted 500 million tweets per day.

2.1.2 Uses and Gratifications: Differentiated Media Use

Uses and gratifications (U&G) theory was established when the scholarly view of the public as “passive”, “docile”, and “atomized” shifted toward an audience-centralized notion in which personal differences influenced media consumption (Katz, 1960; Ruggiero, 2000). After the Second World War, the United States became an important administrative research center, which greatly influenced the rise of “instrumental positivism”. In particular, researchers at the Bureau of Applied Social Research at Columbia University achieved several milestones in audience studies, including the two-step hypothesis and limited effects model. Their studies diverted the centralized mass communication paradigms to focus on the potential influence of interpersonal communication. U&G was born out of this shift in attention.

The idea of U&G was introduced in a study by Elihu Katz (1959), in which he suggested shifting the attention of research (see Figure 4) from “What do media do to people?” to “What do people do with media?” (Severin & Tankard, 2010). The U&G approach aims to determine the functions of mass media and emphasizes that people will use media differently to satisfy their diverse needs. U&G claims that the audience

is “active” and takes the “initiative”. People select their media settings and content.

The impact of media use is supposed to depend on the specific purposes of such use.

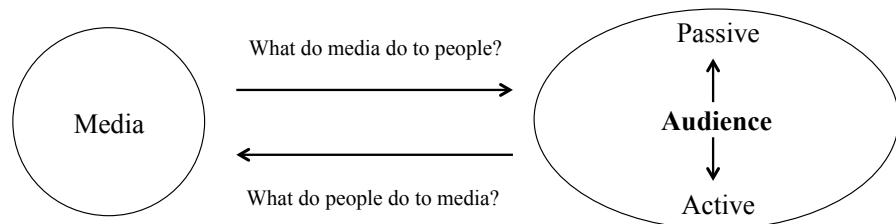


Figure 4. Shifting paradigm of audience and media studies (Katz, 1959; Severin & Tankard, 2010).

After the introduction of U&G theory, a series of empirical studies were conducted to classify the audience's needs and gratifications. Some communication scholars provided a dichotomy method, for instance, separating the gratifications into “immediate” and “deferred” (Schramm, 1961) categories, or dividing the needs into “informational-educational” and “fantasist-escapist” (Weiss, 1970). Such dichotomy approaches simplified the factor analysis procedures to test the basic tenets of U&G. In 1973, Katz and his colleagues identified 35 social and psychological needs that the traditional media (e.g., television, newspaper, and broadcasting) served and classified them into five categories (see Figure 5): cognitive needs, affective needs, personal integrative needs, social integrative needs and tension release needs (Katz, Haas, & Gurevitch, 1973).

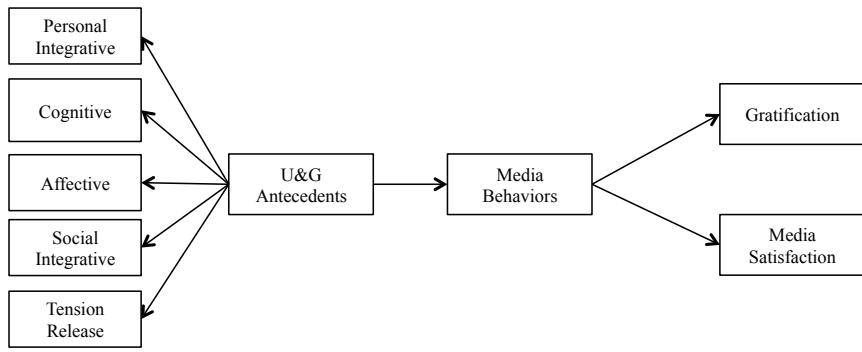


Figure 5. Theoretical model of uses and gratification theory (Katz, Blumler, & Gurevitch, 1973).

Moreover, to test the U&G theory in the Internet context, Papacharissi and Rubin (2000) summarized five major motivations that linked to users' behaviors within the Internet environment, including interpersonal utility, passing time, information seeking, convenience and entertainment. The findings of their research showed that the Internet was serving as a “functional alternative” to the audience’s insufficient face-to-face (FTF) communication, which implied the need for further investigations of the differences between instrumental and ritualized Internet use. Following this approach, Weiser (2001) used 13 items to describe the purposes of Internet use and identified two major functions, which were labeled the Goods-and-Information Acquisition (GIA) function and the Socio-Affective Regulation (SAR) function (see Table 1).

Findings were inconsistent with previous dichotomous paradigms and suggested

as a possible framework for exploring differentiated using behaviors in a social media context.

Table 1

Items of Internet Using Functions (Weiser, 2001, p. 729)

| Function | Items |
|--|--------------------------------|
| <i>One of the reasons why I use the Internet is to</i> | |
| | keep up with the world |
| | just look around |
| GIA ⁴ | shopping |
| | keep up with events |
| | search for hard-to-find items |
| | stay informed with world news |
| SAR ⁴ | chat on-line |
| | meet with new, exciting people |
| | meet similar others |
| | look for romance |
| | look for sexual relationship |
| | view pornography |
| | play interactive games |

2.2 Social Media Use and Social Capital⁵

2.2.1 The Concept of Social Capital

Originating in sociology (Bourdieu, 1986; Coleman, 1988), the concept of social capital has been expanded by Putnam (1995) and Lin (1999) and has been applied to various fields of research on civic participation (Shklovski, Kraut, & Rainie, 2004), mental health (Almedom, 2005; Bolin et al., 2003), and youth behavioral problems

⁴ GIA refers to Goods-and-Information Acquisition, and SAR refers to Socio-Affective Regulation.

⁵ Part of the content in introduction and literature review has been published in *International Journal of Cyber Society and Education* 7(1): 71-88; and *Asian Journal for Public Opinion Research* 1(2): 90-102. Publishers allow the author to use the contents in dissertation.

(Valenzuela et al., 2009). Given the differentiated focus of discussion, the definition of social capital varies. However, in general, social capital can be defined by community features and by individual features.

Regarding community features, Coleman (1988) suggested treating social capital as collective resources embedded in social structures, which operate alongside other types of capital such as financial capital, physical capital, and human capital. Different from the tangible capital that emphasizes material benefits, social capital is closely related to human capital, consisting of certain aspects of the social structure and “facilitating certain actions of actors” within that structure (Coleman, 1988, S98). Influenced by structural functionalism, Coleman’s definition stressed the importance of “social structures” and “individual actors”. First, unlike from other forms of capital, social capital is inherent in a structured organization, lodged neither in the actors themselves nor physical implements (Coleman, 1988). It is similar to Bourdieu’s definition (1986), which envisions social capital as “the aggregate of the actual or potential resources which are linked to a durable network or a member group” (Bourdieu, 1986, p.21). Coleman’s definition (1988) also sees social capital as a product of social structures.

In terms of individual features, social capital is generated through various activities among network members. The most common activity is mutual help and collaboration among individuals. It is not difficult to imagine that, if A does a favor for B, B might reciprocate by doing a favor for A in future. Thus, Coleman (1988)

proposed that “trustworthiness”, “expectations”, and “obligations” were required for people to gain access to the elements of social capital. In response to this opinion, Fukuyama (1999) did not consider social capital as a resource and instead defined it as an instantiated set of informal values among group members. The mutual trust embedded in social networks acts as a lubricant (Pénard & Poussing, 2010) that will promote the efficacy of cooperation within and between groups.

Putnam (1995), who investigated the decline of communities in Italy and the United States, made considerable contributions to the development of social capital theory. By scrutinizing previous findings and his experiences, Putnam (2000) adopted a political approach and suggested three aspects for understanding social capital: (a) social capital is closely related to community members’ attitudes and values of mutual trust, reciprocity, and cooperation; (b) social capital is an important part of the social structure, which will promote democracy and engage civic participation; and (c) social capital is generated within particular social networks. These three summarily outline the elements and conditions of social capital generation in communities and as broadly applied in political research.

On the other hand, the individual level approach interprets social capital as an individual attribute (Pénard & Poussing, 2010), which allows individuals to draw resources from their trusting relationships. Different from the approach that focuses more on communities and organizations, the individual approach claims the important impact of individuals’ social relationships on social capital.

Burt (2009), who founded the structural hole theory, provided one representative study of the individual level perspective. To understand social capital flow in social networks, Burt (2000) argued that the creation of social capital was strongly related to interconnected social segments. In a closed social network, several nodes connect these segments. The structural holes exist in the parts where no nodes are connected. As shown in Figure 6, there are three groups (A, B, and C) connected by strong ties or weak ties. The place that D occupies is the key position of the entire social network. This position could be called a structural hole. According to Burt (2009), the person who occupies these structural holes will obtain more social capital than others. Structural hole theory contributes great insights into individual-level social capital. Meanwhile, it also provides an important notion that strong and weak social relations are critical in formulating nodes in social networks.

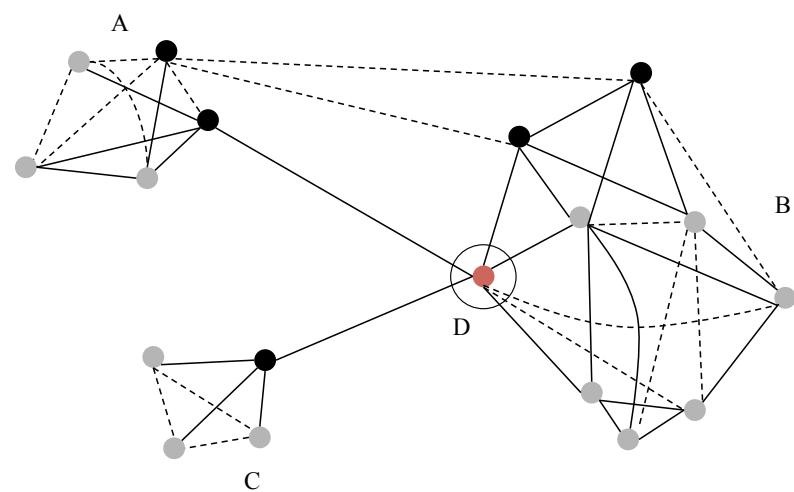


Figure 6. Structure hole theory (Burt, 2009).

The findings of previous research have identified two types of individual-level social capital: bridging social capital and bonding social capital (Putnam, 2000). Bridging social capital has been described as weak relationships among network members with diverse backgrounds and characteristics (Putnam, 2000). Although it is supposed to provide less emotional support than close relationships, bridging social capital could create more opportunities for individuals to broaden their horizons and gain informational benefits (Granovetter, 1973). Bonding social capital has been described as strong relationships built among individuals with high personal connectivity and trust (Putnam, 2000). Network members connected by bonding social capital usually share similar demographic backgrounds, allowing them not only to obtain informational benefits to earn emotional support. Ye (2006) also found that strong ties could effectively satisfy individuals' emotional needs.

2.2.2 The Effects of Social Media Use on Social Capital

Regarding the media effect on social capital, many previous findings have been based on the time displacement hypothesis. The time displacement hypothesis assumes that watching television or using the Internet likely decreases people's time with family and friends. From the perspective of such hypothesis, the relationship between Internet use and its outcomes is similar to a "zero sum game": everyone only has 24 hours in a day; if we spent so much time online, it will definitely reduce our time for FTF communication (Robinson, 1997). Putnam (1995) proposed a

diminishing effect of watching television on social capital, arguing that more hours spent watching television lead to less social trust and lower group membership. Following Putnam's findings, Kraut et al. (1998) also found similar relationships in the context of Internet use, suggesting that Internet use not only decreased social participation in communities but also decreased trust and increased loneliness.

However, the results of many subsequent studies have not confirmed the consistent findings associated with the displacement hypothesis. One possible reason for the inconsistency could be the adoption of a single measurement of media use (i.e., hours), which limited the predictive power of media use on social relations. The findings of Kraut et al. (2002) indicated that individuals would benefit greatly in term of social involvement and wellbeing by using the Internet for heavy communication. People are increasingly engaged in Internet use, because of the attractiveness of advanced information technology, online communications among friends and family members have become common. Such innovation also provides different types of online platforms, such as SNSs, thus enlarging the extent of social participation among users (Quan-Haase & Wellman, 2004).

It is worth noting that previous studies have identified both positive and negative consequences from SNS use. The study of Ellison et al. (2007) on Facebook users in the United States found a strong association between bridging and bonding social capital, as well as the positive effect of Facebook use on bridging social capital. Despite the assertion that hours spent online decrease offline interactions, previous

findings rarely show a subsequent decline in individual-level social capital. Convenient online interactions could actually facilitate the maintenance of existing ties. Moreover, it may as well activate the latent relationships and aid in the construction of new social ties through online activities (Ellison et al., 2007). On the other hand, SNSs have also been found to distract some people from real world engagement. The tendency toward addictive SNS use becomes a serious issue, especially among younger generations (Wilson et al., 2010). In general, it is arbitrary to decide whether using SNSs is good or bad because it is not one-dimensional. In addition to the general indicators (e.g., amount of time), research on the effect of SNSs should also take into account the differentiated functions that they serve (Papacharissi & Rubin, 2000; Shah et al., 2001).

2.3 Social Media Use and Psychological Wellbeing

2.3.1 The Concept of Psychological Wellbeing

There have been extensive discussions on the concept of psychological wellbeing that attempt to delineate the characteristics of positive mental functioning (Diener et al., 1999; Dodge et al., 2012; Ryff & Singer, 1996). Psychological wellbeing is a multidimensional concept (Dodge et al., 2012) that involves a wide range of phenomena, such as emotional responses, domain satisfaction, and life satisfaction (Diener et al., 1999). In general, it refers to people's subjective evaluations of their lives. Previous empirical studies focused on both positive and negative aspects,

relating psychological wellbeing to an individual's perceived degree of happiness (Wilson, 1967), and life satisfaction (Diener et al., 2009; Saucer et al., 1982). This approach is called the *hedonism* tradition, which emphasizes that wellbeing is constructed by positive affect and a lesser degree of negative affect (Cameron et al., 2009). In Bradburn's (1969) classic work on the structure of psychological wellbeing, he noted that "an individual will be high in psychological well-being in the degree to which he has an access of positive over negative affect and will be low in wellbeing in the degree to which negative affect predominates over positive" (Bradburn, 1969, p. 9).

Bradburn's (1969) work concentrated on the psychological mechanism of coping with life difficulties. He conceptualized the structure of psychological wellbeing as how a person balanced positive and negative affect resulting from changes in life, such as changes in education and employment. In line with Aristotle's statements about the goal of human conduct, Bradburn (1969) suggested that happiness was one of the essential measurements of wellbeing. An exposition on the structure of psychological wellbeing made affective balance and perceived life satisfaction into two essential components, which have provided a theoretical basis for examinations of the nature of subjective wellbeing (Cameron et al., 2009).

Another perspective that highlights humans' self-fulfillment and psychological growth (Diener et al., 2009; Ryan et al., 2008) is *eudaimonia*. The word *eudaimonia* originates from Greek and means "the state of having a good indwelling spirit, a

good genius” (Duignan, 2010, p. 110). It was originally used by the Greek philosopher Aristotle to describe the highest good of human life and has commonly been translated as happiness. *Eudemonism* suggests that humans’ psychological wellbeing should be explained by considering the whole lives, treated as a process of a positive life (Ryan et al., 2008) rather than being evaluated by considering the absence of illness and negative affect (Ryff & Singer, 1996).

More recently, Dodge et al. (2012) drew insights from previous studies and argued that the definition of psychological wellbeing “centers on a state of equilibrium or balance that can be affected by life events or challenges” (Dodge et al., 2012, p.222). To propose a framework standing between the hedonic tradition and eudemonic approach, he defined the term as a stable situation “when individuals have the psychological, social and physical resources they need to meet a particular psychological, social and/or physical challenge” (Dodge et al., 2012, p. 230).

To sum up, psychological wellbeing is a dynamic and undeniably complicated term. Regardless of the different approaches, there is one commonality: psychological wellbeing refers to a person’s psychological condition in dealing with life difficulties and represents the evolution of his or her perceived life quality.

Due to the different definitions of psychological wellbeing, its measurement also varies. As mentioned above, previous studies have identified two aspects as essential indicators of the psychological situation: affective balance and perceived life satisfaction (Carmelo, 2009; Diener et al., 1999). Affective balance represents

individuals' evaluations of moods and emotions in dealing with life events, and it roughly reflects a construction by initially distinguishing positive and negative affect (Bradburn, 1969; Diener et al., 1999). In addition, it was believed that individuals' affect and life satisfaction were correlated but separate (Andrews & Withey, 1976; Diener et al., 2009; Diener et al., 1995). Thus, psychologists suggested that it was necessary to combine the measures of both affective reactions and perceived life satisfaction (Diener et al., 1995). Life satisfaction presents "a cognitive judgmental process" (Diener et al., 1985, p. 71) to evaluate the overall quality of life. Compared with affective reactions, perceived life satisfaction is a more popular indicator of individuals' cognitive evaluations of quality of life and the worldwide criteria for judging quality of life (Carmelo, 2009, p. 17).

Unlike previous efforts, Ryff (1996) identified six aspects of psychological wellbeing: "self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life and personal growth" (Ryff et al., 1996, p.15). He provided a more comprehensive framework for evaluating long-term wellbeing. However, as indicated by scholars, the long-term affective dimension is controversial (Diener et al., 1999), making the application of Ryff's scale more complicated.

In computer-mediated communication (CMC) studies, measurements of positive affect and life satisfaction are widely adopted to examine the psychological situation. For instance, Sum et al. (2008) used personal and national life satisfaction as measurements to investigate the potential psychological consequences resulting from

Internet use. Kraut et al. (1998) discussed the same questions by adopting perceived life quality and loneliness as indicators of psychological wellbeing.

2.3.2 The Effects of Social Media Use on Psychological Wellbeing

Regarding the effects of media use on personal wellbeing, previous studies generally investigate the psychological consequences of changes in the individuals' social connections. Noted by Kraut et al. (1998), social engagement is associated with individuals' perceived levels of quality of life, which will affect people's physical and mental health. Therefore, CMC scholars often focus on both the social and psychological perspectives in research associated with psychological wellbeing.

In the context of social media, researchers note that SNSs are able to increase the possibility of activating potential relationships (Johnson, 2007). According to numerous empirical studies, the increase in social relationships and expansion of social network size may yield positive outcomes. It was found that people using SNSs were more likely to experience connectedness and feel happier (Valkenburg et al., 2006). For instance, in their study, Valenzuela et al. (2009) found positive relationships between individuals' SNSs use and life satisfaction. Apaolaza et al. (2013) adopted self-esteem and loneliness as predictors to examine the psychological consequences of SNS use among Spanish adolescents, and confirmed that social media use was significantly positively related to young people's perceived psychological wellbeing.

However, some researchers who are cyber-pessimistic have questioned the positive outcomes of online activities. Kraut et al. (1998) argued that online activities might have a harmful impact on individuals' psychological wellbeing. The over use of the Internet might make them feel more lonely. Kim et al. (2009) examined loneliness as both the cause and the effect of problematic Internet use, and the results showed that, instead of relieving their loneliness, lonely individuals could generate strong compulsive Internet use that could result in more serious negative life outcomes.

More recently, in the newly published book *Alone Together*, Turkle (2012) has asserted that an increasing number of friends on Facebook does not mean that the user has more friends in reality. Actually, social media are creating illusory relationships, which make users mistakenly believe that they are surrounded by people. From a psychological perspective, there is a paradoxical mechanism existing in people's hearts when they attempt to get closer to one another. On the one hand, there are desires that drive people to look for intimacy and emotional support from others. On the other hand, there are also anxieties about relationships breaking down. Therefore, Turkle (2012) attributes this paradox to human vulnerabilities, noting that "human beings are lonely but fearful of intimacy" (Turkle, 2012, p.1). To some extent, the popularity of social media could be considered a compromise of reality, which means people are turning to virtual worlds to compensate for their intimacy needs that are not met in real life. However, the problem is that virtual relationships may never be the equivalent of real ones. Therefore, there are concerns that people's feelings about

online relationships might be illusions.

Furthermore, if we irrationally use social media, it will not only decrease the social support that we will receive; it will also make us lonelier and reduce our quality of life. Therefore, as social media are penetrating every aspect of our daily lives, the effect of social media use on psychological wellbeing will continuously be one of the hottest topics in both communication and mental health studies.

CHAPTER 3: PILOT STUDY ON SOCIAL MEDIA FUNCTIONS⁶

3.1 Background

Inspired by a large number of social media studies, the major focus of this research is to explore how social media changes our daily lives and how its effects work. The first effort was made to examine the effect of SNS use on interpersonal relationships and psychological wellbeing among Chinese international students.

Previous findings suggested that social media use could support pre-existing social relations, solidify offline connections, and allow individuals to create new social ties. Therefore, the pilot study assumed that SNS use would increase individual social ties (both strong ties and weak ties) because of its advantages in maintaining and building social networks. In addition, as a revolutionary innovation, social media has been expected to facilitate many aspects of our life. However, both positive and negative outcomes of social media use have been identified by previous studies, implying that social media is not a panacea but a double-edged sword. The pilot study investigated both positive and negative outcomes of SNS use. It assumed that SNS use would increase users' life satisfaction. Meanwhile, it would also increase their sense of loneliness. As early findings suggested, effects of social media use might vary according to different purposes of using. Therefore, the pilot study followed an existing framework that developed from the uses and gratifications theory to test whether different purposes of using SNSs lead to different impacts on individual

⁶ Earlier results of the pilot study were presented at the Asian Conference on Media and Communication, Osaka, Japan, November 2012. Full paper was published by *CyberPsychology, Behavior, and Social Networking*, 17(1). 52-58. *CyberPsychology, Behavior, and Social Networking* allows the author to use the contents in dissertation.

social ties and psychological states. Considering the connection between the pilot study and the current research, the hypothesized relationships among functions of SNS use, individual-level social capital, and perceived life satisfaction are presented here. Specifically, the pilot study proposed (see Figure 7):

H1: SNS use increases users' perceived bridging social capital.

H2: SNS use increases users' perceived bonding social capital.

H3: SNS use increases users' perceived life satisfaction.

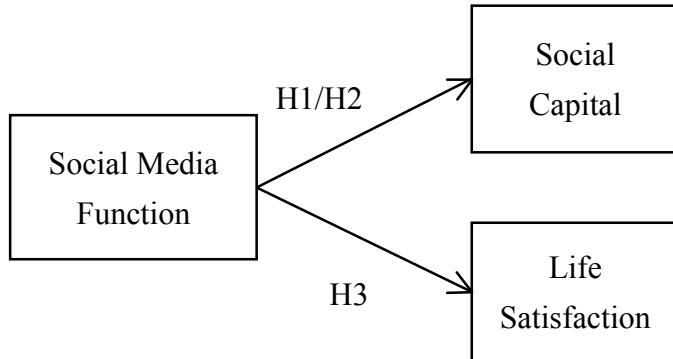


Figure 7. The hypothesized relationships among functions of SNS use, individual-level social capital, and perceived life satisfaction.

Data for the pilot study was collected from a sample of Chinese international students in Japan. The reason for selecting students' samples is not only because university students are easy to reach. More importantly, it is an attempt to compensate for the limitation of previous studies. Although social media usage and effectiveness have been widely discussed, there are relatively few findings associated with usage among people of a minority group. Concerning the background of this pilot study, report of Japan Students Services Organization (JASSO) pointed out that in 2011

Chinese international students (63.4%) were the largest population of international students in Japan (JASSO, 2012). Therefore, the pilot study was not only to examine effects of SNS use on social relationships and psychological wellbeing among a specific population, but also to explore how SNS use affected Chinese sojourners' acculturation. To sum up, the pilot study adds empirical evidence to existing findings on social media effects; additionally, it also contributes insights into the intercultural communication research.

3.2 Methods and Summary of the Results

A survey method was employed in the pilot study to examine the situation of Chinese international students in Hokkaido University. The original questionnaire was in English. It was translated to Mandarin Chinese and then back-translated into English by two bilingual Chinese to verify whether the translation covered all aspects of the original. Questionnaires were distributed to Chinese international students in the International Student Center, and 40 were collected from the center. In addition, the website link of the electronic version of the questionnaire was posted on online communities and instant messaging groups of Chinese international students of the university. One hundred and two samples were collected from the Internet. Within a 14-day's period, a total of 149 Chinese international students completed the questionnaire (see Table 2), among which 142 (95.3%) students (56 male and 86 female) were using SNSs. With respect to the demographic background of the

respondents, 2.8% are less than 20 years old, 47.2% are from 20 to 24 years old, 46.5% are from 25 to 29 years old, 2.8% are from 30 to 34 years old, and 0.7% are from 35 to 39 years old. Most (61.3%) of the respondents are newcomers (students have lived in Japan less than one year), 38.0 % of them have lived in Japan for one to four years, and only one (0.7%) student reports the years of residency as four years and more. Analysis of variance was conducted to examine the mean differences of the respondents who finished the paper questionnaire and those who completed the questionnaire online. As a result, no significant difference was found between the two groups regarding the demographic variables.

Table 2

Summary of Demographics of Pilot Study

| Items | Frequency | Percentage |
|--------------------|-----------|------------|
| Gender | | |
| Male | 56 | 39.4 |
| Female | 86 | 60.6 |
| Age | | |
| less than 20 | 4 | 2.8 |
| 20 to 24 years old | 67 | 47.2 |
| 25 to 29 years old | 66 | 46.5 |
| 30 to 34 years old | 4 | 2.8 |
| 35 to 39 years old | 1 | 0.7 |
| Residence | | |
| less than 1 year | 87 | 61.3 |
| 1 to 4 years | 54 | 38.0 |
| 4 years and more | 1 | 0.7 |

SNS use was measured by three criteria: the *amount of time*, *frequency of reply*, and *functions of SNS use*. First, the respondents were required to answer an open-ended question: “how many minutes per day have you spent on SNSs (e.g.,

Weibo, Renren, Facebook, Twitter, Mixi, etc.) on average in the past week". Second, because replying other users' comments was considered as an important indicator of the degrees of online participation and willingness to interact with others (Dwyer, Hiltz, & Passerini, 2007), the question asking for the frequency of reply was employed and rated on a 4-point scale (1=never and 4=frequently). Third, functions of SNS use were assessed by seven items revised from Weiser's scale that measuring Internet use functions (Weiser, 2001). By factor analysis (see Table 3), two components were obtained and labeled *social-informational function* (SIF) (4 items, $\alpha=.74$) and *entertaining-recreational function* (ERF) (3 items, $\alpha=.66$), which explained cumulatively 60.3% of the variance.

Table 3

Factor Loadings of Social Media Functions of Pilot Study

| Items | Factor Loadings |
|--|-----------------|
| Social and Informational Function (SIF) | |
| <i>I use the social network sites (SNSs)</i> | |
| to interact with others | 0.58 |
| to meet new people who have the similar interest as me | 0.85 |
| to look for news happening around the world | 0.61 |
| to seek for more information that is hardly found from traditional media | 0.75 |
| Entertainment and Recreational Function (ERF) | |
| <i>I use the social network sites (SNSs)</i> | |
| to just look around what happened with the people around me | 0.66 |
| to enjoy the fun and entertainment | 0.72 |
| to spend time online | 0.82 |

Perceived social capital was measured by a modified version of the Internet Social Capital Scale (ISCS) developed by Williams (2006). By factor analysis, two factors were obtained, explaining 56.2% of the total variance. The two components were labeled *bridging social capital* (7 items, $\alpha=.85$) and *bonding social capital* (3 items, $\alpha=.63$). Four items adopted from the Satisfaction with Life Scale (SWLS) (Abdallah, 1998; Pavot & Diener, 1993) were used to measure perceived life satisfaction (4 items, $\alpha=.89$).

All the items measuring functions of SNS use, perceived social capital, and perceived life satisfaction were rated on 7-point scales (1=*strongly disagree* and 7=*strongly agree*).

Correlation analysis and multiple regression analysis (see Table 4) were performed to examine the relationships among relevant variables. First, results of correlation analysis showed that no social capital variable or psychological wellbeing variable was significantly related to amount of time, and only perceived bridging social capital significantly correlated with frequency of reply ($r=.19$, $p<.05$). In addition, perceived bridging social capital was significantly related to both SIF ($r=.39$, $p<.01$) and ERF ($r=.27$, $p<.01$), but perceived bonding social capital showed no significant correlation with the two functions. Perceived life satisfaction was found positively related to SIF ($r=.23$, $p<.01$). Then, results of multiple regression analysis showed that using SNSs for SIF increased the level of perceived bridging social capital ($\beta=.33$, $p<.001$), while using SNSs for ERF had no significant effect on the

two types of social capital. Regarding the predicted effect of SNS functions on perceived life satisfaction, only using SNSs for SIF showed a significant effect ($\beta=.23$, $p<.05$).

Table 4

Regressions Predicting Social Capital and Life Satisfaction

| Predictor | Bridging Social Capital | Bonding Social Capital | Life Satisfaction |
|----------------|-------------------------|------------------------|-------------------|
| | β | β | β |
| SIF | 0.33*** | 0.03 | 0.23* |
| ERF | 0.08 | 0.11 | 0.01 |
| R^2 | 0.17 | 0.02 | 0.05 |
| Adjusted R^2 | 0.15 | -0.00 | 0.04 |
| F | 9.21*** | 0.83 | 3.96* |

Note. $n=142$. * $p<0.05$. ** $p<0.01$. *** $p<0.001$.

To sum up, results of data analyzes partially supported H1 and H3 but rejected H2, which suggested a salient role of SIF in improving weak ties and satisfaction of life. The summary of the results of hypotheses testing was illustrated in Figure 8.

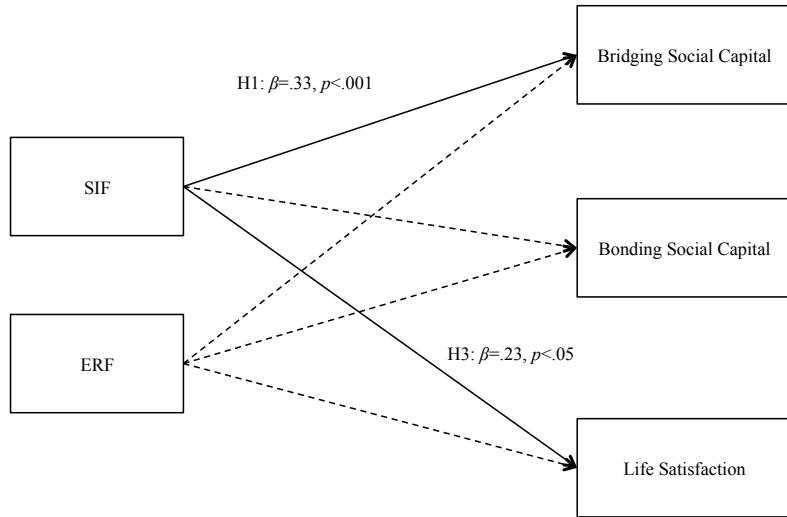


Figure 8. Results of hypotheses testing of pilot study⁷.

3.3 Discussion and Implications

Following previous research, results of the pilot study confirm that it is not the intensity but the functions of SNS use that influence individuals' social ties and psychological states. Functions of SNS use discovered by the pilot study were labeled SIF that referring to the social-informational function and ERF that referring to the entertaining-recreational function. The two functions of social media use have similar structure with those developed by Weiser (2001), which are the Goods-and-Information Acquisition (GIA) function and the Socio-Affective Regulation (SAR) function. Both the two sets of functions indicate that the major purposes of ICT usage are information acquisition and social communication.

⁷ Solid line = the relationship between two variables was statistically supported; Dashed line = the relationship between two variables was statistically rejected

However, different from the previous findings among Internet users (Weiser, 2001), the social media functions exhibited two distinctive features. First, social media use for socialization and information fetching were integrated into one function. As a multiple functional platform, social media allows its users to get access to a wealth of information, at the same time letting them to be engaged into online socialization. Thus, the functions of socialization and information acquisition are not separated but integrated. Second, as the social media producers continuously endeavor to enrich the entertainment applications, using social media to satisfy entertainment needs has become a mainstream function among the Chinese users. The finding suggested that the recreational purpose could drive more using behaviors. Therefore, the two-factor structure of functions developed by the pilot study could be employed as a tool for analyzing the social media context.

SIF, representing the social and informational purpose of SNS use, had positively affected perceived bridging social capital and life satisfaction. SNS use for SIF can be regarded as a positive attitude that encourages people to engage with the world, drives them to seek for more latent social ties, and supports the conversion of latent ties to weak ties (Ellison et al., 2011). Meanwhile, because SIF provides more informational support, individuals' needs are more likely to be satisfied, which may make them happier and increase the possibilities of improving life quality. However, SIF failed to predict perceived bonding social capital. Unlike bridging social capital, bonding social capital is a tightly-knit that maintains family members and friends within the

emotionally intimate relationships (Putnam, 2000) and requires a considerable consumption of time and cost to gain mutual trust. Even in the literature, there are very few studies that support SNSs' capacity for establishing the trust to build bonding social capital. Moreover, according to the media multiplicity theory (Haythornthwaite & Wellman, 1998), the stronger the social ties are, the more people will use available media to exchange information. Therefore, comparing with private channels, the Internet-based medium may not be people's best choice to maintain strong ties (Haythornthwaite, 2005).

ERF, representing the entertaining recreational purposes of SNS use, was unable to predict any of the two types of social capital or life satisfaction. According to the results, ERF was positively associated with the amount of time spent on SNSs ($r=.28$, $p<.01$). Individuals may be isolated because of their dependence on SNSs (Kraut et al., 1998) and have less time for real communications. Moreover, the excessive and addictive use of SNSs for recreation may cause the users indulged in the virtual space and reduced their willingness to go into the real world. It is assumed that over using SNSs for ERF may lead to more serious consequences than expected. To get access to more details, measurements of the two functions (SIF and ERF) could be found in Table 3.

Besides further supporting the role of social media functions in predicting socio-psychological outcomes, the pilot study also implied that there might be other factors to influence social media use and its effects. For instance, several previous

studies suggested that the relationship between patterns of social media use and the outcomes depended on the differentiated individual characteristics (e.g., personality traits) (Amichai-Hamburger & Vinitzky, 2010; Moore & McElroy, 2012; Ross et al., 2009).

The pilot study promotes the further steps in the exploration of social media effects. The findings and implications achieved from the pilot study greatly promote the current research to contribute more insights to the social media research.

CHAPTER 4: RESEARCH DESIGN

4.1 Endeavors to Compensate for the Limitations of Pilot Study

Besides the implications of the pilot study, several limitations are also significant to acknowledge. Attempting to improve research on social media effects, endeavors to compensate for the limitations have been made.

Specifically, the pilot study found two functions regarding social media use among Chinese international students. It was suggested that to assure the validity and applicability of the two-factor structure, data from larger and more representative samples should be collected for analyses. Hence, a national survey has been conducted for the current research.

The pilot study also pointed out that general indicators of social media use, for instance the amount of time and frequency, are not persuasive enough to represent users' dependence on social media. It's because to identify the exact amount of using time is difficult for normal users.

In addition, including the pilot study, many social media studies are based on linear theoretical frameworks, neglecting the structural relationships among relevant variables. For instance, it is assumed that perceived life satisfaction could also be determined by the size of social networks that could be increased via using social media. Therefore, a structured framework has been established (see Figure 9), suggesting mediation and moderation effects may intervene in the relationship between social media use and socio-psychological consequences.

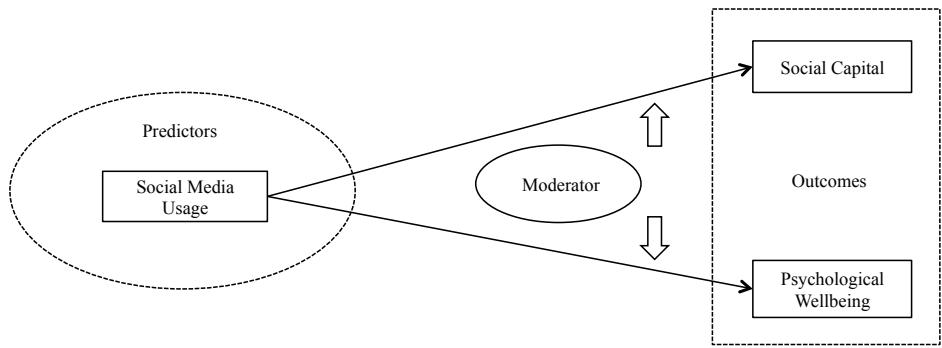


Figure 9. The structured framework of social media effects proposed by the current research.

Speaking of the moderation effects, the pilot study underlined that individual differences could change the effect of social media use. Guo, Li, and Ito (2014b) assumed that the effect of social media use will depend on not only how an individual use the media but also on what kind of person he or she is. Examination of the personality's role was absent in the pilot study. Thus, the current research is designed to invite personality traits as a moderator to obtain a more individual-focused explanation of social media effects.

4.2 Research Questions

Drawing insights from the literature and the pilot study, the current research aims to further explore the mechanism of social media effects. Based on the popular framework developed from the uses and gratifications theory, the current research intends to figure out whether social media effects will vary according to the patterns

of use (“*How?*”) and individual characteristics (“*Who?*”). As such, the focus of the current research is demonstrated in Figure 10.

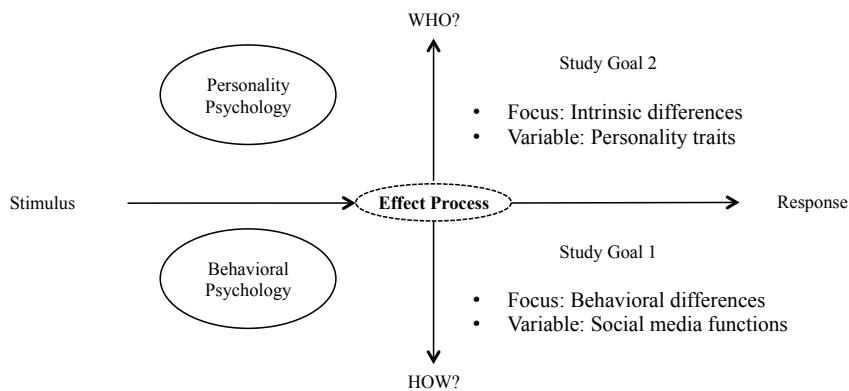


Figure 10. Focus of the current research.

In general, social media functions and personality traits are assumed to intervene in the effect of social media use and its socio-psychological outcomes, which constitutes the core of the current research. Two research questions concerning the relationships among general social media use, social media functions, personality traits, perceived social capital and psychological wellbeing were proposed (see Figure 11):

RQ1: How do functions of social media use differently influence users’ perceived social capital and psychological wellbeing?

Furthermore, regarding the “*WHO*” question, the current study addressed personality traits as moderators and proposed the following:

RQ2: What's the role of personality traits in the effect of social media use on perceived social capital and psychological wellbeing?

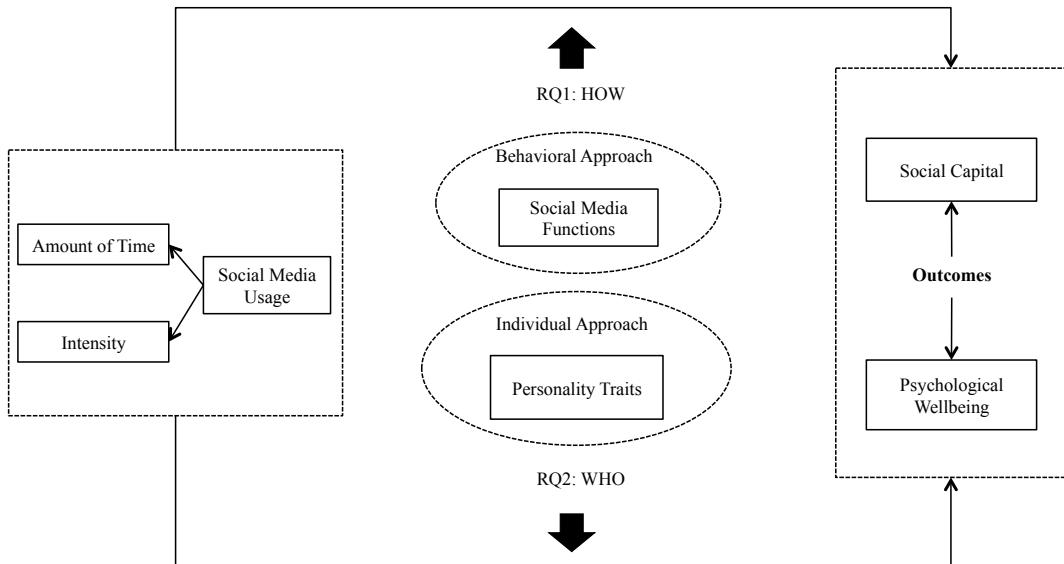


Figure 11. The proposed intervention effects of social media functions and personality traits on the relationships between social media use and the outcomes.

4.3 The Hypothesized Relationships among Social Media Use, Perceived Social Capital, and Psychological Wellbeing

4.3.1 The Effects of Social Media Functions

The first research question concerns the relationships among social media functions, perceived social capital and psychological wellbeing. The two-factor structure of social media functions discovered by the pilot study has been invited to the current research. As explained before, SIF represents the social and informational purpose of social media use and ERF represents the entertainment and recreational purpose of social media use. Following previous findings, the social and

informational purpose of use is supposed to increase users' social ties and enhance their sense of life quality. However, the recreational purpose of use hardly shows a significant effect on social ties and psychological wellbeing.

Regarding the dependent variables, the two types of individual-level social capital categorized by Putnam (2000) (i.e., bridging social capital and bonding social capital) have been invited. In addition, life satisfaction that represents "a cognitive judgmental process" (Diener et al., 1985, p. 71) to evaluate the quality of the whole life has been used in the analyzes. It is used as worldwide criteria of judgment on life quality and an important indicator of psychological wellbeing (Carmelo, 2009).

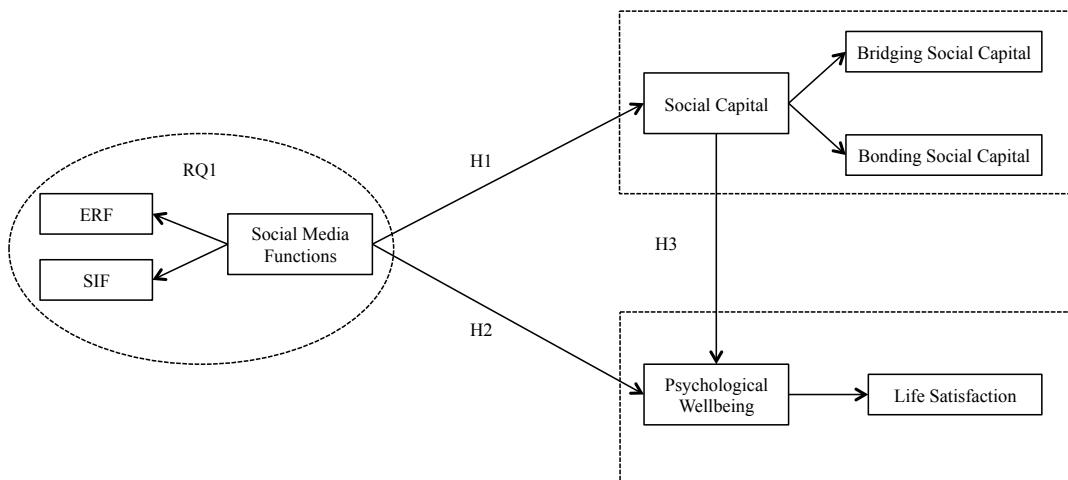


Figure 12. The hypothesized relationships among social media functions, perceived social capital, and psychological wellbeing.

The hypotheses concerning the first research question were proposed as follows (see Figure 12):

H1: Social media use for social and informational purpose (SIF) will increase perceived social capital, while social media use for entertainment and recreational purpose (ERF) will not show significant effect on perceived social capital.

H2: Social media use for social and informational purpose (SIF) will increase perceived life satisfaction, while social media use for entertainment and recreational purpose (ERF) will not show significant effect on perceived life satisfaction.

Furthermore, previous studies have commonly related the level of life satisfaction to changes in individuals' social connections (Ellison et al., 2007; Valenzuela et al., 2009). They found a positive correlation between life satisfaction and the amount of relationships. Reported by Kraut et al. (1998), perceived life quality had connections with social engagement and the size of social network would lead to good physical and mental health. Lin (1999) also suggested that a denser social network with profitable relationships might aid the increase of life satisfaction. Therefore, perceived social capital could be another important contributor of life satisfaction. At the same time, it may mediate the effect of social media use on life satisfaction because social ties would be greatly changed through using social media. Accordingly, the following hypothesis was proposed:

H3: Effects of social media functions on perceived life satisfaction will be mediated by perceived social capital.

4.3.2 The Moderating Role of Personality Traits

In line with previous research (Kim, Hsu, & Zuniga, 2013; Swickert et al., 2002), the current research considers personality traits as moderators that influence the effects of social media use (the intensity of social media use as predictor) on perceived social capital and psychological wellbeing. The FFM of personality traits has been adopted for the current research. FFM, also known as the Big Five, divides individual personalities into five dimensions, extroversion, openness, neuroticism, conscientiousness, and agreeableness, which helps in research with associated with individuals' intrinsic differences (Barrick & Mount, 1991).

In the field of CMC studies, there are rich discussions of the moderating role of personality traits in the relationship between social media use and social capital. Given the areas of expertise, the current research paid more attention to topics in the field of media and communications studies. Therefore, the literature on the relationships between personality traits and psychological wellbeing are not reviewed due to their close connections with psychology. Nonetheless, in an exploratory attempt, the current research still examined the moderating effects of personality traits on the relationships between social media use and perceived life satisfaction. The hypotheses concerning the second research question are shown in Figure 13.

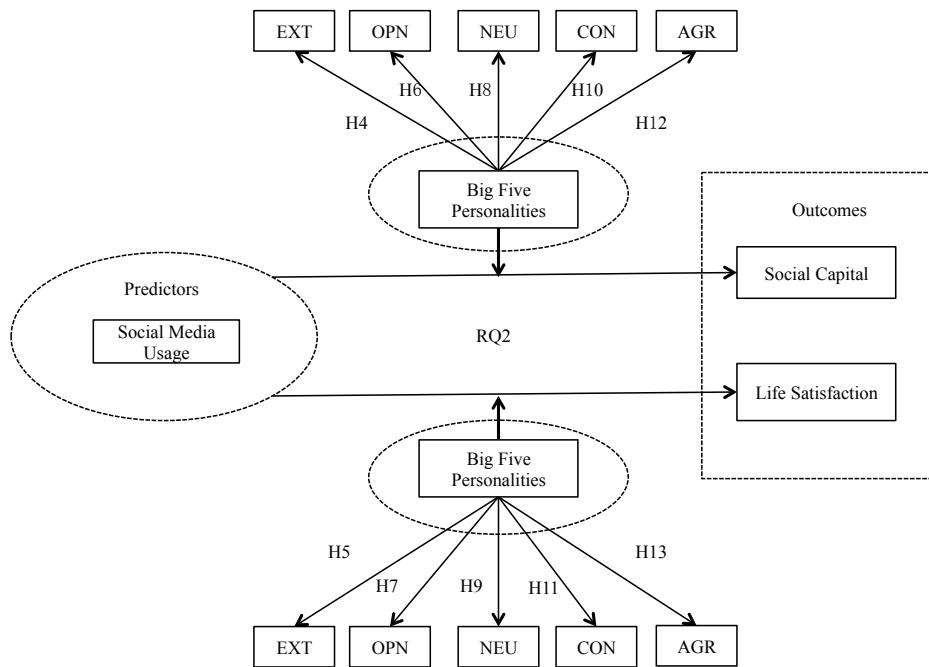


Figure 13. The hypothesized relationships among personality traits, social media use, perceived social capital, and psychological wellbeing (EXT=Extroversion, OPN=Openness, NEU=Neuroticism, CON=Conscientiousness, AGR=Agreeableness).

Extroversion (EXT)

Extroversion represents the extent to which individuals are social, outgoing, active and talkative (Ross et al., 2009; Wehrli, 2008), whereas the introverts are typically quiet and shy (Costa & MacCrae, 1992). Compared with introverts, the extroverts are thought to have strong social motivations and be more easily engaged into socialization (Wehrli, 2008). This extroverted characteristic likely provides them with more positive life experiences. According to social compensation theory, introverts may gain more by using CMC tools because they are expected to be thirstier than extroverts to compensate for their limited opportunities of FTF

communication. Additionally, due to the weak boundaries in the online environment, SNSs might provide introverts with a more flexible place for expression and self-disclosure compared with FTF conversations.

In contrast, the “rich-get-richer” proposition argues that extroverts can have more offline relations, and their offline sociability can shift to online communities. Previous findings have noted that users with extroverted personalities tend to be more engaged in social media use than users with introverted personalities (Correa, Hinsley, & Zuniga, 2010). Extrovers would more frequently use SNSs for communication (Ryan & Xenos, 2011), and would have more SNS friends than introverted users (Amichai-Hamburger & Vinitzky, 2010); the positive emotionality from such SNS use might bring them a higher level of life satisfaction (Judge, Heller, & Mount, 2002). Thus, the following hypotheses were proposed:

H4: Extroversion will moderate the relationship between the intensity of social media use and perceived social capital (i.e., bridging social capital and bonding social capital). As such, the impact of social media use on perceived social capital will be stronger in users who score higher on the extroversion scale than in users who score lower on the extroversion scale.

(The exploratory hypothesis regarding life satisfaction:)

H5: Extroversion will moderate the relationship between the intensity of social media use and perceived life satisfaction. As such, the impact of social media use on perceived life satisfaction will be stronger in users who score higher on extroversion

scale than in users who score lower on extroversion scale.

The findings associated with these hypotheses are expected to provide insights into analyzing how users with varying levels of extroversion will gain relational and psychological benefits from using social media. The providers of social networking services could also find these results useful in locating extroverted users, observing their user behaviors, and developing better applications to aid users' achievement of positive life experiences.

Openness (OPN)

People who exhibit openness to different experiences are open-minded and very curious and have wide-ranging interests to explore new things, whereas people who score low on openness scale prefer the traditional and practical of experiencing life (Wehrli, 2008). As a personality trait, openness to experiences is assumed to be closely related to individuals' information searching behavior (Butt & Phillips, 2008). Regarding SNSs, evidence has shown that users with higher levels of openness to experiences will more easily choose SNSs for socializing purposes (Ross et al., 2009). Additionally, users with more openness personalities will enjoy revealing more personal information on their profiles (Amichai-Hamburger & Vinitzky, 2010). Social networking services with diverse features are assumed to attract people who have more openness personalities. Open personalities are likely to engage in virtual communities, which will contribute to an increase in social ties and enhanced

satisfaction. Thus, the following hypotheses were proposed:

H6: Openness to experiences will moderate the relationship between the intensity of social media use and perceived social capital (i.e., bridging social capital and bonding social capital). As such, the impact of social media use on perceived social capital will be stronger in users who score higher on the openness scale than in users who score lower on the openness scale.

(The exploratory hypothesis regarding life satisfaction:)

H7: Openness to experiences will moderate the relationship between the intensity of social media use and perceived life satisfaction. As such, the impact of social media use on perceived life satisfaction will be stronger in users who score higher on the openness scale than in users who score lower on the openness scale.

The findings associated with these two hypotheses are expected to provide insights into analyzing the behavioral tendencies among users varying levels of open personalities. Such tendencies could provide insightful guidance for the improvement and future design of social networking services, because open personalities could significantly contribute to the discovery of novelties.

Neuroticism (NEU)

Neuroticism refers to the opposite of emotional stability. It normally represents some negative emotions including anxiety, distrust, embarrassment, worry, and insecurity. Individuals who demonstrate high neuroticism may lack social skills in

emotion management and may be nervous when interacting with people (Costa & MacCrae, 1992). Therefore, lower positive emotionality normally results in higher levels of depression, more loneliness and lower life satisfaction (DeNeve & Cooper, 1998).

Neuroticism was assumed to negatively affect the formulation of social relations (Wehrli, 2008). However, this assumption is not supported in the following studies. Neuroticism has been found to be significantly associated with individuals' online activities (Swickert et al., 2002). It has been suggested that, to avoid loneliness (Amichai-Hamburger & Vinitzky, 2010; Butt & Phillips, 2008), neurotic people use the Internet as a communicative instrument more frequently than emotionally stable people (Moore & McElroy, 2012). In line with the neuroticism-loneliness hypothesis, research has also indicated that the neurotic Internet users may more frequently use SNSs to seek social contacts (Hughes et al., 2012), publish private information (Ross et al., 2009), and disclose their true selves (Seidman, 2012). Compared with FTF communications, social media might be a good channel for neurotic people to release their nervousness, build more connections and achieve higher life satisfaction. Hence, the current research proposed the following:

H8: Neuroticism will moderate the relationship between the intensity of social media use and perceived social capital (i.e., bridging social capital and bonding social capital). As such, the impact of social media use on perceived social capital will be stronger in users who score higher on the neuroticism scale than in users who score

lower on the neuroticism scale.

(The exploratory hypothesis regarding life satisfaction:)

H9: Neuroticism will moderate the relationship between the intensity of social media use and perceived life satisfaction. As such, the impact of social media use on perceived life satisfaction will be stronger in users who score higher on the neuroticism scale than users who score lower on the neuroticism scale.

The findings associated with these two hypotheses regarding social media use among users with neurotic personalities are expected to provide implications for the utilization of social networking services to help neurotic people overcome certain negative psychological symptoms. SNS providers could explore ways of enhancing feelings of mutual trust and security to attract neurotic people who expect SNSs could be a good assistant in their social lives.

Conscientiousness (CON)

Conscientiousness is exhibited in those who are dutiful, responsible, disciplined, compulsive, and reliable, and it reflects how much an individual is organized, diligent, and scrupulous (Amichai-Hamburger & Vinitzky, 2010). Normally, highly conscientious people are less willing to devote their precious time to online activities (Swickert et al., 2002), because they may worry about being distracted; thus, they would not want their working efficiency and performance be affected by such distractions (Butt & Phillips, 2008; Wehrli, 2008).

Previous findings have shown that college students who scored low in conscientiousness scale had more time to spend on social media (Wilson et al., 2010). Moore (2012) also supported the negative effect of conscientiousness on SNS use because conscientious people showed less of a desire to self-present online. Consistent with Moore's observation, Amichai-Hamburger et al. (2010) confirmed a negative relationship between conscientiousness and SNS users' self-disclosure online, suggesting that SNS users who scored high in conscientiousness would have less self-presentation on their profiles. Although conscientiousness has been supported as a factor that negatively influences online self-disclosure, it is considered a potential contributor to individuals' social relations, because for conscientious people, less self-disclosure online indicates prudent and responsible attitudes toward their existing interpersonal relationships. These conscientious individuals may be aware of the risk of harming relationships through over-engagement and disclosure online and may not expect many benefits from social media use. From this perspective, the current research assumes that the effect of social media use on socio-psychological variables would be weaker for users with higher levels of conscientiousness than for users with lower levels of conscientiousness. Therefore, the following hypotheses were proposed:

H10: Conscientiousness will moderate the relationship between the intensity of social media use and perceived social capital (i.e., bridging social capital and bonding social capital). As such, the impact of social media use on perceived social capital will

be weaker in users who score higher on the conscientiousness scale than in users who score lower on the conscientiousness scale.

(The exploratory hypothesis regarding life satisfaction:)

H11: Conscientiousness will moderate the relationship between the intensity of social media use and perceived life satisfaction. As such, the impact of social media use on perceived life satisfaction will be stronger in users who score higher on the conscientiousness scale than in users who score lower on the conscientiousness scale.

The findings on user behaviors and the outcomes of users with conscientious personalities are expected to elucidate the improvement of security in virtual communities. How conscientious people use and perform online could raise awareness about and aid in the analysis of privacy issues in social media. The providers of social networking services may also find it necessary to give more attention to conscientious users to better manage the cyber community.

Agreeableness (AGR)

Agreeableness is a personality trait representing a person's tendency to behave in a cooperative, sympathetic, considerate, courteous and kind manner. People who score high on the agreeableness scale may encounter fewer conflicts when interacting with others. Therefore, people who are more agreeable will have more social connections and demonstrate a greater willingness to enhance their feelings of intimacy.

Agreeable people are assumed to make more friends through online communicative activities. However, there is little evidence to support this assumption. Butt and Phillips (2008) found that people with low agreeableness were more likely to use phones to avoid embarrassment and unnecessary conflicts in close interactions. Swickert (2002) asserted that people who were highly agreeable would perceive enhanced support through intensive Internet use. In an attempt to add empirical evidence related to the role of agreeableness, the current research proposes the following:

H12: Agreeableness will moderate the relationship between the intensity of social media use and perceived social capital (i.e., bridging social capital and bonding social capital). As such, the impact of social media use on perceived social capital will be stronger in users who score higher on the agreeableness scale than in users who score lower on the agreeableness scale.

(The exploratory hypothesis regarding life satisfaction:)

H13: Agreeableness will moderate the relationship between the intensity of social media use and perceived life satisfaction. As such, the impact of social media use on perceived life satisfaction will be stronger in users who score higher on the agreeableness scale than in users who score lower on the agreeableness scale.

To add empirical evidence on the role of agreeableness in the context of new media use, the findings associated with these two hypotheses are expected to investigate whether agreeable people will make more friends and experience more

positive emotions from online communicative activities. In addition to supporting previous assumptions, this study may also conclude that agreeable users are likely to be advocates of various social media applications, which will practically aid providers of social networking services in designing new features for their services.

All the proposed hypotheses could be found in Figure 14.

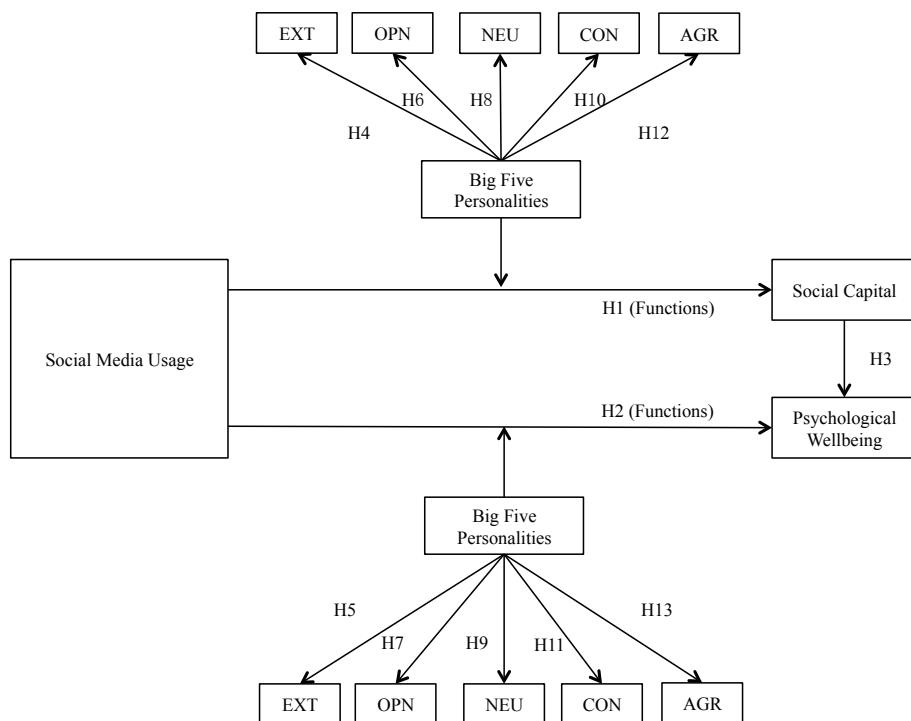


Figure 14. All hypotheses proposed in the current research.

CHAPTER 5: METHODOLOGY

5.1 Procedures and Participants

Data for this research was collected via an online survey conducted by a Japanese research institute (NTT Communications) from September 10 to 13, 2013. Participants were recruited from six areas of mainland China (i.e., East China, Northeast China, North China, South Central China, Northwest China, and Southwest China). To achieve a better reflection of the diversity of Chinese Internet users, samples were collected in accord with the actual distribution of the online population in these areas. The questionnaire was initially developed in English, and in order to guarantee the applicability of the instruments to the Chinese context, two bilingual translators with rich English and Chinese languages learning background helped the back-translation.

The questionnaire was posted on the web survey platform organized by the research institute. Invitation email with the URL link to the electronic version of the questionnaire was sent to 12026 Chinese members of the panel. A total of 2889 people answered the questionnaire, from which 1003 valid samples (male=493, female=510) were collected for analyses in the current research (response rate=8.58%, questionnaire completion rate=35.7%). Most (56.5%) of the respondents were white collars working in business companies, and over sixty percentage (68.4%) of the respondents reported owning a college degree. The median level of household income was 3,001-5,000 RMB per month, and the amount of time spent on the Internet was

about 29 hours per week. Demographics could be found in Table 5.

Table 5

Summary Statistics for Demographic Variables

| | Variables | N | % |
|---|-----------|-----|------|
| Gender | | | |
| Male | | 493 | 49.2 |
| Female | | 510 | 50.8 |
| Income | | | |
| none | | 50 | 5.0 |
| below 500 yuan | | 10 | 1.0 |
| 501 - 1,000 yuan | | 15 | 1.5 |
| 1,001 - 1,500 yuan | | 25 | 2.5 |
| 1,501 - 2,000 yuan | | 29 | 2.9 |
| 2,001 - 3,000 yuan | | 100 | 10.0 |
| 3,001 - 5,000 yuan | | 291 | 29.0 |
| 5,001 - 8,000 yuan | | 264 | 26.3 |
| above 8,000 yuan | | 219 | 21.8 |
| Education | | | |
| Primary school and below | | 1 | 0.1 |
| Junior high school | | 5 | 0.5 |
| Senior high school/Vocational and technical schools | | 58 | 5.8 |
| Junior college | | 191 | 19.0 |
| University | | 686 | 68.4 |
| Postgraduate (master's degrees and doctorates) | | 62 | 6.2 |

By comparing the data with the statistics of Chinese netizens reported by China Internet Network Information Center (CNNIC) (2014a). It was found that the sample for the current research reflected a good balance concerning the online population distribution but indicated a slightly higher representativeness of female users and users at the age of 30 to 39 (average age = 34 years old). Regarding the demographic background of the sample, another thing should be considered. Digital divide, related

to different regional economic conditions, might restrict the Internet access to people in rural China. For instance, the survey got a 10.4% response rate in the East China, but only 5.4% in the Southwest China. Therefore, future studies should try to collect a larger sample that would yield increased precision and a stronger statistical power (Bartlett, Kotrlik, & Higgins, 2001).

5.2 Measurement

Social Media Use

Considering SNSs users may use several accounts at the same time, participants were first required to choose one of their most frequently used SNS from the list of mainstream SNSs providers in China, and to answer a question about the *frequency of using*. The item was measured by a 6-point scale (1=*less often*, 2=*every few weeks*, 3=*1-2 days a week*, 4=*3-5 days a week*, 5=*about once a day*, and 6=*several times a day*).

Then, they were asked to evaluate their intensity of social media use. The measurement of intensity was combined by 6 items suggested in previous studies (Ellison et al., 2007) that describing the daily use of social media (see Table 6). The first item was about the amount of time of social media use, which was measured by a 5-point scale (1=*10-30 minutes*, 2=*31-60 minutes*, 3=*1-2 hours*, 4=*2-3 hours*, and 5=*more than 3 hours*). The following 5 items regarding the habits of social media use were rated on 7-point scales (1=*strongly disagree* and 7=*strongly agree*).

Table 6

Questionnaire Items Measuring Intensity of Social Media Use

| Item | <i>M</i> | <i>SD</i> |
|---|----------|-----------|
| Approximately how many minutes per day have you spent on your most preferred SNS? | 2.67 | 1.26 |
| I find myself using SNS about the same time each day. | 5.20 | 1.33 |
| Checking my SNS is part of my usual routine. | 5.88 | 1.03 |
| I would miss SNS if I couldn't go online. | 5.77 | 1.19 |
| I would be sorry if the SNS was shut down. | 5.92 | 1.12 |
| I feel out of touch when I haven't logged onto SNS for a while. | 5.57 | 1.29 |

Social Media Functions

The two-factor structure of social media functions (SIF and ERF) developed by the pilot study was modified and employed to the current research. Two items that describing the major entertainment activities (online games vs. video watching) of social media use were added into the measurement of ERF. And the single item appeared in the pilot study's SIF measurement “to interact with others” was divided into two more detailed items: “to stay with people I know” and “to find something to talk about”. Eventually, five items were used to measure the social and informational purpose of use (SIF, $\alpha=.82$). Five items were used to measure the entertainment and recreational purpose of use (ERF, $\alpha=.78$). All the ten items were rated on 7-point scales (1=*strongly disagree* and 7=*strongly agree*), which were indicated by results of factor analysis to explain cumulatively 59.4% of the variance (see Table 7).

Table 7

Questionnaire Items Measuring Social Media Functions

| Item | Factor Loadings | |
|---|-----------------|---|
| | 1 | 2 |
| Social and Informational Function (SIF) | | |
| <i>It's likely for me to use my most preferred SNS...</i> | | |
| to get immediate knowledge of events around world | 0.84 | |
| to find a wealth of information | 0.84 | |
| to stay in touch with people I know | 0.69 | |
| to find something to talk about | 0.52 | |
| to meet new people who have similar interest with me | 0.70 | |
| Entertainment and Recreational Function (ERF) | | |
| <i>It's likely for me to use my most preferred SNS...</i> | | |
| to use recreational applications or play games | 0.59 | |
| to listen to the music or watch videos | 0.49 | |
| to relieve boredom | 0.69 | |
| to find a way to pass time | 0.82 | |
| to feel less lonely | 0.86 | |

Perceived Social Capital

The Internet Social Capital Scale (ISCS) developed by Williams (2006) was adopted and modified to measure perceived social capital. All items were rated on 7-point scales (1=*strongly disagree* and 7=*strongly agree*). As shown in Table 8, 7 items measured perceived bridging social capital ($\alpha=.93$) and 6 items measured perceived bonding social capital ($\alpha=.87$). Noted by previous research, the emerging ways of online communication and participation have greatly blurred the boundary between offline and online environment. Distinguishing online and offline as two mutually exclusive terms may be a hindrance for understanding the interactive

features of computer-mediated communication (Ellison et al., 2011). Therefore, the ISCS was invited to assess the users' perceived social relationships in a realistic context that was supposed to connect closely with their online activities.

Table 8

Questionnaire Items Measuring Perceived Social Capital

| Item | <i>M</i> | <i>SD</i> |
|--|----------|-----------|
| Perceived Bridging Social Capital | | |
| Interacting with people makes me interested in things that happen outside. | 5.49 | 0.94 |
| Interacting with people makes me want to try new things. | 5.57 | 0.91 |
| Interacting with people makes me interested in what people unlike me are thinking. | 5.56 | 0.91 |
| Talking with people makes me curious about other places in the world. | 5.56 | 0.93 |
| Interacting with people reminds me that everyone in the world is connected. | 5.53 | 0.99 |
| I am willing to spend time to support general civic activities. | 5.47 | 1.07 |
| Interacting with people brings me new people to talk to. | 5.58 | 0.93 |
| Perceived Bonding Social Capital | | |
| There are several people I trust who can help me solve problems. | 5.52 | 0.98 |
| There is someone I can turn to for advice when making very important decisions. | 5.57 | 0.93 |
| When I feel lonely, there are several people I can talk to. | 5.39 | 0.99 |
| If I needed an emergency loan of 1000 RMB, I know someone I can turn to. | 5.54 | 1.13 |
| People I interact with would be good job references for me. | 5.37 | 1.07 |
| People I interact with would help me fight an injustice. | 5.08 | 1.16 |

Psychological Wellbeing

As reviewed before, perceived life satisfaction is used as "a worldwide criteria of judgment on life quality and an important indicator of psychological wellbeing"

(Carmelo, 2009, p. 17). Therefore, 5 items (see Table 9, $\alpha = .87$) adopted from the Satisfaction with Life Scale (SWLS) (Abdallah, 1998; Pavot & Diener, 1993) were used to measure perceived life satisfaction. All items were rated on 7-point scales (1=*strongly disagree* and 7=*strongly agree*).

Table 9

Questionnaire Items Measuring Perceived Life Satisfaction

| Item | <i>M</i> | <i>SD</i> |
|--|----------|-----------|
| In most ways my life is close to my ideal. | 5.15 | 1.25 |
| The conditions of my life are excellent. | 5.06 | 1.33 |
| I am satisfied with my life. | 5.12 | 1.35 |
| So far I have got the important things I want in life. | 4.98 | 1.40 |
| If I could live my life over, I would change almost nothing. | 4.55 | 1.61 |

Personality Traits: the Big Five

The NEO Five-Factor Inventory (NEO-FF) containing five dimensions: extroversion (EXT), openness (OPN), conscientiousness (CON), neuroticism (NEU), and agreeableness (AGR) was employed to measure the tendencies of the participants' intrinsic propensities (Costa & MacCrae, 1992). This scale with adequate level of validity and reliability (Gosling, Rentfrow, & Swann, 2003; Rammstedt & John, 2007) was frequently used in personality psychology research. As shown in Table 10, fourteen items from the NEO-FF scale were adopted and rated on 7-point scales (1=*strongly disagree* and 7=*strongly agree*).

Table 10

Questionnaire Items Measuring Personality Traits

| Item | <i>M</i> | <i>SD</i> |
|---|----------|-----------|
| Extroversion (EXT, $\alpha=.83$) | | |
| I see myself is someone who is talkative. | 4.76 | 1.43 |
| I see myself is someone who is full of energy. | 5.20 | 1.19 |
| I see myself is someone who is outgoing, sociable. | 4.80 | 1.45 |
| Openness (OPN, $\alpha=.88$) | | |
| I see myself is someone who is original, comes up with new ideas. | 5.15 | 1.12 |
| I see myself is someone who is curious about many different things. | 5.46 | 0.98 |
| I see myself is someone who is ingenious, a deep thinker. | 5.32 | 1.05 |
| I see myself is someone who has an active imagination. | 5.26 | 1.15 |
| Neuroticism (NEU, $\alpha=.86$) | | |
| I see myself is someone who can be moody. | 4.15 | 1.60 |
| I see myself is someone who worries a lot. | 4.38 | 1.54 |
| I see myself is someone who gets nervous easily. | 4.32 | 1.52 |
| Conscientiousness (CON, $r=.68, p<.01$) | | |
| I see myself is someone who makes plans and follows through with them. | 5.07 | 1.18 |
| I see myself is someone who does a thorough job. | 5.12 | 1.12 |
| Agreeableness (AGR, $r=.54, p<.01$) | | |
| I see myself is someone who is sometimes cold. (reverse question) | 3.74 | 1.64 |
| I see myself is someone who tends to find fault with others. (reverse question) | 4.08 | 1.61 |

Controlled Variables

As suggested by previous studies, demographic variables, the frequency of Internet use, and the amount of time spending on the Internet might be associated with individuals' social capital (Shah, 2001; Williams, 2007). In order to exclude the above

influence, the current research controlled: demographic variables, including gender (1=*male* and 2=*female*), age (by identifying the actual years), income (1=*none*, 2=*below 500 yuan*, 3=*501-1,000 yuan*, 4=*1,001-1,500 yuan*, 5=*1,501-2,000 yuan*, 6=*2,001-3,000 yuan*, 7=*3,001-5,000 yuan*, 8=*5,001-8,000 yuan*, and 9=*above 8,000 yuan*), level of education (1=*primary school and below*, 2=*junior high school*, 3=*senior high school or vocational and technical schools*, 4=*junior college*, 5=*university*, 6=*postgraduate*), and the time of Internet use (by identifying the actual hours spent on the Internet per week).

Meanwhile, self-disclosure on social media was significantly associated with individuals' social relations (Park, Jin, & Jin, 2011). Thus, to exclude the influence of self-presenting behavior, the current research also controlled the self-disclosure variable that assessed the depth and breadth of self-presenting on SNSs. Specifically, 9 items ($\alpha = .93$) modified from early studies (Ko, 2012; Krasnova et al., 2010) constructed the measurement of self-disclosure (see Table 11) to represent the general online self-disclosure, the amount of self-disclosing activities, and the accuracy of published information. All items (see Table 11) were rated on 7-point scales (1=*strongly disagree* and 7=*strongly agree*).

Table 11

Questionnaire Items Measuring Control Variables

| Variables | M | SD | N | % |
|--|-------|------|-----|------|
| Gender⁸ | | | | |
| Male | - | - | 493 | 49.2 |
| Female | - | - | 510 | 50.8 |
| Age | 33.78 | 9.20 | - | - |
| Income⁸ | | | | |
| none | - | - | 50 | 5.0 |
| below 500 yuan | - | - | 10 | 1.0 |
| 501 - 1,000 yuan | - | - | 15 | 1.5 |
| 1,001 - 1,500 yuan | - | - | 25 | 2.5 |
| 1,501 - 2,000 yuan | - | - | 29 | 2.9 |
| 2,001 - 3,000 yuan | - | - | 100 | 10.0 |
| 3,001 - 5,000 yuan | - | - | 291 | 29.0 |
| 5,001 - 8,000 yuan | - | - | 264 | 26.3 |
| above 8,000 yuan | - | - | 219 | 21.8 |
| Self-disclosure | | | | |
| I have a comprehensive profile on the SNS | 4.82 | 1.41 | - | - |
| I find time to keep my profile up-to-date | 5.06 | 1.28 | - | - |
| I keep my friends updated about what am I thinking and what is going on in my life through the SNS | 5.45 | 1.10 | - | - |
| I often talk about myself on SNS | 5.10 | 1.33 | - | - |
| I frequently express my personal beliefs and opinions | 5.38 | 1.18 | - | - |
| I often discuss my feelings about myself | 5.38 | 1.20 | - | - |
| I am always sincere when I show my own feelings and experiences | 5.23 | 1.25 | - | - |
| I am always honest in my self-disclosures | 5.35 | 1.14 | - | - |
| My self-disclosures are accurate reflections of who I really am | 5.37 | 1.15 | - | - |

⁸ Data were also shown in Table 5.

5.3 Data Analysis

Correlation analyses and regression analyses were performed by SPSS (version 21) to examine the direct effect of social media use on perceived social capital and life satisfaction. The hypothesized indirect effect of social media functions on perceived social capital and life satisfaction was tested with structural equation modeling (SEM) in AMOS. Chi-square value is reported as an index of model adequacy, where a non-significant value suggests good model fit. Although the value is sensitive to sample size (Bollen, 1998), when the sample size exceeds 200 and other indices indicate acceptable model fit, the significance of the value can be disregarded (Moss, 2009). Moreover, the comparative fit index (CFI), Tucker-Lewis index (TLI), standardized root mean square residual (SRMR), and the root mean square error of approximation (RMSEA) are reported. CFI and TLI values equal to or larger than 0.90, SRMR value equal to or less than 0.05, and RMSEA value less than 0.08 indicate good fit.

To examine the moderation effect of personality traits on the relationships between social media use and its socio-psychological outcomes, hierarchical multiple regression analyses were conducted. A moderator is a variable that alters the direction or strength of the relationship between a predictor and an outcome. Moderation effect is a process of interaction, demonstrating how the effect of one variable depends on the level of another. Three types of interactions have been frequently identified through analyzes of moderation. One is “enhancing”, which means the increasing

moderator will further increase the effect of predictor. One is “buffering”, which means the increasing moderator will further decrease the effect of predictor. Another one is “antagonistic”, which means the increasing moderator will reverse the effect of predictor. To confirm the moderation effect it is necessary to check whether adding the interaction leads to a significant improvement in the regression. If the interaction is improving the regression, R^2 is expected to increase, and this increase should be significant.

CHAPTER 6: RESULTS

6.1 Descriptive Results

6.1.1 Frequency and Amount of Time of Social Media Use

As shown in Figure 15, over 60% of the respondents reported that they checked their SNS account several times per day. And, over half of the respondents spent more than one hour per day on SNS (see Figure 16), which suggested using social media becomes one of the predominate media behaviors in mainland China. Furthermore, there is a question asking “are you intent to continuously use SNS in the next year”. Results showed that over 90% of the current users answered “Yes” to demonstrate an enthusiasm to use social media.

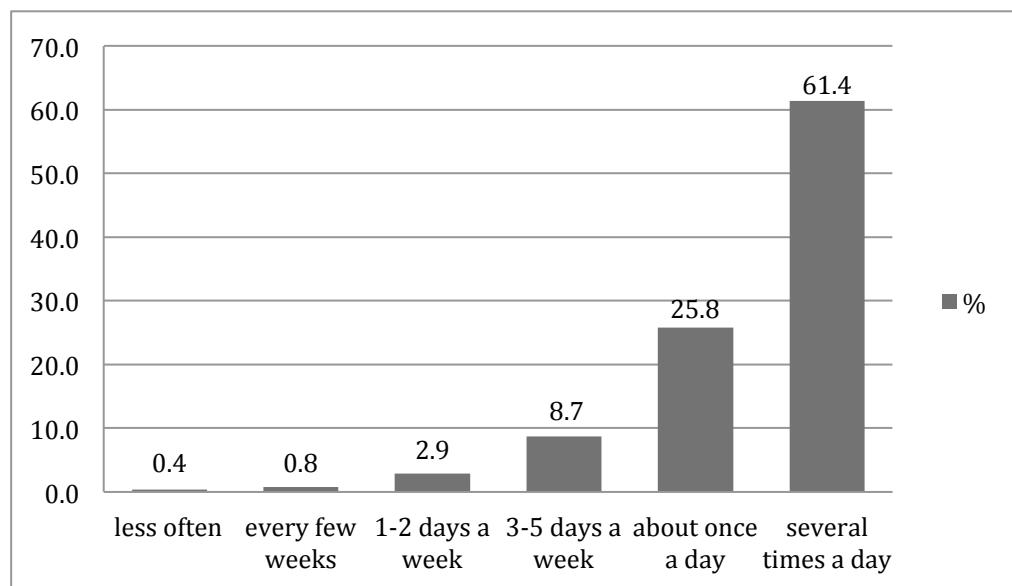


Figure 15. Frequency of social media use.

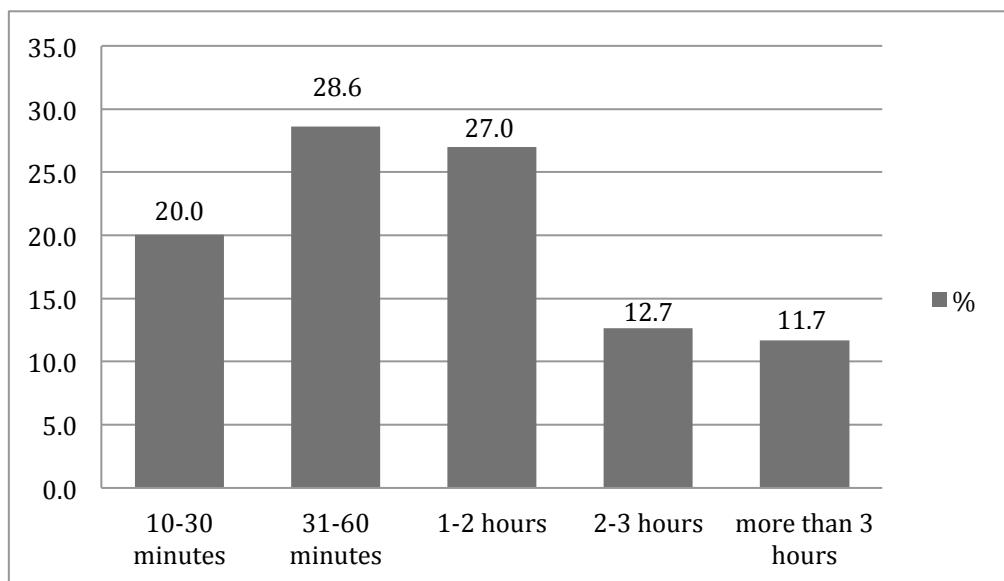


Figure 16. Amount of time of social media use per day.

Regarding the gender differences in the amount of time of social media use, as demonstrated in Figure 17, comparing with male users, female users were identified as heavier users, occupying a bigger proportion in terms of time length.

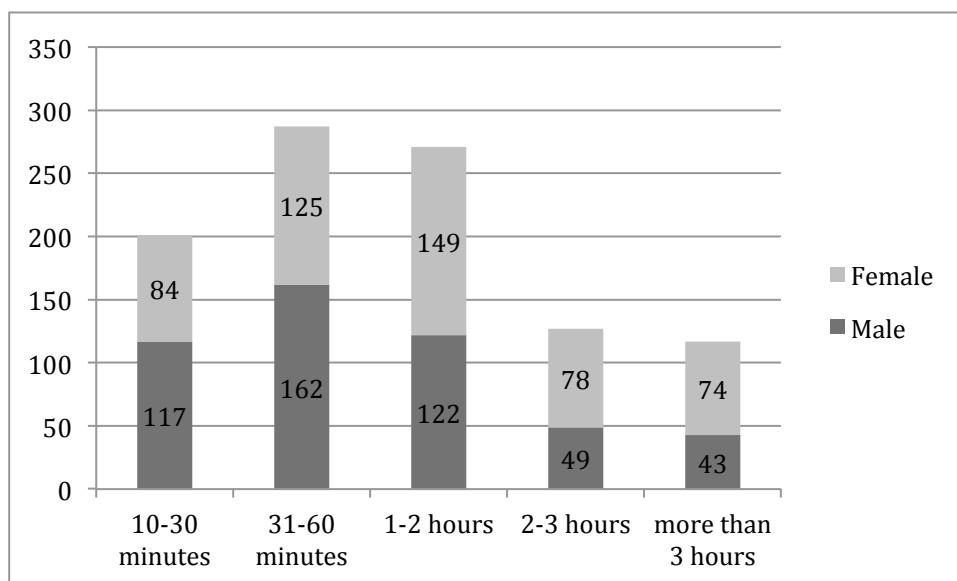


Figure 17. Gender distribution regarding amount of time of social media use per day.

6.1.2 Social Media Platforms

Figure 18 showed the major social networking services in China and proportions of their users. With respect to the respondents' most preferred SNS, results indicated that *Sina Weibo* had the biggest market share in China (32%), which was followed by *Q-zone* and *WeChat* that occupying 30% and 25% respectively. In addition, results also suggested 78.1% of the users owned more than one SNS account, indicating users might prefer to use different social networking services to satisfy their different needs (see Figure 18).

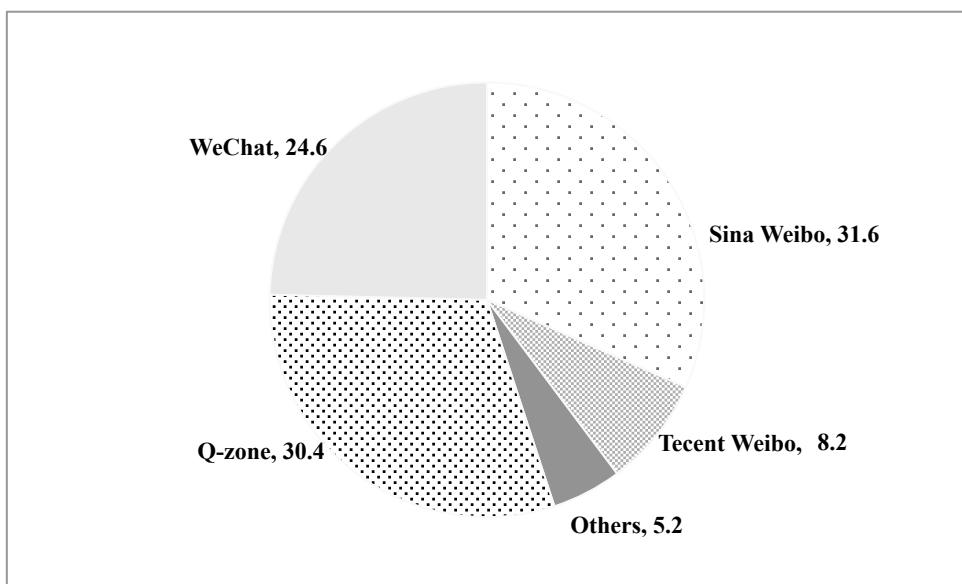


Figure 18. Proportions of users of major social networking services in China (with respect to respondents' most preferred SNS).

Concerning the three most popular social media formats (i.e., *Sina Weibo*, *Q-zone*, and *WeChat*), results showed no significant difference between male and female users. But, all of the three demonstrated a tendency to attract more female users than male users (see Figure 19).

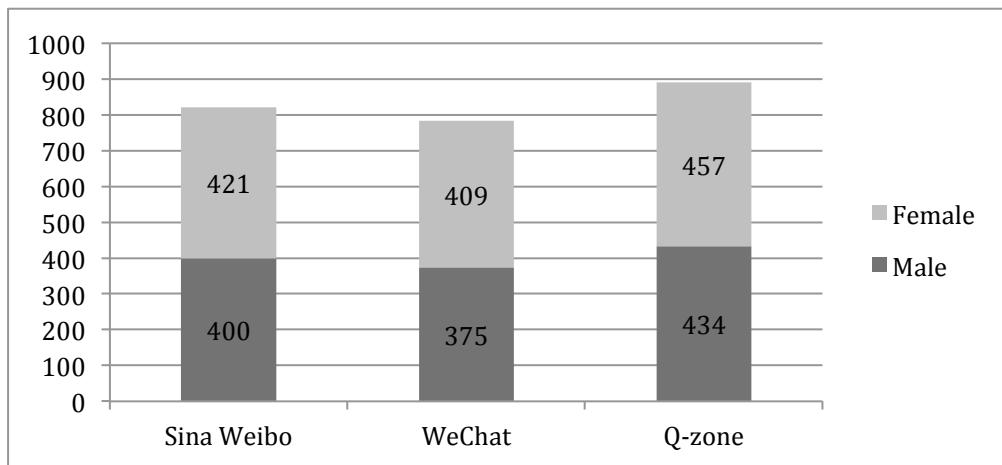


Figure 19. Gender distribution regarding users of the most three popular social networking services in China.

6.2 Results of Preliminary Analyses

Before testing the hypotheses, correlation analysis was performed (see Table 12). Results in Table 12 indicated that two types of social capital and life satisfaction were all positively associated with frequency, amount of time, and functions of social media use. Meanwhile, changes in perceived life satisfaction were highly synchronized with changes in perceived social capital. The highly correlated relationships among variables may be because the size of the sample used for the current research is much larger than that of the pilot study. The larger sample size may increase the possibility of obtaining statistically significant results. Therefore, in next steps of analysis, several variables were controlled to exclude their potential influence.

Table 12

Correlations among General Social Media Use, Social Media Functions, Perceived Social Capital, and Perceived Life Satisfaction

| | Frequency | Amount of Time | Intensity | SIF | ERF | Bonding Social Capital | Bridging Social Capital | Life Satisfaction |
|-------------------------|-----------|----------------|-----------|--------|--------|------------------------|-------------------------|-------------------|
| Frequency | - | .391** | .414** | .299** | .157** | .285** | .251** | .145** |
| Amount of Time | | - | .287** | .266** | .262** | .200** | .211** | .269** |
| Intensity | | | - | .561** | .327** | .409** | .424** | .292** |
| SIF | | | | - | .479** | .501** | .542** | .359** |
| ERF | | | | | - | .253** | .314** | .322** |
| Bonding Social Capital | | | | | | - | .712** | .420** |
| Bridging Social Capital | | | | | | | - | .530** |
| Life Satisfaction | | | | | | | | - |

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

6.3 Results of Hypotheses Testing

6.3.1 Predicted Effect of Social Media Functions on Perceived Social Capital and Perceived Life Satisfaction

Multiple regression analysis was performed to test the predicted effect of social media functions proposed in H1 and H2. Demographic variables (gender, age, educational level, monthly income), general social media use variables (frequency, amount of time, and intensity), and intensity of social media use were controlled.

As shown in Table 13, results of regression first supported findings of the pilot study that general indicators of social media use such as frequency and amount of time were not significant predictors of perceived social capital, except that frequency significantly increased perceived bonding social capital ($\beta = .09, p < .01$). The intensity of social media use was supported as a significant predictor of both perceived bonding social capital ($\beta = .16, p < .001$) and perceived bridging social capital ($\beta = .14, p < .001$). Inconsistent with findings of the pilot study, the two types of social media functions played different roles in predicting perceived social capital. Specifically, social media use for SIF greatly increased both perceived bonding social capital ($\beta = .37, p < .001$) and perceived bridging social capital ($\beta = .41, p < .001$), while social media use for ERF showed no significant effect on the two types of social capital. Therefore, H1 was supported.

Regarding perceived life satisfaction, results showed that both SIF (Model 3: $\beta = .18, p < .001$) and ERF (Model 3: $\beta = .14, p < .001$) significantly increased perceived life satisfaction. Thus, H2 was partially supported.

Table 13
Multiple Regressions Predicting Perceived Social Capital and Perceived Life Satisfaction

| Predictor | Bonding Social Capital | | Bridging Social Capital | | Life Satisfaction | |
|----------------------|------------------------|---------|-------------------------|---------|-------------------|---------|
| | β | t-value | β | t-value | β | t-value |
| Step 1 | | | | | | |
| Gender | 0.04 | 1.31 | 0.13*** | 4.19 | 0.10** | 3.26 |
| Age | -0.19*** | -5.69 | -0.14*** | -4.19 | -0.08* | -2.35 |
| Income | 0.19*** | 5.45 | 0.20*** | 6.14 | 0.31*** | 9.19 |
| Education | 0.02 | 0.52 | 0.01 | 0.43 | 0.04 | 1.14 |
| Step 2 | | | | | | |
| Gender | -0.03 | -0.91 | 0.06* | 2.21 | 0.05 | 1.55 |
| Age | -0.14*** | -4.19 | -0.09** | -2.83 | -0.03 | -1.02 |
| Income | 0.09** | 2.75 | 0.11** | 3.41 | 0.23*** | 6.98 |
| Education | 0.01 | 0.02 | 0.01 | 0.05 | 0.04 | 1.24 |
| Frequency | 0.10** | 2.97 | 0.05 | 1.48 | -0.04 | -1.08 |
| Amount of Time | 0.04 | 1.25 | 0.06 | 1.77 | 0.19*** | 6.00 |
| SMI | 0.34*** | 10.55 | 0.36*** | 11.08 | 0.20*** | 6.01 |
| Step 3 | | | | | | |
| Gender | -0.02 | -0.71 | 0.07** | 2.60 | 0.04 | 1.49 |
| Age | -0.10 | -3.42 | -0.05 | -1.71 | 0.00 | -0.01 |
| Income | 0.05 | 1.47 | 0.06 | 1.81 | 0.19*** | 5.78 |
| Education | -0.00 | -0.06 | 0.00 | 0.01 | 0.04 | 1.36 |
| Frequency | 0.09** | 2.67 | 0.04 | 1.16 | -0.04 | -1.09 |
| Amount of Time | 0.01 | 0.27 | 0.01 | 0.44 | 0.15*** | 4.85 |
| SMI | 0.16*** | 4.51 | 0.14*** | 4.19 | 0.07 | 1.96 |
| SIF | 0.37*** | 10.65 | 0.41*** | 11.95 | 0.18*** | 4.80 |
| ERF | -0.01 | -0.24 | 0.04 | 1.41 | 0.14*** | 4.38 |
| R² | 0.30 | | 0.33 | | 0.23 | |

Note. ** $p < .01$; *** $p < .001$.

To explore the mediation effect of perceived social capital in the relationship between social media functions and perceived life satisfaction, a structured model was constructed. Gender and age were also included in model testing considering their potential influence on social media use, perceived social capital, and perceived life satisfaction. Demonstrated in Figure 20, results of structural equation modeling indicated satisfactory model fit: $X^2(3)= 18.313$, $p\text{-value}= .013$, CFI= .992, TLI= .941, RMSEA= .057 (95% Confidence Interval= .042-.104), SRMR= .023. Indicated by the estimates, the mediating role of perceived bridging social capital in the effect of SIF on perceived life satisfaction was confirmed ($b= .19$, $p<.01$). Thus, H3 was partially supported by model testing.

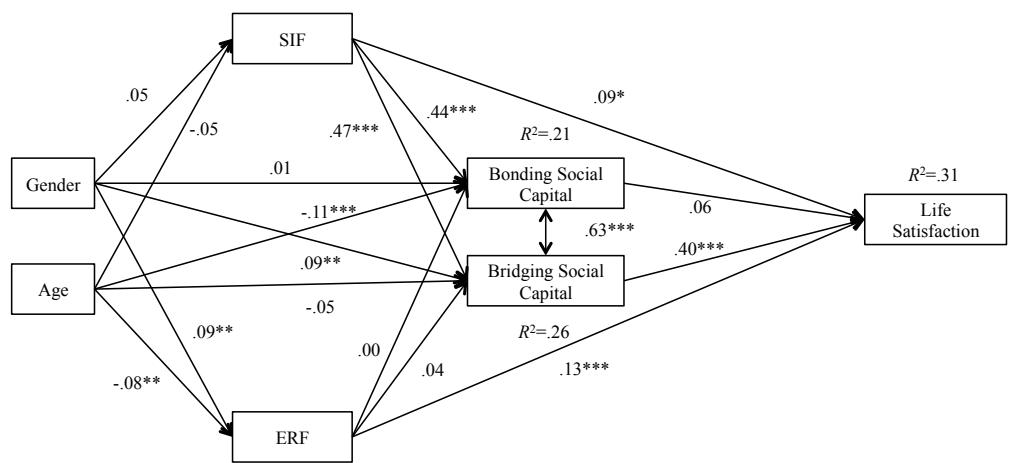


Figure 20. The resulting path model of perceived life satisfaction.

6.3.2 The Moderating Role of Personality Traits in the Effect of Social Media Use on Perceived Social Capital and Perceived Life Satisfaction

Hierarchical regressions were performed to test the hypothesized moderation effect of personality trait (see Table 14). Gender, age, monthly income, educational level, hours of Internet use, frequency of Internet use, and extent of self-disclosure were controlled. Controlled variables (Model 1), the intensity of social media use (SMI) as independent variable (Model 2), and the five personality factors as moderators (Model 3) were successively inserted into regressions. In order to test the moderation effects, five interaction terms (SMI×EXT, SMI×OPN, SMI×CON, SMI×NEU, SMI×AGR) were then introduced (Model 4). Results in Table 14 first showed that intensity of social media use significantly increased perceived bonding social capital ($\beta= .10, p<.01$), perceived bridging social capital ($\beta= .09, p<.01$), and perceived life satisfaction ($\beta= .11, p<.001$).

Personality traits demonstrated certain power to moderate the effect of social media use on perceived social capital. Hypotheses regarding the CON, NEU, and AGR were supported or partially supported. Specifically, as shown in Table 14 regarding EXT and OPN, results showed no significant positive moderation effect of the two personality traits. Unexpectedly, it even indicated a mild negative moderation effect of EXT ($\beta= -.05, p<.1$). Thus, H4 and H6 were rejected. It was assumed that NEU and AGR would positively moderate the effect of social media use on perceived social capital. Results revealed that for individuals with stronger NEU, the impact of social media use on perceived bonding social capital would be stronger ($\beta= .13, p<.01$). For individuals with stronger AGR, the impact of social media use on both

perceived bonding social capital ($\beta = .13, p < .001$) and perceived bridging social capital ($\beta = .09, p < .05$) would be stronger. Thus, H8 was partially supported, and H12 was fully supported. CON was assumed as a negative moderator. However, results suggested positive moderation effect of CON in predicting perceived social capital (bonding social capital, $\beta = .06, p < .1$; bridging social capital, $\beta = .08, p < .05$). Thus, H10 was not supported.

Results in Table 14 showed that, except OPN, all the other four traits had significant direct effects on perceived life satisfaction (EXT, $\beta = .34, p < .001$; CON, $\beta = .20, p < .001$; NEU, $\beta = -.16, p < .001$; AGR, $\beta = -.09, p < .05$). However, personality traits did not show strong moderation effect in the prediction of perceived life satisfaction. Only moderation effect of CON ($\beta = .08, p < .01$) was verified. Therefore, regarding the moderating effect of personality traits on life satisfaction, only H11 was supported, and other life satisfaction associated hypotheses (H5, H7, H9, and H13) were rejected. The exploratory examinations of the moderating role of personality traits in predicting perceived life satisfaction were considered failed.

Table 14

Moderating Role of Personality Traits in Predicting Perceived Social Capital and Perceived Life Satisfaction

| Variables | Bonding Social Capital | | | | Bridging Social Capital | | | | Life Satisfaction | | | |
|-----------------------------|------------------------|---------|----------|-------------------------|-------------------------|---------|---------|--------------------------|-------------------|---------|----------|-------------------|
| | Model 1 | Model 2 | Model 3 | Model 4 | Model 1 | Model 2 | Model 3 | Model 4 | Model 1 | Model 2 | Model 3 | Model 4 |
| Controlled Variable | | | | | | | | | | | | |
| Gender | 0.01 | -0.01 | -0.01 | -0.01 | 0.10*** | 0.08** | 0.09*** | 0.09*** | 0.09** | 0.06* | 0.05* | 0.05* |
| Age | -0.11*** | -0.10** | -0.11*** | -0.11*** | -0.05 | -0.04 | -0.08** | -0.07** | -0.04 | -0.02 | -0.04 | -0.04 |
| Income | -0.01 | -0.02 | -0.05 | -0.05 | 0.00 | -0.01 | -0.04 | -0.04 | 0.23*** | 0.20*** | 0.07* | 0.07* |
| Education | 0.04 | 0.03 | -0.01 | -0.01 | 0.04 | 0.04 | -0.01 | -0.01 | 0.04 | 0.05 | 0.01 | 0.01 |
| Hours of Internet use | 0.01 | -0.01 | -0.03 | -0.02 | 0.02 | 0.01 | -0.01 | 0.00 | 0.01 | -0.01 | -0.01 | -0.01 |
| Frequency of Internet use | 0.05 [#] | 0.04 | 0.04 | 0.04 | 0.00 | -0.02 | -0.02 | -0.02 | 0.02 | -0.00 | 0.00 | 0.00 |
| Extent of self-disclosure | 0.51*** | 0.45*** | 0.27*** | 0.27*** | 0.56*** | 0.50*** | 0.31*** | 0.30*** | 0.30*** | 0.22*** | 0.05*** | 0.05*** |
| Independent Variable | | | | | | | | | | | | |
| SMI | | 0.13*** | 0.11*** | 0.10** | | 0.11*** | 0.09** | 0.09** | | 0.20*** | 0.12*** | 0.11*** |
| Moderator | | | | | | | | | | | | |
| EXT | | | 0.08* | 0.07* | | | 0.03 | 0.02 | | | 0.35*** | 0.34*** |
| OPN | | | 0.25*** | 0.26*** | | | 0.28*** | 0.29*** | | | 0.05 | 0.05 |
| CON | | | 0.09** | 0.09** | | | 0.14*** | 0.15*** | | | 0.20*** | 0.20*** |
| NEU | | | 0.03 | 0.03 | | | -0.05 | -0.05 | | | -0.15*** | -0.16*** |
| AGR | | | 0.08* | 0.07 [#] | | | 0.05 | 0.04 | | | -0.09* | -0.09* |
| Interaction Term | | | | | | | | | | | | |
| SMI × EXT | | | | -0.04 | | | | -0.05[#] | | | | -0.04 |
| SMI × OPN | | | | 0.03 | | | | -0.01 | | | | -0.01 |
| SMI × CON | | | | 0.06[#] | | | | 0.08* | | | | 0.08** |
| SMI × NEU | | | | 0.13** | | | | 0.06 | | | | 0.05 |
| SMI × AGR | | | | 0.13*** | | | | 0.09* | | | | 0.02 |
| Model F | 56.68 | 52.52 | 47.43 | 35.90 | 71.91 | 65.32 | 62.70 | 46.31 | 31.78 | 33.59 | 52.57 | 38.71 |
| R ² | 0.29*** | 0.30*** | 0.38*** | 0.40*** | 0.34*** | 0.35*** | 0.45*** | 0.46*** | 0.19 | 0.21 | 0.41 | 0.42 [#] |
| ΔR ² | 0.01*** | 0.09*** | 0.01** | | 0.01*** | 0.11*** | 0.01* | | | 0.03*** | 0.20*** | 0.01 [#] |

Note. # p < .1; *p < .05; **p < .01; ***p < .001

6.3.3 Summary of the Results of Hypotheses Testing

Table 15 and Table 16 are presented here to show explicitly the results of hypotheses testing in the current research.

Table 15

Summary of the Results of Hypotheses Testing Associated with Research Question 1

| Hypothesized Relationship in RQ1 | Result |
|----------------------------------|--------|
| H1: Functions → SC | |
| SIF → Bonding | ○ |
| SIF → Bridging | ○ |
| ERF → Bonding | ○ |
| ERF → Bridging | ○ |
| H2: Functions → PSY | |
| SIF → LS | ○ |
| ERF → LS | × |
| H3: Functions → SC → PSY | |
| SIF → Bonding → LS | × |
| SIF → Bridging → LS | ○ |
| ERF → Bonding → LS | × |
| ERF → Bridging → LS | × |

Note. ○=supported; ×=rejected; SC=social capital;

PSY=psychological wellbeing; LS=life satisfaction; SIF=social and informational function; ERF=entertainment and recreational function.

Table 16

Summary of the Results of Hypotheses Testing Associated with Research Question 2

| Hypothesized Relationship in RQ2 | Result |
|-----------------------------------|--------|
| H4, H5: EXT as moderator | |
| SMI×EXT → Bonding | × |
| → Bridging | × |
| SMI×EXT → LS | × |
| H6, H7: OPN as moderator | |
| SMI×OPN → Bonding | × |
| → Bridging | × |
| SMI×OPN → LS | × |
| H8, H9: NEU as moderator | |
| SMI×NEU → Bonding | ○ |
| → Bridging | × |
| SMI×NEU → LS | × |
| H10, H11: CON as moderator | |
| SMI×CON → Bonding | × |
| → Bridging | × |
| SMI×CON → LS | ○ |
| H12, H13: AGR as moderator | |
| SMI×AGR → Bonding | ○ |
| → Bridging | ○ |
| SMI×AGR → LS | × |

Note. ○= supported; × = rejected; SMI=social media intensity;
 PSY=psychological wellbeing; LS=life satisfaction;
 EXT=extroversion; OPN=openness; NEU=neuroticism;
 CON=conscientiousness; AGR=agreeableness.

CHAPTER 7: DISCUSSION

7.1 Gain or Loss: Effects of Social Media Use on Social Capital and Psychological Wellbeing

7.1.1 The Social Media Impact within the Chinese Context

Considering the influence of social media use on social ties, previous studies (Ellison et al., 2007, 2011) have suggested the positive impact of social media on the maintenance and creation of individual-level relationships due to its distinctive technological advantages in connecting people. The most famous study was conducted by Ellison et al. (2007), who analyzed samples collected from college students in the United States and discovered a positive effect of Facebook use on perceived social capital and psychological wellbeing. Their work was published in the *Journal of Computer-Mediated Communication*, which has been cited for more than 4500 times, indicating how hot the topic is in related fields of research. Ellison et al. (2007) claimed the following:

“Online interactions do not necessarily remove people from their offline world but may indeed be used to support relationships and keep people in contact, even when life changes move them away from each other.” (Ellison et al., 2007, p.1165)

However, many subsequent studies have found different results in pioneering efforts. Leskovec et al. (2010) suggested that using social media could bring both positive and negative consequences to social relations. Interestingly, it has been reported that more than one-third of British Facebook users did not like their

Facebook friends, implying the discrepancy between online and offline social networks (Woollaston, 2013). Therefore, the impacts of social media are likely to vary according to different patterns of use among different groups of people in different contexts, which need to be continuously examined and explored.

The results of the current research on Chinese social media users have supported the positive effect of social media intensity on users' perceived social capital (perceived bonding social capital, $\beta = .16$, $p < .001$; perceived bridging social capital, $\beta = .14$, $p < .001$), which contributes to the world database of social media research by adding empirical evidence about the Chinese context.

Over the past decade, the fast growth of China's social media market has coincided with Chinese people's increasing fanaticism in using such convenient communication tools. Unlike elsewhere in the world, the ecosystem of China's social media market has been developed from the prosperity of many homegrown digital media platforms. Due to the Internet censorship that sets boundaries between mainland China and the outside world, a unique cyber environment has been established. Many popular worldwide social networking services, such as *Facebook*, *Twitter*, and *Instagram* are kept out of reach by the Great Firewall of China. However, this censorship has not hindered the progress of new media technologies in China; instead, it has created golden opportunities for local companies to develop domestic social media platforms that are cultivated their users. By the end of 2014, there were 620 millions social media users in mainland

China, and three-quarters of them checked their social media accounts at least four times per week and spent approximately 30 minutes each time they checked their preferred social media accounts (CNNIC, 2014c). These numbers demonstrate how indispensable social media are in Chinese people's daily lives.

Chinese people's enthusiasm in using social networking services is closely related to the economic and social transformations in China. Benefiting from the long-term policies promoting modernization and urbanization, China has achieved 10.7% economic growth in the past ten years, which far exceeds the worldwide growth of 3.9%. Rapid modernization and extensive urbanization are supposed to considerably increase the social wealth and efficiently solve the problem of the surplus rural labor force. Along with the growing rural labor flow, the social atmosphere has greatly changed in China. Millions of people rush to big cities to start their new lives, and because they have left behind hometowns and families, there is an increasing desire to be connected. The emergence of social media has precisely met such needs, which could directly shape people's perceptions of their social relations.

However, unlike findings in the Western contexts that suggest a stronger influence of social media use in improving weak social relations than in improving strong social relations (Ellison et al., 2007), the current research in the Chinese context claims that social media use could significantly contribute to both bridging ($\beta = .14, p < .001$) and bonding social capital ($\beta = .16, p < .001$). Explanations for these

differences could also be found in the characteristics of Chinese society and the Chinese way of socializing. Influenced by traditional Chinese culture, Chinese people normally expand their “*guan xi*” (social relations) through networks of family members and relatives. Thus, in the traditional Chinese social model, obtaining specific social resources involves expanding one’s strong connections through social activities. According to traditional Chinese social practices, it seems that real world interactions would be more important than online communication.

However, as social mobility increases, the geographic distance between people also inevitably increases, making economical, networked communication tools essential channels for many Chinese people. In addition, social media also provide a new avenue that allows people to present an ideal self. It has been found that self-disclosure on social media could expand individuals’ circles of friends (Taddei & Contena, 2013), enhance their feelings of intimacy (Park et al., 2011), and facilitate their development of romantic relations (Kito, 2005). Therefore, social media could be a good choice to supplement users’ social resources and to enlarge their existing relational networks.

7.1.2 The Differentiated Effects of Social Media Functions

To further explore how Chinese people’s social ties and psychological wellbeing are influenced, the concept of social media functions has been

introduced to the current research after drawing insights from the idea of “active audience” in mass communication research. According to Papacharissi and Rubin (2000), the audience intentionally selects specific media content to satisfy their particular needs, which represented a shift in research paradigms “from communicator-oriented to audience-oriented” perspectives (Severin & Tankard, 2010, p.329). Reflecting this paradigm shift, the current research has focused on the needs and purposes of Chinese people when using social media, and has examined how the Chinese structure of social media functions leads to differentiated social and psychological outcomes. A two-factor structure of social media functions in China has been revealed through factor analysis: the social and informational function (SIF) and the entertainment and recreational function (ERF).

Regarding the social and informational function, Chinese social media may play a different role compared with their role in the Western contexts. In mainland China, the media system is embedded in the social structure; therefore, the particular political environment limits the extent to which varied information can be published. The traditional media in China (e.g., television, newspaper, and broadcasting) are under strict control as the official propaganda channels of the government, which is empowered to influence public opinion and shape ideology. Thus, most of the time, especially when major events and serious issues are covered, the functionality of official media largely depends on intentions of

relevant political departments, for instance, the Central Publicity Department. In such situations, social media become alternative sources of information that the public could not acquire from the official media (Sparks, 2010). Moreover, the open platform also expands the public sphere *tit for tat*, which considerably increases the diversity of the obtained information. The social and information seeking function of social media use could be seen as based on a positive attitude to be linked to the outside world. As a result, people's willingness to seek connections and information may easily engage them in social networking services.

In contrast, using social media for recreational purposes could be seen as a type of ritual and habitual behavior. As reported, over 97.6% of Chinese smartphone users spend the majority of their time (60.6%) on mobile phones for entertainment purposes (CNNIC, 2014c). The recreational consumption of social media has become an area worthy of exploration. Compared with social media used worldwide, such as *Facebook* and *Twitter*, Chinese social media have more interesting modules to satisfy the increasing entertainment demands of users. For instance, *Weibo* has added embedded video playback, allowing users to open a video without redirecting to another hyperlink. It seems that localized social media settings know more about Chinese users' needs. However, with respect to the impact of recreational use on social ties, the results of the current research have not shown a significant effect of ERF on perceived social capital, perhaps because

the people who mainly use social media for recreational purposes have less of a desire to communicate with the outside world. Underlined in previous studies on the impact of ICTs, the ritual use of social media would lead to a higher possibility of media dependence, which would have a negative impact on individuals' social integration and wellbeing (Guo et al., 2014c; Kim & Haridakis, 2009). However, these findings should not arbitrarily negate the recreational use of social media, because entertainment needs are a natural demand within humans' psychological structure. Although such usage patterns will not significantly contribute to social ties, they may offer more personalized user experiences to satisfy people's needs for personal space.

Regarding the effects of social media functions on perceived life satisfaction, more interesting findings have been obtained. Both direct and indirect effects were examined in the current research. In general, both the SIF function ($\beta = .18, p < .001$) and the ERF function ($\beta = .14, p < .001$) directly increased Chinese users' perceived life satisfaction. In addition, the SIF function may also contribute to perceived life satisfaction through the mediation effect of perceived bridging social capital. Given to the salient advantage of connectivity, social media links people together in a faster, easier, and low-cost way that can more conveniently bridge the structural holes between groups and contribute to the acceleration of social capital flow. Via social media, people can access diverse resources from close relationships, acquaintances, and even strangers, which could be an important

reason that life satisfaction is perceived higher within online environments. The findings also imply instant and superficial socialization among Chinese people.

As discussed before, the SIF function is considered a positive attitude that encourages people to seek information and to pursue connections. Compared with FTF communication, online interactions cost less time and money, which makes it much easier and more convenient for users to obtain various benefits. The resources obtained from online communities have the potential power to generate perceived social support, which is likely to make people feel better (Shaw & Gant, 2002). On the other hand, although the ERF function showed no significant impact on social ties, it directly contributed to the psychological outcomes, perhaps because users with recreational purposes may treat social media with multiple applications as platforms for excitement and joy to compensate for their lack of satisfaction offline.

In addition, Kraut et al. (1998) underlined that individuals' mental health was closely associated with the quantity and quality of their social ties. Being in a network with diverse social relationships can alleviate people's stress and help them to experience a higher quality of life. The results of the current research have suggested a significant mediation effect of perceived bridging social capital in the relationship between social media use and perceived life satisfaction. Granovetter (1973) noted that weak ties created in different social circles could be more beneficial than strong ties because of the dissimilarity between network members.

Although strong relations could offer considerable instrumental and emotional support, resources from strong relations such as family members and relatives might lack novelty and diversity. In the era of fast urbanization in mainland China, the results reveal that Chinese people tend to use new communication technologies to seek heterogeneous information and social resources from weak ties, which are more likely to generate a sense of satisfaction.

7.1.3 Transforming Society: Social Media's Influence on Social Capital

Chinese society is profoundly different from the West in terms of its culture, which has been deeply influenced by Confucianism for thousands of years. Unlike the Western understanding of social relationships that philosophically values “love” as an important symbol of civilization, traditional Chinese society puts more emphasis on “obligations” or “responsibilities”.

Influenced by the doctrine of Confucianism, the most important relationships in Chinese culture involve the Five Cardinal Relationships (*wu lun*): *jun chen* (ruler and subject), *fu zi* (father and son), *fu fu* (husband and wife), *xiong di* (elder brother and younger brother), and the relationships between *peng you* (friends). These five cardinal relationships outline the basic patterns of Chinese people’s socialization. More essentially, these patterns establish the obligations, norms and social rituals associated with these relationships. For example, with *fu zi*, the relationship between parents and children illustrates the hierarchical way in which

“*xiao*” is embedded (filial piety, pronounced *kō* in Japanese), requiring children to get along with family authorities. As a moral standard in Chinese culture, “*xiao*” is acknowledged as a social virtue, meaning the young’s respect for, obedience to, and care for the elder. The virtue is not limited to the family unit; it has also developed into the fundamental basis of traditional Chinese society. In general, the doctrine of Confucianism has conceptualized a hierarchical Chinese society, regulating how Chinese people interact with each other through its standards for obligations, morals, and virtues. Accordingly, it has gradually constituted “*guan xi*”, which refers to social relations in Chinese society and reflects the reciprocal interactions among Chinese people that are based on mutual trust. Thus, by evaluating the required trust among people, researchers have concluded that traditional Chinese society is more likely to bind people together with strong ties, through which people obtain resources from established close relationships (Bian, 1997).

Before adopting the reform and open door policy, the social resources flowing through strong relationships in diverse social networks was a major characteristic of social capital in China. For instance, graduates tended to rely on middlemen in their social networks when looking for their ideal jobs because they were to obey the national allocation policy. As suggested by Bian (1997), who conducted a general social survey on labor mobility in several cities in China, job seekers and job introducers were strongly bonded by mutual trust; however, these

bonds differ from the situations described by Granovetter (1973), who attached importance to weak ties. In the context of a semi-closed era, strong ties seemed to play a bigger role in formulating people's social capital.

After the establishment of the reform and open door policy, China attempted to transform its social system into a two-tier pattern by combining the market-oriented economy and centralized politics. The direct influence of this change has been that the role of strong social relations in obtaining resources has been undermined, while the information flow within different social networks has been highlighted. Such phenomena are also identified by the “efficient capital market hypothesis (ECMH)” in social capital research, which emphasizes information flow rather than individuals' social relationships as the determinant of resource allocation in a market-oriented economic system. From this point of view, the structure and morphology of social capital in Chinese society has greatly changed since the establishment of new economic policies.

With the development of Internet-based technologies the transformation of Chinese society has become clear. The most significant effect of new media technologies on social capital is their effectiveness in linking different social groups. The information flow is clearly accelerating, as the range of received information has been greatly expanded. As diverse social media settings are emerging in China, Internet-based networking services play a salient bridging role in connecting Chinese people. As indicated by results of the current study, there is

a significant association between bridging and bonding social capital among social media users ($r = .71$, $p < .01$), suggesting a potential reciprocal relationship between the two types of social capital associated with social media use. In the near future, the characteristic of social capital in the Chinese society is transition from bonding to bridging social capital. The social structure currently bound by strong ties could gradually become a structure supported by weak ties.

7.2 Individual Differences: The Moderating Role of Personality Traits in Predicting the Socio-Psychological Outcomes of Social Media Use

Compared with complex reality, activities within social media platforms are more prone to be individualized, narrowed and privatized. The “technological empowerment” through ICTs distributes the power to individuals and provides them with more rights. As such, social media enable people to more easily act according to their needs, because there are fewer confounding factors in the virtual world. Therefore, personal characteristics are assumed to play an important role in the relationship between social media use and its outcomes. In line with previous studies (Ellison et al., 2007; Guo et al., 2014a; Kim et al., 2013), the current research used a representative sample to test this assumption. The findings have suggested that certain personality traits considerably moderate the effect of social media use on its socio-psychological outcomes.

Although previous studies have separately examined how individual differences affect social media use (Ryan & Xenos, 2011) and how social media

use affects interpersonal relationships (Ellison et al., 2007, 2011), rare cases examine social media use, personality traits and social capital together to explore the relationships among these three variables. The current research has analyzed data collected from a sample of mainland Chinese in an attempt to examine personality traits as potential moderators in the relationship between social media use and social capital. The findings have suggested that individuals' inherent features have the potential power to determine the benefits of social media use.

People with more neurotic ($\beta = .13$, $p < .01$) and agreeable personalities ($\beta = .13$, $p < .001$) are likely to gain more social capital through social media use. Agreeableness is regarded as a promoting factor in forming friendships (Ross et al., 2009). Persons with more agreeable personalities may be good listeners who can easily converse with others. Hence, they may also have more advantages in enhancing the quality of friendships via social media. Neuroticism is found to moderate the effect of social media use on perceived bonding social capital. This result does not support the stereotyped understanding that neurotic people will have more difficulties in socializing. Surprisingly, people with high levels of neuroticism might prefer to use CMC tools as a supplementary channel to communicate with others. A previous study also suggested that neurotic users showed a stronger interest in Internet-based communication (Wolfradt & Doll, 2001). Therefore, social media may help neurotic people who are not good at FTF communication to establish social networks. Moreover, the results have indicated

that more conscientious users might benefit more in the accumulation of social capital, which does not support the hypothesis. This result may imply that more conscientious people are likely to use social media merely as an information seeking tool (Hughes et al., 2012). Such usage patterns may enhance their information sharing and exchanging behaviors, which facilitates the generation of more social ties.

Unlike in previous research (Amichai-Hamburger & Vinitzky, 2010; Moore & McElroy, 2012), Extroversion and openness to experiences were not found to significantly enhance the generation of perceived social capital through social media use. One possible explanation regarding extroversion is that users who score high on the extroversion scale may be less interested in using social media as social tools because they may think the limited applications of social media cannot provide an environment for full self-disclosure. Ross et al. (2009) also showed that highly extroverted individuals might not use social media as an alternative to social activities. Regarding openness, although it was seen as an influential factor in predicting social capital, the results of the current research did not support this assumption. During the period of data collection, social media in China such as *Weibo* and *Renren* have become the dominant social networking services. For people who score high on the openness scale, these social media may not present novel features and may no longer lead to considerable social benefits. Individuals who are more open are more likely to be the pioneers who use a new CMC tool

during the early period of its diffusion. However, they may not become loyal users of these services. They may also be the first to quit using these applications if they find something more attractive.

Pertaining to the prediction of perceived life satisfaction, only the moderating effect of conscientiousness ($\beta = .08$, $p < .01$) was supported. As the results have shown, instead of being moderators, personality traits could directly determine how a person evaluates his or her life quality, which might be explained in the field of psychology. To sum up, in the current research, the exploration of the moderating role of personality traits in the current research implied that individual differences have the potential power to affect the entire process of media consumption. Personality traits largely determine how much users may benefit from using media. Thanks to the innovation of ICTs, social media enable more personalized patterns of communication and socialization. Accordingly, different personalities may influence the adoption of communication tools, shape particular online behaviors, and cause varied outcomes. Individual characteristics considerably influence behaviors before, during, and after social media use. From this point of view, when the discussion turns to social media effects, answers about whether these effects are positive or negative are not sufficiently persuasive. It could be better to distinguish media behaviors and to categorize outcomes according to individual differences. This perspective might be insightful for societal-level activities, for instance, the promotion of knowledge acquisition,

civic engagement, and health communication via social media. Strategies can be designed to target different types of users under different conditions. Moreover, research on social media impact associated with individual differences (including, but not limited to personality traits) may contribute to the detection of social behaviors in the age of digital socializing.

7.3 Implications

A previous review of the development of social media research indicated four major phases in this process (Khang, Ki, & Ye, 2012). The first phase focuses on the emergence of social media as a technological innovation. The second phase addresses the usage and users of social media by adopting mass communication theories. The third phase begins to investigate the effects of social media, and the fourth phase explores the improvements in social media. An increasing number of studies contribute their insightful findings to the second and third phases, indicating a wide recognition of and interest in social media's impacts on our lives and society (Khang et al., 2012). This research on the socio-psychological outcomes of social media use adds further evidence to the current developmental stages. It also provides theoretical, methodological and practical implications for future research to continue this progress.

Regarding the theoretical implications, the model adopted in the current study focused on the resulting process of media effects, demonstrating how the differentiated functions of social media and personality traits influence the

outcomes of social media usage. Subsequent research should take into account the influence of diverse online activities and extensive individual differences (e.g., users' personalities, cognition, and inner workings). In addition, in exploring the relationships between social media use, social capital and life satisfaction, the current study innovatively examined the potential mediating role of social capital in the associations between SNS use and life satisfaction, rather than blindly treating social capital as an outcome variable. This study added empirical support for the claims of Ellison et al. (2007), who stated that social capital and life satisfaction might be correlated variables. The present study reveals insights into the analysis of the complicated relationships among social media usage, social capital and psychological wellbeing.

Methodologically, unlike previous studies that extensively discussed similar questions by surveying college students in the United States and Europe, the current study adopted a representative Chinese sample to test the situation in an Asian context. The findings of this study may contribute to the diversity of observed populations and to a more comprehensive collection of references in related fields of study. The results have supported the positive impact of social media on Chinese people's social relations and levels of psychological health, which is consistent with findings obtained in Western countries. On the other hand, the current research has also identified two major patterns of social media use

among Chinese users SIF and ERF, indicating that the benefits that users obtain will vary according to two different social media functions.

Practically, the findings of the current study are expected to contribute to research that aim to apply ICT to promote public health. With the widespread popularity of the Internet, discussions on potential negative consequences brought of the Internet use, particularly concerning the excessive Internet use, have not abated. Internet addiction or dependence has drawn widespread concerns from educators and psychologists. Although the current study did not investigate the excessive use of social media, the findings related to social media functions provided implications for guiding the public toward a more beneficial way of using social media. The current study suggested that, in contrast to its entertainment use, the use for SIF has more significance. Therefore, in social media education, social media skills should be enhanced for information seeking purposes and social engagement, but users should also be persuaded to avoid excessive and recreational consumption.

7.4 Limitations and Future Directions

Despite insightful findings and implications, the current research has several limitations that should be acknowledged. First, as noted earlier in this dissertation, an individual might have several SNS accounts. Although respondents were asked to identify their preferred SNS, different social networking services might attract users with different personalities and lead to different outcomes. For

instance, a previous study suggested that individuals who prefer using *Facebook* or *Twitter* might prefer them because of particular intrinsic characteristics (Hughes et al., 2012). Thus, future studies may consider focusing on a specific SNS to contribute more targeted and practical insights. Comparisons between different social media environments may also be considered.

The second limitation relates to the measurement of perceived social capital and psychological wellbeing. As the netizen population has reached 648 million in China (Xinhua, 2015), it probably constitutes the most energetic and promising market for social media, substantiating the significance of investigating social media use in the Chinese context. Therefore, instead of using universal scales, items that better fit the cultural context should be designed. As discussed in the current research, Chinese people demonstrate a distinct way of socializing. Therefore, when examining the effect of social media use in China, the specific characteristics of interpersonal relationships among Chinese people should be investigated. Otherwise, even though the assumptions are statistically confirmed, the results may not perfectly reflect the actual situation in a given context. In addition, the items in the questionnaire are mostly self-reported judgments rather than real estimations of social capital. Future studies should consider measuring social capital in more practical contexts, for instance, considering individuals' civic participation, interpersonal trust, and social network size as dimensions to explore the actual quality and quantity of their social ties.

Regarding the measurement of psychological wellbeing, the current research used perceived life satisfaction as a single indicator of personal wellbeing. Although it has been widely adopted in social psychology research, it is necessary to emphasize that psychological wellbeing is defined by a multi-dimensional structure containing many other indicators such as feelings of loneliness, self-esteem, and stress. Researchers have also noted that, in addition to the subjective indicators, evaluations of psychological wellbeing should also consider the lifespan development of wellbeing (Ryff & Singer, 1996), which demonstrates a more stable status of personal wellbeing. Therefore, future studies may include both positive and negative aspects of psychological wellbeing, and invite both subjective and objective evaluation methods.

Another limitation lies in the methodology used. Conducting dynamic research on the relationship between social media use and its outcomes is necessary. Analysis using cross-sectional data may indicate potential causal relationships, but it is not sufficiently persuasive to determine causation. Therefore, longitudinal analyses are suggested for future studies. In addition, this research tested the moderating effects of personality traits with hierarchical multiple regressions. However, linear regression has limitations in relation to variable control. To achieve more rigorous explanations, future studies should try to employ more sophisticated methodologies that can better rule out the intervention of irrelevant variables.

Moreover, due to the significance of individual-oriented research, future observations and investigations could also not neglect the role of demographic variables. For instance, in the current research, both gender and age were found to be significant predictors of the entertainment and recreational purpose of social media use and perceived social capital. They also showed indirect or potential influence on perceived life satisfaction. Specifically, in line with previous research (Bolin et al., 2003), findings of the current research indicated that women were more willing to use social media for entertaining purpose (see Figure 20, $\beta = .09$, $p < .01$) and were more likely to gain weak ties (see Figure 20, $\beta = .09$, $p < .01$), suggesting a higher possibility of women experiencing a higher life satisfaction (see Figure 20, indirect effect⁹ = $.04$, $p < .01$ and indirect effect¹⁰ = $.01$, $p < .01$).

Regarding the role of age, results first showed that elder users were less likely to use social media for entertaining purpose (see Figure 20, $\beta = -.08$, $p < .01$). Findings also implied that older people are facing a decline in perceived social relations (see Figure 20, perceived bonding social capital, $\beta = -.11$, $p < .001$; perceived bridging social capital, $\beta = -.05$, ns) and psychological wellbeing (see Figure 20, indirect effect¹¹ = $-.01$, $p < .01$), which had also been claimed by previous study (Van Tilburg, 1998). Although it has been given great expectation that the Internet-based technologies could contribute to aging people's social capital and

⁹ Indirect effect mentioned here refers to effect of gender on perceived life satisfaction through the mediating role of perceived bridging social capital.

¹⁰ Indirect effect mentioned here refers to effect of gender on perceived life satisfaction through the mediating role of entertainment and recreational purpose of social media use.

¹¹ Indirect effect mentioned here refers to effect of age on perceived life satisfaction through the mediating role of entertainment and recreational purpose of social media use.

happiness, there still doubts about this proposition. Actually, aging people are not the dominant population of social media users, and they may even show less interest in enjoying the fun of social media. The lower desirability to use social media might explain why few benefits aging people could get from it. As China becomes an aging society, it will be meaningful to continuously explore the influence of new communication technologies on older people's social life and wellbeing.

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