Rumor Has It: Examining Social Capital and Intention of Sharing Rumor in Social Network Services

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ABSTRACT

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Rumor spreading is one of the basic mechanisms for information dissemination in Social Network Services (SNS). As "unverified but important knowledge," rumor is considered as a valuable resource. Drawing on Social Capital Theory and Social Cognitive Theory, this study theoretically articulates and empirically tests a model positing that social capital and social cognitive affect SNS users' intention of sharing rumor in their SNSs. Results indicate that trust, norm of reciprocity, and personal outcome expectations play a significant role underlying SNS users' intention of sharing rumor.

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CHAPTER 1 INTRODUCTION

Rumors are the oldest form of mass media and widely prevalent in our today's society. They influence our beliefs and behaviors towards others by affecting the way we perceive the world, regardless of our social spheres. In an organizational or political context, they fuel intergroup conflict and affect a company's or candidate's reputation negatively (DiFonzo & Bordia, 2007). During organizational change, such as corporate restructuring, mergers, or downsizing, the presence of pervasive rumors may create mistrust and lower morale, growing a climate of uncertainty (DiFonzo & Bordia, 1998).

Rumor is defined as "an unverified proposition for belief that bears topical relevance for persons actively involved in its dissemination" (Rosnow & Kimmel, 2000, p. 122). Generally speaking, rumors supposedly are factual but lack authenticity, passed along from person to person. In addition, rumors can be differentiated from knowledge (e.g., news) in that the latter has a strong evidentiary basis, whereas the former are unsubstantiated. However, both of them are perceived as "important" by receivers. This nature of rumor reveals why rumor has the potential to impose harmful consequences.

When we hear something dreadful, we want to validate the information to act effectively. This is because our defense motivation is derived from a desire to confirm the validity of our circumstances or to disconfirm the validity of contrary position (Chaiken, Giner-Sorolla, & Chen, 1996). This mechanism explains why we spread negative rumors, not to speak of positive

ones, despite of the "minimize unpleasant messages (MUM)[1] effect." Further, prior research suggests that negative information is more likely to be transmitted to a friend when it was considered useful to prevent harmful consequences for the friend (Weenig, Groenenboom, & Wilke, 2001). This is called as the "relationship-enhancement motivation" of rumor transmission (Rosnow & Bordia, 2007).

In recent years, Social Network Services (SNS), such as Twitter and Facebook, have been received much scholarly attention as they have become a major platform to exchange information and opinions publicly. They have attracted millions of users, many of whom have integrated these sites into their daily practices (Boyd & Ellison, 2008). Prior research has characterized user behavior in SNSs (Benevenuto et al., 2009), analyzed topological characteristics of SNSs (Ahn et al., 2007), and empirically studied the factors affecting SNS use (Kwon & Wen, 2010). So far, however, there has been far too little discussion about SNS users' motivations of spreading "unverified knowledge," although a lot of social whirls have been stemmed from rumors nowadays.

Further, SNSs ease the spread of rumor (Doerr et al., 2012). Predictions that SNSs, with its low transaction costs, high speed, and global reach, would facilitate the spread of rumors, and that individuals would unquestioningly accept these falsehoods, have already come true. In addition, SNSs are reshaping the way people take collective actions. It is quite remarkable that

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[1] Tesser and Rosen (1975) demonstrates that people are reluctant to spread bad news for fear it will generate negative image of the sender and the recipient may evaluate them negatively.

social networks spread any kind of information including rumors and news so fast, considering the recent uprisings of the 'Arab Spring' and the 'London riots.' Both the structure of social networks and the process that distributes the news have evolved in a random and decentralized manner (Doerr et al., 2012).

For example, a rumor swept across Korea in early 2012. The rumor said that a female waitress had used physical violence against a pregnant customer at a franchise restaurant. Huge public outcry over the waitress arose, and the story diffused extremely fast via Twitter, Facebook, and KakaoTalk. Furious SNS users searched and uncovered the waitress's personal information by web surfing and then threated her by posting it everywhere. This so-called "witch-hunt" finally waned when police announced that it was the waitress who actually had gotten kicked in the stomach by the pregnant woman. However, what has done to the waitress is done.[2]

After this incident, many have voiced that SNS users should be more careful when sharing information that has not been verified yet. However, this approach is not preventative enough. Other rumors have been heard and caused problematic results afterwards.[3] Therefore, this study examines the social factors that influence SNS users' intention of sharing rumor with other SNS users in order to effectively manage them.

The paper is organized as follows. First, the background of this study is

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[2] This story can be found in the article, <Stop the Witch Hunt>, of Korea Joongang Daily on Feb 29, 2012.
(http://koreajoongangdaily.joinsmsn.com/news/article/html/145/2949145.html)
[3] An article of The Kyunghyang Shinmun reports several current rumors. It points out that public anxiety and miscommunications facilitate SNS environments in which anyone can easily generate rumors and share them fast.
(http://news.khan.co.kr/kh_news/khan_art_view.html?artid=201209162202475&code=940202)

discussed. Next, a theoretical model for this study is posited, and the primary hypotheses of the study are presented. Chapter 4 and 5 describes a discussion of the research methodology, data collection procedures, instrument validation, analysis techniques, and the results. Finally, the last chapter assesses the study's findings, its implications for research and practice, its limitation, and future research directions.

CHAPTER 2 THEORETICAL FRAMING

This study relies on and contributes to four threads of scholarship: rumor transmission, social capital, social cognitive, and Social Networks Services (SNS). Each of these four literatures will be summarized, and prior findings to aid in understanding the characteristics of the theme of this study will also be provided.

2.1 Attributes of Rumor

Rumor is defined as "unverified and instrumentally relevant information statements in circulation that arise in contexts of ambiguity, danger, or potential threat and that function to help people make sense and manage risks" (DiFonzo & Bordia, 2007, p. 13). DiFonzo and Bordia (2007) presents the Information Dimensions Scale (IDS) to investigate perceived dimensions of information. Based on the IDS, rumor is distinguished from "serious" knowledge (e.g., news), gossip, and urban legend. The primary distinction between knowledge and rumor is only with regard to the existence of strong evidentiary basis (e.g., rumor is lack authenticity), which suggests that rumor is considered to be useful or beneficial. Rumor and gossip, however, differ on perceived importance and perceived usefulness by participants. Both gossip and urban legend are low on importance and usefulness whereas rumor high (Guerin & Miyazaki, 2006). Table 1 summarizes the differences of rumor.

Table 1. Information Dimensions Scale (DiFonzo & Bordia, 2007)			
	Evidentiary basis	Perceived importance by participants	Perceived usefulness by participants
Rumor	Low	High	High
News	High	High	High
Gossip	L/M/H	Low	Low
Urban legend	Low	Low	Low

The nature of rumor generating and spreading has been viewed from two different perspectives: the sociological and the psychological perspectives. Sociologists analyze rumormongering at the level of collective actions (Warren, Peterson, & Noel 1951; Sibutani, 1966), whereas psychologists view it at the level of individual needs (Allport & Postman 1945; 1947). Both underline the functional and purposive nature of rumormongering as the cognitive and emotional expression (Rosnow, 1988). As Knapp argues, "rumor is created out of the impulse to interpret the world meaningfully and at the same time to gratify or given expression to human motives" (Knapp, 1944, p. 31). This psychodynamics of rumor is consistent with the factors that influence why and how rumor is generated and transmitted. Previous studies have identified four variables related to rumor transmission: general uncertainty, personal anxiety, topical importance, and credulity (Bordia & DiFonzo, 1998; 2002; Rosnow, 1988; 1991).

The first variable, uncertainty is related to a person's defense motivation which is derived from a desire to verify the validity of a given situation or to disconfirm dissonance to support a positive self-concept (Chaiken, Giner-Sorolla, & Chen, 1996). Uncertainty has a direct relation to the basic law of

rumor developed by Allport and Postman. They introduce a formula for the intensity for rumor, which proves that if the ambiguity of the evidence pertaining to the rumor topic is zero, there is no rumor (Allport & Postman, 1947). In summary, people have a strong desire to resolve and reduce uncertainty in order to secure their positions, to predict future, or to bring relief by generating and spreading rumor.

With regard to the second variable, Anthony (1973) empirically proves that the anxiety of a group exposed to certain rumors is crucial to the survival of the rumors. In her experiment, groups with higher anxiety, when confronted with important rumors, transmitted those rumors more frequently. Prasad (1950) also proposes that anxiety makes rumors keep spreading.

As mentioned earlier, the basic law of rumor states that the "amount of rumor in circulation will vary with the importance of the subject to the individuals involved *times* the ambiguity of the evidence pertaining to the topic at issue" (Allport & Postman, 1947, p. 502).

$$R \sim i \times a$$

* R: Rumor, i: topical importance, a: ambiguity of evidence

Figure 1. The Basic Law of Rumor (Allport & Postman, 1947)

According to the law, ambiguity alone does not cause rumor transmission. Prior research has provided empirical evidence to support the law. In a study on rumor circulation in a girls' preparatory school, Schachter and Burdick (1955) shows that rumors were diffused more often in the group dealing with the uncertainty about an important issue than the group in which it was not

important. More recent research also provides evidence that thematic importance as a predictor of diffusion of rumors regarding AIDS (Kimmel & Keefer, 1991). According to their research, anxiety-eliciting rumors perceived as personally consequential were most likely to be believed.

The last condition for rumor transmission is credulity, or belief in the rumor. Prasad (1935) proposes that the other situational variables closely interact to increase credulity. Individuals have a strong tendency to spread rumors which they find credible (Rosnow, 1991). In addition, the homophily principle suggests that individuals are more likely to establish social ties with similar others, in terms of ascribed traits and socioeconomic status (Buckner, 1965; Lai & Wong, 2002). Sunstein (2009) carries out a number of real-world evidence suggesting that group polarization solidifies and spreads rumors. Group polarization is triggered by the exchange of information supporting or justifying preexisting beliefs (Sunstein, 2009). Individuals who are on the same wavelength, holding strong opinions on disputable or complex social issues, gather, they inevitably wind up skewing in one direction to a great extent by accepting "confirming" evidence at face value (Lord et al., 1979).

DiFonzo and Bordia (2007) presents empirical evidence supportive of the psychological factors that motivate rumor spread. In the context of rumor transmission, three motivations influence rumor spreading behavior: relationship-enhancement, self-enhancement, and fact-finding motivation (DiFonzo & Bordia, 2007, p. 70). A behavioral intention indicates a person's motivation to perform the behavior in psychological terms (Sheeran, 2002). Therefore, these three motivations are closely relevant to the factors affecting

intention of sharing rumor, which this study examines.

First, relationship-enhancement motivation is strongly associated with earning a reputation and strengthening status in one's social network (DiFonzo and Bordia, 2007). Several studies have revealed that a reputation as a believable source of information is essential for acceptance in social networks (Caplow, 1947; Guerin, 2003; Stevens & Fiske, 1995). In addition, acquiring and sharing beneficial information helps heighten status and prestige (Fromkin, 1972; Lynn, 1991). The more scare the information is, the more desirable it is perceived (Lynn, 1991), especially during times of uncertainty and threat (e.g., natural disasters, war, social turmoil, or economic collapse). Thus, examining relationship-enhancement motivation by applying Social Capital Theory in the context of rumor transmission will be valuable.

Second, self-enhancement motivation and fact-finding motivation can be explained with regard to Social Cognitive Theory. The self-enhancement goal is the need to feel good about oneself. Previous studies have reported that people attempt to maintain a positive self-image and bolster self-esteem (Kunda, 1999; Steele, 1998). DiFonzo and Bordia (2007) points out that spreading rumor to others in a social network may boost one's self-esteem by increasing one's social identity. As mentioned earlier, when evaluating rumors, people tend to favor information that intensifies existing prejudices. The same occurs when people seek to find facts in order to manage their circumstances in the desired direction. Therefore, Social Cognitive Theory can trace the reason why people intend to share rumor at the individual level.

2.2 Social Capital Theory

Social capital is defined as "resources embedded return in a social structure that are accessed and/or mobilized in purposive actions" (Lin, 2001, p. 29). The essence of social capital is the networks of relationships between individuals and individuals' connections with their communities, which facilitate coordination and cooperation for mutual benefit (Putnam, 1995). The central proposition of social capital theory is that social relationships among individuals constitute productive resources for the conduct of social affairs (e.g., they collectively resolve problems in common and achieve shared goals) (Nahapiet & Ghoshal, 1998). For Portes (1998), social capital stands for the "ability of actors to secure benefits by virtue of membership in social networks or other social structure," stressing social capital's function in different contexts (Portes, 1998, p. 6). In summary, social capital is a broad term that encompasses various patterns of social interrelationships promoting collective actions for mutual benefits (Woolcock, 1998).

In prior studies, social capital has been introduced and represented in a great deal of different forms. For example, Coleman (1998) divides forms of social capital into three sub-groups: (1) obligations, expectations, and trustworthiness of structures, (2) information channels, and (3) norms and effective sanctions, whereas Narayan and Cassidy (2001) shows even more detailed classification: (1) group characteristics, (2) generalized norms, (3) togetherness, (4) everyday sociability, (5) neighborhood connections, (6) volunteerism, and (7) trust. In addition, Collier (2002) points out that social

capital can be grouped by differentiating the forms of social interaction (e.g., observation and reciprocal interaction), the particular type of externality generated (e.g., knowledge about the behavior of other agents, knowledge about the non-behavioral environment, and knowledge externalities), and the mechanisms that induce it to be generated (e.g., copying and pooling). Despite taking many forms, the concepts of social capital are realized by two common characteristics: (1) they are embedded in the social structure; (2) they provide resources for collective goals of individuals who are within the structure (Coleman, 1990).

Nahapiet and Ghoshal (1998) suggests that social capital has different attributes. They separate the three facets analytically: the structural, the relational, and the cognitive dimensions of social capital. Even though these three dimensions are distinguishable from each other, many of the features are closely interrelated. The structural dimension of social capital concerns the properties of the social system and social interaction. The location of an individual's contacts in a social structure provides certain benefits for her (Tsai & Ghoshal, 1998). The relational dimension of social capital refers to the particular relationships, such as respect, trust, and friendship. The third dimension of social capital, the cognitive capital, is embodied in attributes like a shared language, a shared vision, or a shared paradigm that facilitates proper ways of acting in a social network.

The study of the relationship among the three facets of social capital was first carried out by Tsai and Ghoshal in 1998. Tsai and Ghoshal (1998) reports that the three dimensions of social capital interact among themselves, using

data collected from multiple respondents in all the 15 business units of a multinational electronics company. Figure 2 graphically shows their findings. They conclude that the structural dimension of social capital, manifesting as social interaction ties, and the relational dimension of it, represented by trust and trustworthiness, are significantly associated with the extent of interunit resource exchange, which in turn has a large effect on product innovation.
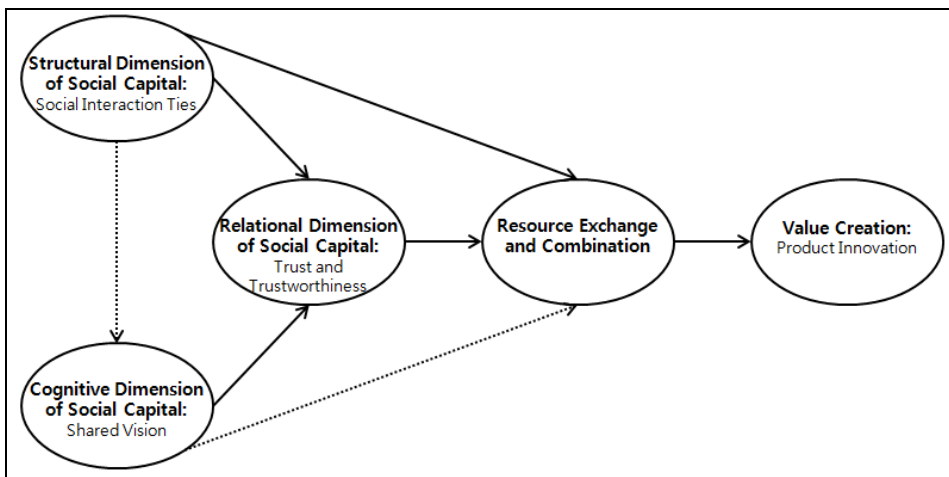
Figure 2. A Model of Social Capital and Value Creation
(Tsai & Ghoshal, 1998)

Adler and Kwon (2002) identifies three benefits of social capital: information, influence, control, and power, and solidarity. Of direct relevance to this study is the informative benefit. Their research states, "for the focal actor, social capital facilitates access to broader sources of information and improves information's quality, relevance, and timeliness" (Adler & Kwon, 2002, p. 29). In recent years, numerous studies from diversified disciplines have illustrated this benefit. In these studies, various forms of social capital

have been provided as explanations for a number of pro-social behaviors, such as collective action, community involvement, and differential social achievements (Coleman, 1990). For example, several network studies have revealed that network ties help actors gain access to information regarding job opportunities (Boxman et al., 1991; Burt, 1992; Fernandez & Weinberg, 1997; Granovetter, 1973; Lin et al., 1981; Meyerson, 1994) and innovation (Burt, 1987; Rogers, 2003).

2.3 Social Cognitive Theory

In his introduction to Social Cognitive Theory, Bandura (1986) states, "human functioning is explained in terms of a model of triadic reciprocality in which behavior, cognitive and other personal factors, and environmental events all operate as interacting determinants of each other" (Bandura, 1986, p. 18). Figure 3 graphically shows the nature of triadic influences in Social Cognitive Theory.

Figure 3. Triadic Reciprocal Causation (Bandura, 1986)
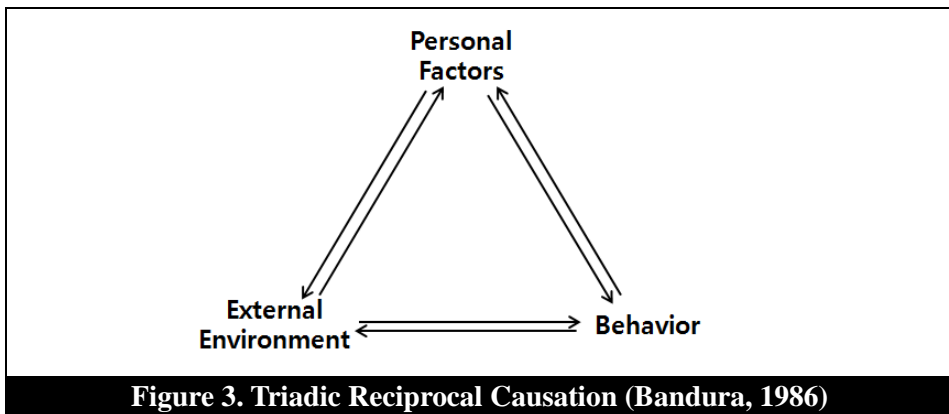
In this model, reciprocality does not imply that the different sources of influences are of equally strength nor occur at the same time; it takes time for a causal factor to exercise its influence. Due to the bidirectionality of influence, people are both products and producers of their environment simultaneously (Wood & Bandura, 1989).

According to Bandura (1986), the human nature is defined in terms of basic capabilities, such as (1) symbolizing capability, (2) forethought capability, (3) vicarious capability, (4) self-regulatory capability, and (5) self-reflective capability. Individuals operate within a broad network of socio-structural influences because their self-development, adaptation, and change are enclosed in social systems (Bandura, 2001). In these transactions, people utilize these basic capabilities to self-influence themselves in order to initiate, regulate, and nurture their own behavior (Stajkovic & Luthans, 1998).

Social Cognitive Theory provides prominence to the concept of self-efficacy, which reflects "beliefs about our ability to perform a specific behavior, recognizing that our expectation of positive outcomes of a behavior will be meaningless if we doubt our capability to successfully execute the behavior in the first place" (Compeau et al, 1999, p. 146). Self-efficacy beliefs have formidable predictive powers and thus carry numerous implications for more effective management of human behavior and performance (Stajkovic & Luthans, 1998).

More importantly to this study, Social Cognitive Theory highlights the concept of outcome expectations, defined as the perceived likely consequences of one's own behavior (Bandura, 1997; Compeau et al., 1999).

Outcome expectations are composed of three major forms: (1) physical effects, (2) social effects recognition, and (3) self-evaluation effects (Bandura, 1997). Based on outcome expectations, beliefs in personal determination of outcomes create a sense of efficacy and power. In other words, the positive expectations can be regarded as incentives and thus human behavior can be regulated.

Bock and Kim (2002), for example, shows that the links between one's beliefs about expected associations, and contribution, and the attitude toward knowledge sharing are statistically significant. In addition, important elucidations have been provided to support the importance of incentive systems for successful knowledge management (Nelson & Cooprider, 1996; Bock & Kim, 2002; Ryu et al., 2003; Kankanhalli et al., 2005). Therefore, this study integrates the concept of personal outcome expectation into examining factors, which affect motivations to spreading rumor, embedded in social networks on social network sites.

2.4 Understanding Knowledge Sharing in Virtual Communities

Social Capital Theory and Social Cognitive Theory have been attractive elucidations for a variety of researchers, whose research objective is focused on contributions of knowledge to electronic networks of practice in particular, in the MIS field. Drawing from the two theories and a considerable stream of

basic research, numerous researchers have shown that these two theories are closely related to knowledge sharing behavior in many forms of electronic networks (e.g., virtual communities, Social Network Services) in recent years (Chang & Chuang, 2011; Chiu et al., 2006; Chow & Chan, 2008; Huang et al., 2009; Hsu et al., 2007; Nov et al., 2012; Recuero et al., 2011; Wasko & Faraj, 2005; Yli-Renko et al., 2001).

In his major study, Collier (2002) views that social capital is economically beneficial because social interaction generates one or other of the three externalities explained in this study earlier. He argues that social capital reduces the problem of opportunism and market failures in information by facilitating the transmission of knowledge about others' behavior. It also reduces the problem of free-riding by promoting collective action. A number of studies have attempted to explain why individuals help strangers in the electronic networks on the basis of these benefits created by social capital.

Wasko and Faraj (2005) points out that a paradox arises when no immediate benefit is given to contributors while free-riders are able to acquire the same knowledge as everyone else in an electronic networks. To solve this puzzle, they applied theories of collective action to investigate how "private rewards (e.g., reputation, enjoying helping)" (Constant et al., 1996; Von Hippel, E., and Von Krogh, G.; 2003) and social capital influence knowledge contribution. They show that people contribute their knowledge when they perceive that participation enhances their professional reputations as well as structural and cognitive social capital play a critical role underlying knowledge contribution.
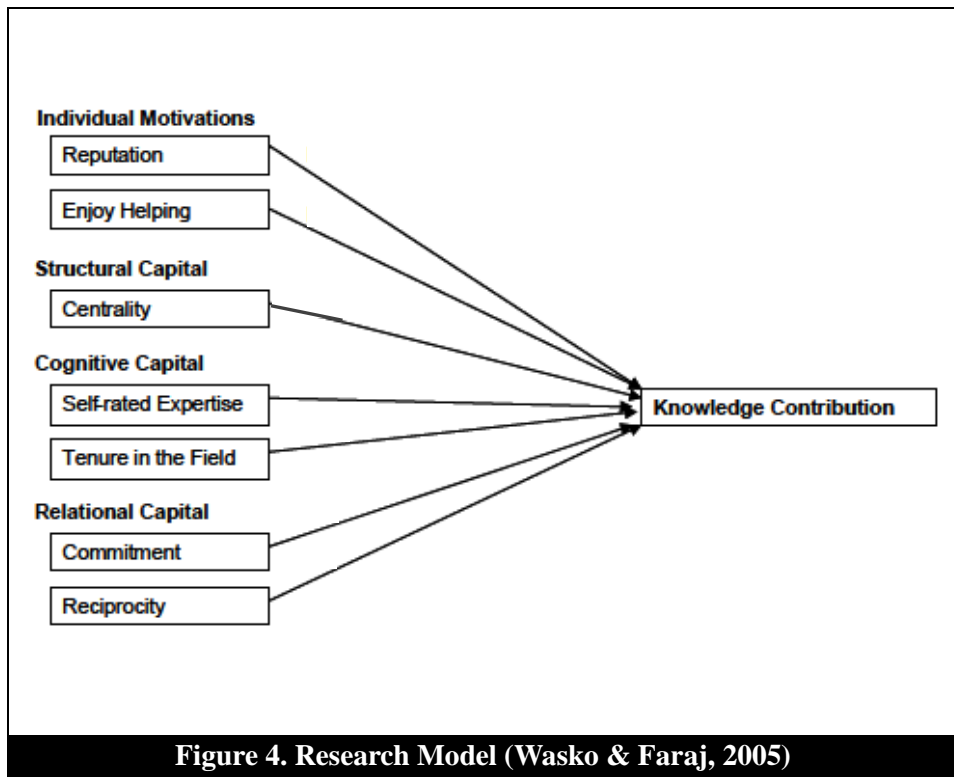
Figure 4. Research Model (Wasko & Faraj, 2005)

Based on the primary findings of Wasko and Faraj (2005), Chiu et al. (2006) integrates two complementary theories, Social Capital Theory and Social Cognitive Theory, to examine the motivations behind people's knowledge sharing in virtual communities. Their major contribution is that the study examines integrated influence of outcome expectations and social capital on knowledge sharing. Furthermore, Huang et al. (2009) proposes a model using some key theorems in Social Cognitive Theory and Social Capital Theory to explore the factors that determine eWOM behavior, represented by a sender's pass-along intentions (PAEIs) and its efficacy.

According to Wasko and Faraj (2000), knowledge is defined as justified true belief that which is known. While previous research has predominated

focused on sharing "verified" knowledge sharing behavior, very little attention has been paid to explore rumor transmission, another form of unverified knowledge, in the MIS literature. Therefore, examining factors affecting intention of sharing rumor on the basis of these two supplementary theories will provide differentiated insights into viral rumor spreading behavior on social network sites.

2.5 Social Network Services and Information Diffusion

Social network sites (SNSs) are "web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system" (Boyd & Ellison, 2007, p. 211).

SNS may be classified into two main categories in general: organic SNS and hybrid SNS. Based on Quan et al. (2011), organic SNS is people-focused and embeds social network features within, whereas hybrid SNS is content-focused and combines traditional Internet services and social network by integrating social features. This study accords to the first type of SNS because it aims to maintenance of preexisting social networks, facilitate connect people on the basis of common language (Quan et al., 2011). In contrast, the second type provides diverse audience. In Korea, typical examples of organic SNS are Twitter, Facebook, and KakaoTalk, which this study concentrates on.

Several attempts have been made to investigate the possibilities which SNSs have for building social capital among users. Early in 2000, Resnick (2001) already pointed out that new forms of social capital and relationship building would happen in SNSs due to the novel way in which technologies support online linkages with others. In support of Resnick (2001)'s idea, Kwon and Wen (2010) empirically shows that individuals who have higher social identity, altruism, and telepresence tend to be sensitive to receiving encouragement. Morris et al., (2010) shows that trust (24.8%) is the top ranked motivation for asking their social network rather than (or in addition to) conducting a Web search. Subrahmanyam et al. (2008) suggests that emerging adults use SNSs to establish intimate relationships by forming and maintaining interconnections with people in their lives.

Previous research findings into social networks have stressed characteristics or impacts of the tie strength. A tie includes a sender and a receiver depending on the direction of information flow (Watts & Strogatz, 1998), and the tie strength consists of closeness, intimacy, support, and association (Frenzen & Davis, 1990). Strong ties are characterized by the degree of intimacy and special meaning through a voluntary investment, which have frequent interactions in multiple contexts under a sense of mutuality of the relationship (Walker et al., 1994). Therefore, stronger ties between two individuals mean that they are more similar to each other (Granovetter 1973; McPherson and Smith-Lovin, 1987).

Impacts of tie strength on diffusion of information have been known to be significant by several researchers (Friedkin, 1982; Gatignon & Robertson,

1985; Rosen, 2000; Reichheld, 2006). Generally speaking, the more homogeneous the social system is, the faster the diffusion of information gets (Lee et al., 2009). In other words, stronger ties are individually more influential, whereas weak ties are more appropriate for propagation of novel information (Bakshy et al., 2012; Ferrara et al., 2012; Granovetter, 1973; Onnela, et al., 2007).

In recent years, a new form of information diffusion on Websites or in SNSs, online rumor dissemination, has received a great deal of scholarly attention (Bordia & Rosnow, 1998; Buchegger & Boudec, 2003; Doerr et al, 2011; 2012; Kostka et al., 2008; Liu & Chen, 2011; Mendoza et al, 2010; Nekovee et al., 2007; Xu and Liu, 2008; Yiran & Fanrong, 2012). Bordia and Rosnow (1998) suggests that the idea of rumormongering as a collective, problem-solving interaction which is sustained by the key variables in rumor transmission such as individual anxiety, uncertainty, credulity, and outcome-relevant involvement can be consistently observed both in face-to-face situations or in computer-mediated communication. This proves that any further studies focusing on online rumor dissemination behavior or phenomena can be grounded in previous rumor literature based on the face-to-face communication. Furthermore, numerous researchers explained the reason why and how rumors spread enormously fast in SNSs. Doerr et al. (2012), for example, shows that fruitful interactions between hubs facilitate sending a rumor fast. Nekovee et al. (2008) demonstrates that scale-free social networks are prone to spreading rumors. Especially, the rumor propagation in twitter-like websites is more likely to efficient, unpredictable to start the rumor again

(Liu & Chen, 2011).

In spite of their insightful findings, however, previous studies tend to focus on mathematical explanations about rumor transmission without investigating any psychological and social factors. Therefore, this study aims to empirically examine how social capital and social cognitive affect individual intention of sharing rumor in SNSs, stressing users' behavioral aspects.

CHAPTER 3 RESEARCH MODEL

Based on the theoretical model proposed by Nahapiet and Ghoshal (1998) and the research model developed by Tsai and Ghoshal (1998), this study develops a series of hypotheses to examine how three forms of social capital (structural, relational, and cognitive) and social cognitive (personal outcome expectation) are related to individual intention of sharing rumor on social network services (e.g., KakaoTalk, Twitter, and Facebook, etc.). In light or previous research and the nature of rumor sharing behavior, the following research model (Figure 5) and eight hypotheses are formulated.

Figure 5. Research Model
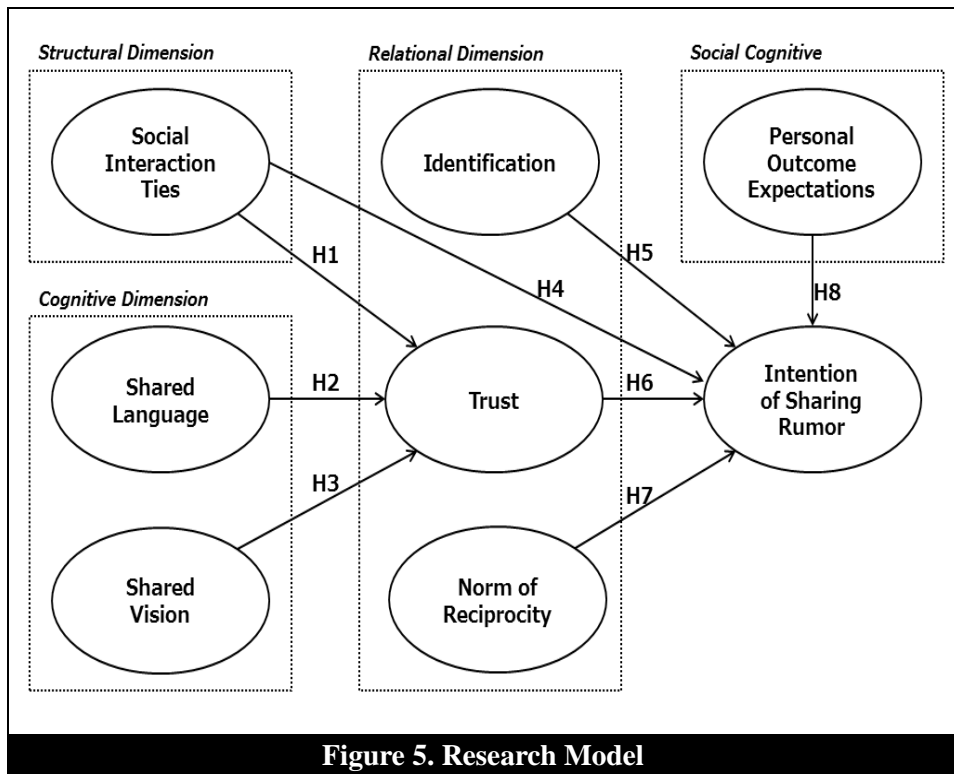
3.1 Linking Structural and Relational Dimension

The structural dimension of social capital, represented by social interaction ties, may stimulate trust, which represents the relational dimension of social capital. In this paper, social interaction ties represent the strength of the relationships, the amount of time spent, and communication frequency among SNS users.

Trust is an implicit set of beliefs that the others will forbear conducting opportunistic behavior and will not intend to take advantage of the situation (Gefen, 2002; Hosmer, 1995; Moorman et al., 1992). Previous findings have demonstrated that trust evolves from social interactions (Granovetter, 1985; Gulati, 1995, Tsai and Ghoshal, 1998). The closeness between two individuals develops because of the strong mutual interest, and it may foster the development of trust (Ridings et al., 2002). Repeated interaction with others may also help trust enhance. Moreover, the social network literature on tie strength has found that strong interaction ties are related to trust (Nelson, 1989). Hence, a user occupying a central location in an SNS has more opportunities to be perceived as trustworthy by others in the network (Tsai and Ghoshal, 1998). Thus, hypothesis 1 is as follows:

H1. Users' social interaction ties positively influence their trust in other SNS users.

3.2 Linking Cognitive and Relational Dimension

A shared language and shared value, the major manifestations of the cognitive dimension of social capital, may also encourage the development of trusting relationships. Abrams et al. (2003) conducted interviews to identify ways in which interpersonal trust in a knowledge-sharing context develops. Based on this work, they found that people who tend to establish and ensure shared language (e.g., similar jargon and terminology) and shared vision (e.g., common goals) are seen as trustworthy sources of knowledge.

A shared language goes beyond the language itself (Chiu et al., 2006); it also addresses "the acronyms, subtleties, and underlying assumptions that are the staples of day-to-day interactions" (Lesser & Storck, 2001, p. 836). As Nahapiet and Ghoshal (1998) notes, a shared language influences to form strong trusting relationships in several ways. First, language has an explicit function in social relations, for it is the means by which people talk about and share information and knowledge. Thus, sharing a common language acts as an access to others and their information. Second, language affects individual perception that it provides a frame of reference for observing and interpreting the world. The last but most important point is that a shared language enhances combination capability (Nahapiet & Ghoshal, 1998). Boland and Tenkasi (1995), for example, presents models of language, communication, and cognition which can assist electronic communication systems for perspective making and perspective taking, stressing the importance of common vocabulary to the combining of information. . Accordingly,

hypothesis 2 is as follows:

H2. Users' shared language positively influences trust in other SNS users.

Moreover, a shared vision also plays a critical role in knowledge exchange. A shared vision "embodies the collective goals and aspirations of the members of an organization" (Tsai and Ghoshal, 1998, p. 467). Paul and McDaniel (2004) classifies trust into four broad types: calculative trust, competence trust, relational trust, and integrated trust in their research examining the relationship between interpersonal trust and virtual collaborative relationship performance. Among four types of trust, competence trust is about whether the other party is capable of doing what it says it will do, and relational trust in the extent one feels a personal attachment to the other party and believes that other party will intend doing good to him or her. A shared vision is closely related to enhance these types of trust because it is a bonding mechanism between different parties or individuals, as well as it enables them to expect that they will not be hurt by any other member's pursuit of self-interest while working for collective goals (Tsai & Ghoshal, 1998). Accordingly, hypothesis 3 is as follows:

H3. Users' shared vision positively influences trust in other SNS users.

3.3. Social Capital and Intention of sharing Rumor

3.3.1 Social Interaction Ties

Social ties serve as a major channel of information flow. In his major research, Granovetter (1973) identifies the strength of dyadic ties as a key factor governing the flow of information. His main premise suggests that while information flows from strong tie to strong tie, weak ties can serve as bridges allowing information to flow to more individuals and circulate in greater social networks. He also describes tie strength as a combination of the amount of time, the emotional intensity and intimacy, and the reciprocal services that characterize the tie (Granovetter, 1973).

Social positions have been argued to influence the composition of social networks (Erickson et al., 1978; Marsden & Hurlbert, 1988; Moore, 1990). Further, the homophily principle suggests that individuals are likely to share information with similar others and with people whom they perceive to have good relations (Lai and Wong, 2002). Moreover, previous research has suggested that the more individuals are in regular contact with one another, the more likely they are to cooperate and act collectively (Marwell and Oliver, 1988). Thus, high levels of structural capital, dense connections in the collective, are more likely to sustain collective action (Wasko & Faraj, 2005).

Finally, Nahapiet and Ghoshal (1998) suggests that network ties influence both access to parties for combining and exchanging intellectual capital (e.g., knowledge) and anticipation of value through such exchange. Based on this premise, Chiu et al. (2006) argues that social interaction ties

provide a cost-effective way of accessing wider range of knowledge source. Furthermore, the more these social interactions establish, the greater the intensity, frequency, and breadth of the knowledge exchanged (Yli-Renko et al., 2001). The same can be applied to rumormongering and rumor sharing due to the relationship-enhancement motivation (DiFonzo & Bordia, 2007; Rosnow et al., 1998). Lai and Wong (2002), for example, shows that kin tend to be more efficient channels of rumor than non-kin, and rumor transmitted via kin ties are prone to arrive at the respondent faster than via non-kin ties or other communication channels.

While the research model predicts that social interaction ties would affect SNS user's intention of sharing rumor through trust, this study also aims to recognize the possibility of unmediated effect. For example, social interaction ties may directly affect intention of sharing rumor, because with the strong closeness and similarities, SNS users may have more opportunities and urges to talk about rumors. Prior research suggests that strong ties are found to serve as network bridges, which involves information pertaining to the interest of a group and/or its individual members (Lai & Wong, 2002). In line with Tsai and Ghoshal (1998), the research model hypothesizes both indirect effect from social interaction ties to intention of sharing rumor (SIT → TR → ISR) and direct effect, hypothesis 4 (SIT → ISR), to reveal mediation effect in the full model. Therefore, a mediation effect test was performed as discussed later in Chapter 5.

Based on previous research, therefore, this paper expects that the following relationship between the structural dimension of social capital and

SNS users' intention of sharing rumor:

> *H4. Users' social interaction ties positively influence their intention of sharing rumor in SNSs.*

3.3.2 Identification

Identification is defined as "the process whereby individuals see themselves as one with another person or group of people" (Nahapiet & Ghoshal, 1998, p. 256). In this study, identification refers to an individual's conception of self in terms of belonging and positive feeling toward other SNS users with whom one frequently interacts. Nahapiet and Ghoshal (1998) points out that identification acts as a resource facilitating the motivation to combine and exchange knowledge. In contrast, previous research findings suggest that groups with distinct and contradictory identities face significant barriers to information sharing and knowledge creation (Simon, L. & Davies, G., 1996). Given that people usually tend to hoard valuable knowledge, one would not contribute his knowledge unless he understands that his contribution will be appreciated, thus resulting in his welfare (Chiu et al., 2006). In other words, individuals' willingness to maintain committed relationships will be elevated by the perception of social unity and togetherness.

Identification can also be viewed as a form of commitment. Meyer and Allen (1997) presents a distinction between different forms of commitment: 1) affective commitment, 2) continuance commitment, and 3) normative

commitment. As he notes, affective commitment, which refers to identification and involvement with the organization, is generated and enhanced when a sense of identification exists within a group. Various researchers have investigated the relationship between commitment and knowledge sharing (Scarbrough, 1999; Smith and McKeen, 2002). Hoof and Ridder (2004), for example, demonstrates that affective commitment positively influences the extent to which one donates and collects knowledge.

Individuals establish social identities by developing cognitive and emotional links between themselves and other social entities. If individuals identify strongly with an entity, they perceive a sense of togetherness and belongingness to those who share the same perception. Therefore, if individual's level of identification increases, they will be more prone to share rumor so that others can reap benefits by exchanging information. Accordingly, hypothesis 5 is as follows:

H5. Users' identification positively influences their intention of sharing rumor in SNSs.

3.3.3 Trust

Trust is defined as the belief that the "results of somebody's intended action will be appropriate from our point of view" (Misztal, 1996, p. 9-10). Nahapiet and Ghoshal (1998) demonstrates that where relationships are high in trust, individuals are more prone to engage in social exchange in general, and cooperative interaction in particular. According to Tsai and Ghoshal

(1998), when two parties begin to trust each other, they become more willing to share their valuable information without worrying about being taken advantage of by each other. Thus, the exchange or combination of knowledge may emerge when trust exists. In fact, the same principle can be seen in the rumor literature. Individuals generally do not want to take responsibility for spreading false information because nobody voluntarily makes them look like liars (Fine, 2007). Consequently, individuals may be more prone to share rumor with someone they can trust.

Trust has been viewed as a set of specific beliefs representing the integrity, benevolence, and ability of another party (Abrams et al, 2003; Ardichvili et al, 2003; Gefen et al, 2003; Leimeister et al, 2005; McAllister, 1995). This study concentrates on integrity, which is based on the belief that others will behave trustworthily and follow a generally accepted set of values, norms, and principles.

H6. Users' trust positively influences their intention of sharing rumor in SNSs.

3.3.4 Norm of Reciprocity

Coleman (1990) states that a norm exists when the socially defined right to control an action is held not by the actor but by others. Therefore, it represents a degree of consensus in the social system (Nahapiet and Ghoshal, 1998). A basic norm of reciprocity is a "sense of mutual indebtedness, so that individuals usually reciprocate the benefits they receive from others, ensuring

ongoing supportive exchanges" (Wasko & Faraj, 2005, p. 43). Reciprocity implies actions that are dependent upon rewarding reactions from others and that cease when these expected reactions are not forthcoming (Blau, 1964). In addition, Social Exchange Theory also suggests that individuals expect mutual reciprocity that justifies their expense in terms of time and effort in sharing their knowledge (Thibaut & Kelly, 1959).

Prior research has suggested that a sense of reciprocity accompanies information sharing, and members who have not contributed to their community are ignored by many potential information sharers (Wasko & Faraj, 2000). Further, Rheingold (2000) observes that individuals who regularly help others in virtual communities seem to receive help more quickly when they ask for it. Thus, the hypothesis is:

H7. Users' norm of reciprocity positively influences their intention of sharing rumor in SNSs.

3.4. Social Cognitive and Intention of Sharing Rumor

Social Cognitive Theory posits that self-efficacy has direct impact on outcome expectations (Bandura, 1986). Positive relationship between self-efficacy and outcome expectations has also been validated in the context of computer usage, knowledge sharing, and Internet usage (Compeau & Higgins,

1999; Hsu et al., 2004). Another study has found that outcome expectations are significantly related to computer end-user's organizational commitment (Stone & Henry, 2003).

Outcome expectations refer to an individual's belief that task accomplishment leads to a possible outcome. Outcome expectations consist of three major forms: physical effects (e.g., pleasure, pain, discomfort), social effects (e.g., social recognition, monetary rewards, power, applause) and self-evaluation effects (e.g., self-satisfaction, self-devaluation) (Bandura, 1997). Within each form, the positive expectations can be regarded as incentives and thus human behavior can be regulated by these different forms of effects (Bandura, 1997).

Compeau and Higgins (1995) identifies two types of outcome expectations regarding individual's computer use: (1) performance-related outcome expectations and (2) personal outcome expectations. Performance-related outcome expectations are associated with improvements in job performance, while personal outcome expectations represent change in image, status, or rewards, such as promotions, raises, or praises. Their study shows that both types of outcome expectations are significantly related to computer usage, emphasizing the individuals' benefits derived from people's actions.

By synthesizing above arguments, this study may conclude that SNS users' expected outcomes are positively related to their intention of sharing rumor. Here, only personal outcome expectations are included in the research model because adding other forms of outcome expectations would be redundant due to Social Capital Theory, which represents relational assets and rewards

embedded in social networks. In this study, therefore, personal outcome expectations are an SNS user's judgment of likely consequences that his or her rumor sharing behavior will produce to himself or herself, such as getting rid of personal anxiety, gaining more recognition and respect, making more friends, or getting better cooperation in return (Chiu et al., 2006; Hsu et al., 2007). Accordingly, hypothesis 8 is as follows:

H8. Users' personal outcome expectations positively influence their intention of sharing rumor in SNSs.

CHAPTER 4 METHODS

4.1 Operationalization of Constructs

The research constructs used in this study were measured using operationalized constructs confirmed reliability and validity in previous studies. New items were developed based on the definition provided by the literature. These measures were slightly modified to fit the unique nature of this research context and were translated to Korean from English, if necessary. A pretest of the questionnaire was performed using five experts in the IS area to assess its logical consistencies, readability, and sequence of items. Then, a pilot study was conducted involving four Ph.D. students and sixteen master students. The comments on the item contents collected from them resulted in several minor modifications of the wording and the item sequence. Table 2 shows the operational definitions and sources of these variables.

Four items for measuring social interaction ties focus on close relationships, time interaction, and frequent communication (Granovetter, 1973; Chiu et al., 2006). A shared language was measured with a three-item scale adapted from Lesser and Storck (2001) and Nahapiet and Ghoshal (1998). It focuses on message readability and understandability and meaningful communication patter. A shared vision was assessed with two items based on Tsai and Ghoshal (1998). The items measured an individual's perceptions of whether members shared the same goal, vision, and value about rumor sharing.

Table 2. Operational Definition of Research Constructs			
Construct (Abb.)		**Operational Definition**	**Reference**
Structural Dimension	Social Interaction Ties (SIT)	The degree of the strength of the relationships, and the amount of time spent, and communication frequency among SNS users in the same social network	[Granovetter, 1973] [Chiu et al., 2006]
Cognitive Dimension	Shared Language (SL)	The degree of an SNS user's belief that he uses a common language (terms, slangs, etc.) to effectively communicate with other SNS users to whom he frequently talks	[Lesser & Storck, 2001] [Nahapiet & Ghoshal, 1998]
	Shared Vision (SV)	The degree of an SNS user's belief that he shares collective goals and aspirations with other SNS users connected in the same social network	[Tsai & Ghoshal, 1998]
Relational Dimension	Trust (TR)	The degree of SNS user's belief that other SNS users with whom he frequently communicates will behave trustworthily and follow a generally accepted set of values, norms, and principles	[Abrams et al, 2003] [Ardichvili et al, 2003] [Gefen et al, 2003]
	Identification (ID)	The degree of an SNS user's conception of self in terms of belonging and positive feeling toward other SNS users connected in the same social network	[Nahapiet & Ghoshal, 1998]
	Norm of Reciprocity (NOR)	The degree of an SNS user's sense of mutual indebtedness to other SNS users, which ensures supportive exchanges between them	[Wasko & Faraj, 2005]
Social Cognitive Theory	Personal Outcome Expectation (POE)	An SNS user's judgment of likely consequences that his rumor sharing behavior will produce to himself	[Chiu et al., 2006] [Hsu et al., 2007]
Intention of sharing Rumor (ISR)		The degree of how likely an SNS user would share unverified and instrumentally relevant information statements with some SNS users connected in the same social network	[DiFonzo & Bordia, 2007] [Marett & Joshi, 2009]

Identification was measured with four items adopted from Nahapiet and Ghoshal (1998). It assessed an SNS user's sense of togetherness and oneness. Trust was adapted from prior studies (Abrams et al, 2003; Ardichvili et al, 2003; Gefen et al, 2003; Leimeister et al, 2005; McAllister, 1995), with three items to measure an individual's beliefs in other SNS users' truthfulness. Identification was assessed with four items adapted to reflect an individual's conception of self in terms of belonging and positive feeling toward other SNS users, following prior study (Nahapiet & Ghoshal, 1998). Norm of reciprocity was also adapted from prior study (Wasko & Faraj, 2005), with three items to measure the mutual indebtedness among SNS users. Personal outcome expectations were adapted from prior studies (Chiu et al., 2006; Hsu et al., 2007).

Finally, the dependent variable, intention of sharing rumor was assessed with five items based on DiFonzo and Bordia (2007) and Marett and Joshi (2009). The items asked how likely the respondent would share rumors that she or he has heard before. To avoid any misunderstanding of the word, "rumor," and neutralize its underlying negative nuance, the exact definition of rumor based on DiFonzo and Bordia (2007) and several types of latest rumor examples were given on the questionnaire. These items measured three attributes of the content of shared rumor: evidentiary basis, perceived importance by participants, and perceived usefulness by participants.

All of the items were measured on a seven-point Likert scale, anchored by "strongly disagree" (1) to "strongly agree" (7). Table 3 summarizes the constructs used in this study and their operationalization.

Table 3. Constructs and Measures		
Construct		**Measure**
Social Interaction Ties	SIT1	I maintain close social relationships with some SNS users.
	SIT2	I spend a lot of time interacting with some SNS users.
	SIT3	I know some SNS users on a personal level.
	SIT4	I have frequent communication with some SNS users.
Share Language	SL1	The SNS users whom I frequently communicate use common terms or jargons.
	SL2	The SNS users whom I frequently communicate use understandable communication pattern during the discussion.
	SL3	The SNS users whom I frequently communicate use understandable narrative forms to post messages or articles.
Share Vision	SV1	The SNS users whom I frequently communicate share the vision of helping others solve their problems.
	SV2	The SNS users whom I frequently communicate share the same value that helping others is pleasure.
Identification	ID1	I feel a sense of belonging towards the SNS users whom I frequently communicate.
	ID2	I have the feeling of togetherness or closeness towards the SNS users whom I frequently communicate.
	ID3	I have a strong positive feeling the SNS users whom I frequently communicate.
	ID4	I am proud to have connections to the SNS users whom I frequently communicate.
Trust	TR1	The SNS users whom I frequently communicate will not take advantage of others even when the opportunity arises.
	TR2	The SNS users whom I frequently communicate will always keep the promises they make to one another.
	TR3	The SNS users whom I frequently communicate behave in a consistent manner.
	TR4	The SNS users whom I frequently communicate are truthful in dealing with one another.

	NOR1	I know that the SNS users whom I frequently communicate will help me, so it's only fair to help other users.
Norm of Reciprocity	NOR2	I believe that the SNS users whom I frequently communicate would help me if I need it.
	NOR3	To acquire valuable information, I need to share related information in advance with the SNS users whom I frequently communicate.
	POE1	Sharing rumors will enable me to gain better cooperation from the SNS users whom I frequently communicate.
Personal Outcome Expectations	POE2	Sharing rumors will strengthen the tie between other SNS users whom I frequently communicate.
	POE3	Sharing rumors will give me a sense of accomplishment by overcoming anxious situations.
	ISR1	I have intention of sharing unverified yet important information with some SNS users.
	ISR2	I have intention of sharing unverified yet significant information with some SNS users.
Intention of sharing Rumor	ISR3	I have intention of unverified information with some SNS users in case the information is helpful for someone.
	ISR4	I have intention of sharing unverified yet beneficial information with some SNS users.
	ISR5	I have intention of sharing unverified information with some SNS users in case the information is important to me.

4.2 Data Collection

In order to study the hypotheses, a web-based survey and face-to-face survey were conducted. Data were randomly collected from people younger than forty years of age who have been using Twitter, Facebook, and KakaoTalk, the three most popular and widespread SNSs in Korea.

There are two types of data collected for this study. One type of data was collected from a web-based survey conducted for students of Seoul National University and Ewha Woman's University who have been using SNSs from October 19 to 27. In addition, a URL connecting to the Web survey was posted via Facebook and Twitter during the time. Heavy users of SNS were also cordially invited to support this survey via KakaoTalk. The other type of data was collected from a face-to-face survey conducted for students of Seoul National University who have been taking *Introduction to Management Information Systems* on October 25. Twenty five randomly selected respondents from both surveys were offered an incentive in the form of Gifticon, a sort of mobile coupon, amounting to $10. Table 4 lists the demographic information of the respondents.

The first page of the questionnaire explained the purpose of this study and ensured the confidentiality based on the Statistics Act. The definition of "rumor" and its examples were given on the next page in order to prevent respondents from misinterpreting the concept of "rumor," because the word has a negative nuance in Korean culture.

By the time this survey was concluded, 214 questionnaires (179 from the Web survey and 35 from face-to-face survey) were collected. The exclusion of 18 invalid questionnaires resulted in a total of 196 complete and valid ones for data analysis (166 from the Web survey and 30 from face-to-face survey). To attain the required statistical power for the study, Cohen's power primer (Cohen, 1992) and G*Power 3.1.3 (Faul et al., 2007) were used for computing required sample size in advance.

Table 4. Demographic Attributes of the Respondents (N=196)			
Attribute		**Frequency**	**Percentage (%)**
Gender	Female	145	73.98 %
	Male	51	26.02 %
Age	Under 19	30	15.31 %
	20-29	152	77.55 %
	30-39	14	7.14 %
Education	High School	4	2.04 %
	Undergraduate	133	67.86 %
	Graduate	59	30.10 %
Most frequently used SNS	Twitter	26	13.27 %
	Facebook	49	25.00 %
	KakaoTalk	121	61.73 %
History of Use	Less than 3 month	5	2.55 %
	3 – 6 month	15	7.65 %
	6 month – 1 year	61	31.12 %
	1 year – 2 year	85	43.37 %
	2 year – 3 year	20	10.20 %
	Over 3 year	10	5.10 %
Most frequently used purpose	Making a more personal connection	24	12.24 %
	Promoting friendship	146	74.49 %
	Information gathering	10	5.10 %
	Uploading personal content	6	3.06 %
	Sharing knowledge	7	3.57 %
	Obtaining material rewards	0	0.00 %
	Entertainment	3	1.53 %
Receiving Rumor via SNSs	Have received ones	178	90.82 %
	Have never received ones	18	9.18 %
Sharing Rumor via SNSs	Have shared ones	80	40.82 %
	Have never shared ones	116	59.18 %
Channels of rumor to receive	Family or close friends	83	42.35 %
	Acquaintances or coworkers	45	22.96 %
	Other SNS users	19	9.69 %
	Strangers (online)	49	25.00 %
Channels of rumor to spread	Family or close friends	101	51.53 %
	Acquaintances or coworkers	25	12.76 %
	Other SNS users	18	9.18 %
	Strangers (online)	14	7.14 %
	Never share rumors	38	19.39 %

Based on Cohen (1992), the recommended sample size was 147 ($\alpha=0.01$, power=0.80), which are widely accepted among researchers (Robins 1998; Mazen et al., 1987), with medium population effect size (0.15). In addition, G*Power 3.1.3 suggested 180 samples ($\alpha=0.01$, power=0.95) for testing the research model (H1, H2, H3, H4, H5, H6, H7, and H8). Thus, the total sample (N=196) exceeded the recommended sample sizes at $\alpha=0.01$ level.

CHAPTER 5 ANALYSIS AND RESULTS

In this study, descriptive statistics, factor analysis, and testing of the measurement model and structural model were conducted using SPSS 19.0 and Smart PLS.

Partial least square (PLS) is used for measurement validation and testing the structural model. Structural equation modeling (SEM) analysis was chosen over regression analysis, because SEM can analyze all of the paths in one analysis (Barclay et al., 1995; Gefen et al., 2000).

Unlike a covariance-based structural equation modeling method such as LISREL and AMOS, PLS employs a component-based approach for estimation (Chin et al., 1999). In general, PLS is better suited for investigating the phenomenon that is relatively new and measurement models need to be newly developed and the structural equation model that is complex with a large number of latent variables and indicator variables (Urbach & Ahlemann, 2010). In addition, whereas LISREL requires a sound theory base, PLS supports exploratory research (Barclay et al., 1995; Gefen et al., 2000). Hence, this research chose PLS to accommodate the presence of a number of variables, relationships and mediation effect.

PLS provides the analysis of both a structural model (assessing relationships among theoretical constructs) and a measurement model (assessing the reliability and validity of measures) (Compeau and Higgins, 1995). This study followed many researchers' framework for assessing the

measurement model and the hypotheses in the structural model by examining the path coefficients.

5.1 Measurement Validation

The measurement model comprises the research constructs and their associated indicators (measures). Fornell and Larcker. (1981) suggests that the quality of the constructs and indicators could be evaluated by assessing the internal consistency, construct, and content reliabilities and the convergent and discriminant validities of the research constructs.

5.1.1 Reliability

To assess internal consistency reliability, one of the useful indicators is Cronbach's Alpha. It measures the degree to which the manifest variables load simultaneously when the latent variable increases (Urbach & Ahlemann, 2010). Alpha values ranges from 0 (completely unreliable) to 1 (perfectly reliable). A construct is considered to have adequate internal consistency reliability if the CA is greater than 0.70 in the explorative research (Cronbach, 1951; Nunally & Bernstein, 1994). Therefore, as shown in Table 5, all of the tested constructs (ranging from 0.731 to 0.940) demonstrate good construct reliability.

Table 5. Measurement Validation					
Construct	Indicator	Loading	Composite Reliability	AVE	Cronbach's Alpha
Social Interaction Ties	SIT1	0.822	0.928	0.765	0.898
	SIT2	0.857			
	SIT3	0.915			
	SIT4	0.900			
Shared Language	SL1	0.853	0.889	0.729	0.814
	SL2	0.879			
	SL3	0.828			
Shared Vision	SV1	0.942	0.929	0.867	0.848
	SV2	0.920			
Identification	ID1	0.861	0.916	0.734	0.880
	ID2	0.898			
	ID3	0.830			
	ID4	0.834			
Trust	TR1	0.875	0.875	0.702	0.789
	TR2	0.807			
	TR3	0.829			
Norm of Reciprocity	NOR1	0.772	0.848	0.652	0.731
	NOR2	0.864			
	NOR3	0.782			
Personal Outcome Expectations	POE1	0.892	0.899	0.749	0.834
	POE2	0.918			
	POE3	0.779			
Intention of sharing Rumor	ISR1	0.890	0.954	0.807	0.940
	ISR2	0.898			
	ISR3	0.887			
	ISR4	0.926			
	ISR5	0.888			
Required Value	loading > 0.7		CR > 0.7	AVE > 0.5	α > 0.7

In addition, construct reliability is calculated using composite reliability (CR) scores provided by PLS. Alternative to Cronbach's Alpha, composite reliability allows indicators to not be equally weighted (Urbach & Ahlemann, 2010). Values must not be lower than 0.60. Proposed threshold value for explorative research is: CR > 0.70 (Werts et al., 1974; Nunally & Bernstein, 1994). As shown in Table 5, all of the tested constructs (ranging from 0.848 to 0.954) are considered having adequate reliability.

Table 6. AVE and Correlations among Latent Constructs										
	M	**SD**	**SIT**	**SL**	**SV**	**ID**	**TR**	**NOR**	**POE**	**ISR**
SIT	5.94	1.14	**0.874**							
SL	5.81	0.93	0.495	**0.853**						
SV	5.02	1.37	0.476	0.267	**0.931**					
ID	5.35	1.31	0.510	0.552	0.493	**0.856**				
TR	5.48	1.14	0.482	0.468	0.478	0.546	**0.837**			
NOR	4.75	1.33	0.249	0.275	0.275	0.336	0.241	**0.807**		
POE	3.47	1.60	0.084	0.298	0.190	0.302	0.079	0.600	**0.865**	
ISR	4.62	1.51	0.324	0.183	0.272	0.310	0.397	0.476	0.409	**0.898**

Note: Diagonals are the square roots of average variance extracted (AVE).

5.1.2 Validity

According to Fornell and Larcker (1981), convergent validity can be tested by average variance extracted (AVE) values. AVE attempts to measure

the amount of variance that a latent variable component captures from its indicators relative to the amount due to measurement error (Chin, 1998). Proposed threshold value is: AVE > 0.50 (Hu et al., 2004). Table 5 and 6 both show that AVE score for every construct, ranging from 0.652 to 0.867, meets this requirement.

A generally accepted rule for assessing discriminant validity requires a latent variable to share more variance with its assigned indicators than with any other latent variable. Accordingly, the AVE of each latent variable should be greater than the latent variable's highest squared correlation with any other latent variable (Fornell & Larcker, 1981). Table 6 shows that the square roots of all the AVEs (i.e., the numbers on the diagonal) are greater than the correlations among constructs (i.e., the off-diagonal numbers), indicating satisfactory discriminant validity of all the constructs.

Furthermore, discriminant validity can be assessed by cross-loadings. Barclay et al. (1995) suggests that, as a rule of thumb, the item loading should exceed 0.70. In this study, the loading of each item meets this criterion (ranging from 0.772 to 0.942), as Table 5 and 7 demonstrate. Moreover, cross-loadings are obtained by correlating the component scores of each latent variable with all other items. If the loading of each indicator is higher for its designated construct than for any of the other constructs, and each of the constructs loads highest with its own items, it can be inferred that the models' constructs differ sufficiently from one another (Chin, 1998, Gefen et al., 2000; Straub et al., 2004). Table 7 indicates that all measurements satisfy the requirements.

	SIT	SL	SV	ID	TR	NOR	POE	ISR
				Table 7. Examination of Cross-Factor Loadings				
SIT1	**0.822**	0.481	0.409	0.403	0.385	0.251	0.221	0.199
SIT2	**0.857**	0.448	0.457	0.496	0.382	0.194	0.081	0.167
SIT3	**0.915**	0.394	0.417	0.404	0.424	0.269	0.054	0.330
SIT4	**0.900**	0.430	0.401	0.485	0.478	0.169	-0.016	0.383
SL1	0.475	**0.853**	0.197	0.439	0.354	0.217	0.314	0.109
SL2	0.405	**0.879**	0.274	0.486	0.426	0.236	0.230	0.159
SL3	0.520	**0.828**	0.208	0.484	0.411	0.251	0.229	0.195
SV1	0.355	0.310	**0.942**	0.472	0.478	0.261	0.146	0.333
SV2	0.475	0.178	**0.920**	0.446	0.408	0.219	0.213	0.160
ID1	0.491	0.443	0.499	**0.861**	0.402	0.381	0.372	0.314
ID2	0.452	0.459	0.435	**0.898**	0.445	0.252	0.224	0.229
ID3	0.436	0.519	0.411	**0.830**	0.548	0.209	0.174	0.282
ID4	0.337	0.469	0.309	**0.834**	0.478	0.292	0.241	0.211
TR1	0.454	0.452	0.445	0.532	**0.875**	0.198	0.000	0.340
TR2	0.267	0.333	0.261	0.445	**0.807**	0.162	0.036	0.311
TR3	0.456	0.377	0.462	0.393	**0.829**	0.238	0.160	0.344
NOR1	0.235	0.342	0.200	0.291	0.230	**0.772**	0.447	0.376
NOR2	0.206	0.282	0.232	0.319	0.284	**0.864**	0.546	0.364
NOR3	0.163	0.056	0.196	0.209	0.081	**0.782**	0.459	0.407
POE1	0.073	0.284	0.168	0.322	0.100	0.502	**0.892**	0.386
POE2	0.100	0.283	0.256	0.299	0.050	0.547	**0.918**	0.396
POE3	0.034	0.190	0.024	0.123	0.052	0.523	**0.779**	0.254
ISR1	0.259	0.136	0.213	0.294	0.333	0.486	0.441	**0.890**
ISR2	0.243	0.170	0.168	0.209	0.308	0.399	0.390	**0.898**
ISR3	0.285	0.170	0.275	0.261	0.415	0.360	0.332	**0.887**
ISR4	0.331	0.187	0.298	0.325	0.401	0.468	0.340	**0.926**
ISR5	0.336	0.163	0.265	0.300	0.324	0.415	0.326	**0.888**

At last but not least, all of the measurements used in this study were examined in advance by following Straub et al. (2004). To test content validity,

Straub et al. (2004) proposes two methods: literature reviews and pilot tests. This study addressed extensive literature reviews for the constructs in Chapter 2, and survey items were reviewed by five experts in the IS area, four Ph. D. and 16 master MIS students who have been using various SNSs as introduced in Chapter 4.

5.2 Common Method Variance

The problem of method biases has been attracted much scholarly interest in the behavioral sciences. Common method variance (CMV) can be a problem in any single-source survey-based research (Turel et al., 2011). Further, there exists a potential for common method biases from multiple sources such as consistency motif and social desirability for self-reported data (Podsakoff et al., 2003).

To assess the common method biases problems in the survey design, this study ran one of the most widely used approaches, Harman's single-factor test (Podsakoff et al., 2003). If a substantial common method bias is present, a single factor emerges or one general factor explains the majority of the total variance (Harman, 1976; Yun et al., 2011). The analysis revealed total 6 factors in the results. The data set of 196 SNS users produced 6 factors (71.350 %), and the first factor accounted for only 33.319 percent of the variance (Turel et al., 2011).

In this test, all variables in the theoretical model were entered into an

Exploratory Factor Analysis (EFA). EFA describes that measurement items should converge in the corresponding factor so that each item loads with a high coefficient on only one factor, and this factor is the same for all items that are supposed to measure it (Urbach & Ahlemann, 2010).

Prior research findings suggest that the number of selected factors is determined by the numbers of factors with an Eigenvalue exceeding 1.0 (Gerbing & Anderson, 1998). An item loading is usually considered high if the loading coefficient is above 0.6000 and considered low if the coefficient is below 0.4000 (Gefen & Straub, 2005; Gerbing & Anderson, 1998). As Table 7 shows, the correlation matrix does not indicate any highly correlated factors, whereas evidence of common method bias should have resulted in extremely high correlations (r > .90) (Pavlou et al., 2007). Based on Turel et al. (2011) and other researchers, therefore, the results did not indicate common method bias as an issue.

5.3 Structural Model Analysis

PLS uses bootstrapping method to test the significance of path coefficients. In this study, 500 re-samples were created to test the hypotheses, and the results are summarized as shown in Table 8 and Figure 6. In PLS analysis, examining the R^2 scores (i.e., variance accounted for) of endogenous variables and the structural paths assesses the explanatory power of a structural model. It is most desirable to measure the statistical power of

PLS with R^2 values of endogenous variables using at least 0.10 as the reference value (Falk & Miller, 1992). Other researchers, however, suggest that values of approximately 0.670 are considered substantial, values around 0.333 moderate, and values around 0.190 weak (Chin 1998). In this study, the model accounts for 35.7 to 37.6 percent of the variances (R^2 scores), as shown in Figure 6. In addition, Table 8 shows that 5 paths are significant at the level of 0.001, and 1 path is significant at the level of 0.05. Thus, the fit of the overall model is good.

Table 8. Hypotheses Testing Results				
	Path	**Path Coefficient**	**t-value**	**Result**
H1	Social Interaction Ties → Trust	0.190**	2.840	Supported
H2	Shared Language → Trust	0.291***	4.143	Supported
H3	Shared Vision → Trust	0.310***	4.312	Supported
H4	Social Interaction Ties → Intention of sharing Rumor	0.140	1.441	Rejected
H5	Identification → Intention of sharing Rumor	- 0.080	0.929	Rejected
H6	Trust → Intention of sharing Rumor	0.294***	3.678	Supported
H7	Norm of Reciprocity → Intention of sharing Rumor	0.247***	4.163	Supported
H8	Personal Outcome Expectations → Intention of sharing Rumor	0.249***	3.348	Supported

Note 1: Path significant *p<0.05, **p<0.01, ***p<0.001
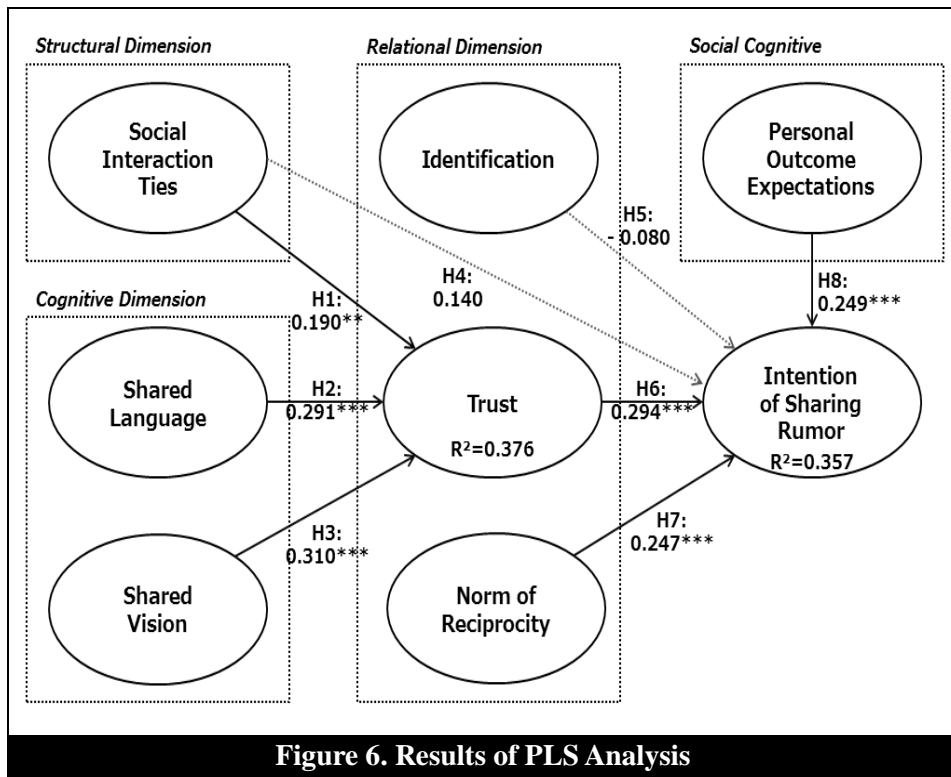**Note 2: Partial Mediation effect was observed (SIT → TR → ISR).**

Figure 6. Results of PLS Analysis

Note 1: Path significant *p<0.05, **p<0.01, ***p<0.001
Note 2: Partial Mediation effect was observed (SIT → TR → ISR). Thus, H4 was only partially supported.

As a result of path analysis, H1, H2, H3, H6, H7, H8, which propose that social interaction ties, shared language, and shared vision would affect trust, and trust, norm of reciprocity, and personal outcome expectations would affect intention of sharing rumor, were supported. In details, social interaction ties (β=0.190, p<0.05), shared language (β=0.291, p<0.001), and shared vision (β=0.310, p<0.001) influence trust. Trust (β=0.294, p<0.001) and norm of reciprocity β=0.247, p<0.001) influences SNS users' intention of sharing rumor, but identification does not have a relationship with it. In other words, the higher the social dimension of social capital and cognitive dimension of social capital in an SNS; the higher trust is in the social structure;

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the more trust and norm of reciprocity an SNS user has, the stronger intention of sharing rumor of the SNS user will be affected.

However, H4 was rejected. This indicates that social interaction ties do influence SNS users' intention of sharing rumor not directly but through trust in the full research model. A supplementary analysis of the existence of mediation effect (Table 9) reveals that structural dimension of social capital, manifesting as social interaction ties, fully mediates the degree of SNS users' intention of sharing rumor. Details will be discussed in the following section. In addition, H5 was also rejected. This means that a significant relationship between identification and intention of sharing rumor was not found.

5.4 Mediation Effect Analysis

An influential description of how mediation can be detected statistically was given by Baron and Kenny (1986). Figure 7 demonstrates the elements of the mediation analysis. Part 1 of Figure 7 implies that a unit change in X is associated with a change of c units in Y when only X and Y are considered. Part 2 of Figure 7 shows a model that includes variable M, the proposed mediator. The mediation model assumes that M is affected by changes in X. The model also assumes that changes in M are associated with changes in Y, above and beyond the direct effect of X on Y. Consequently, X is said to have an indirect effect on Y through the mediator M. The size of the indirect effect is simply the product of the X-to-M and M-to-Y effects, that is, a ∗ b (Shrout
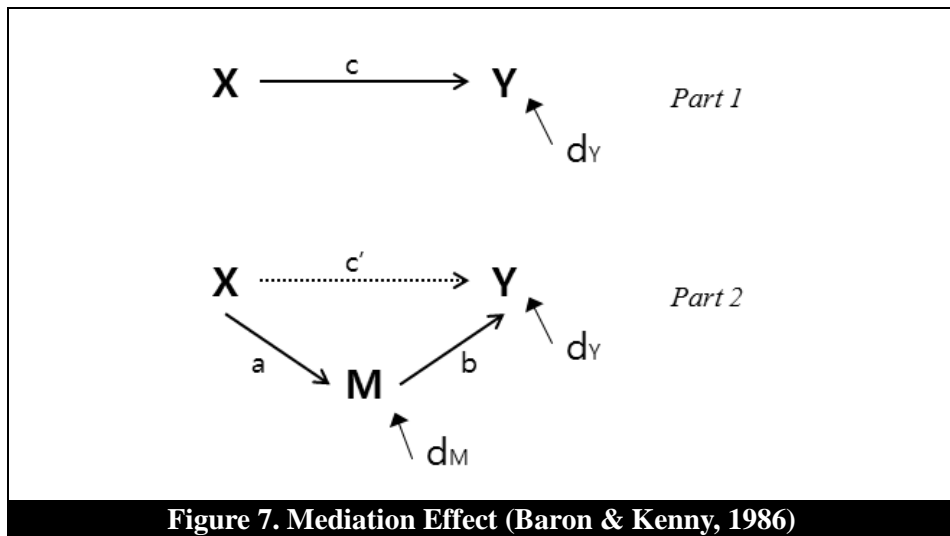
& Bolger, 2002).

Figure 7. Mediation Effect (Baron & Kenny, 1986)

Note: when mediation occurs, the c' path in Part 2 is smaller than the c path in Part 1, as indicated by dashed lines. Residual terms are displayed as d effects.

Mediation effect was tested by using the three-step method suggested by Baron and Kenny (1986). In Step 1, the independent variable must affect the mediator in the first equation; second, the independent variable must be shown to affect the dependent variable in the second equation; and last, the mediator must affect the dependent variable in the third equation. If these conditions are hold in the predicted direction, then the effect of the independent variable on the dependent variable must be less in the third equation than in the second. According to Baron and Kenny (1986) and Kenny et al. (1998), if M is significant and IV is not significant, then M partially mediates the impact of IV on DV. However, if both M and IV are significant as in this study, then M partially mediates the impact of IV on DV. Table 9 shows the mediation effect test results.

Table 9. Result of Mediation Effect Test							
			Coefficient in Regressions				
IV	**M**	**DV**	**I → DV**	**IV → M**	**IV + M → DV**		**Mediation**
					IV	M	
SIT	TR	ISR	0.344***	0.488***	0.481***	0.180	Fully mediating

Note 1: IV = independent variable; M = mediator; DV = dependent variable.

Note 2: * Significant at the 0.001 level;**

** Significant at the 0.01 level;

* Significant at the 0.05 level

Note 3: Also see http://davidakenny.net/cm/mediate.htm#IE for three-step method suggested by Baron and Kenny (1986).

Step 1: IV → DV is significant.

Step 2: IV → M is significant.

Step 3: IV + M → DV: (a) If M is significant and IV is not significant, then M fully mediates the impact of IV on DV.

(b) If both M and IV are significant, then M partially mediates the impact of IV on DV.

CHAPTER 6 CONCLUSION

Drawing on Social Capital Theory and Social Cognitive Theory, this study theoretically articulates and empirically tests a model positing that social capital and social cognitive affect SNS users' intention of sharing rumor in their SNSs. Table 10 summarizes the results.

6.1 Research Findings and Discussion

This study examines the complex process in which social capital and personal outcome expectations influence rumor sharing in SNSs. First of all, this study indicates that both cognitive capital and structural capital have a significant, positive effect on relational capital. This implies that structural capital is a predicator of relational capital, and a sense of trust can be derived directly from social interaction ties among SNS users. These results also suggest that achieving high trust requires establishing a shared language and vision to ensure alignment between individuals and SNS users whom they frequently communicate.

Second, an unexpected finding is that social interaction ties have almost no influence on intention of sharing rumor. This result is contrary to prior study on social capital and value creation within intrafirm networks, where it is shown that the centrality of a business unit in interunit social interaction is associated with the extent of the resource exchange and combination the unit

engages in with other units in the organization (Tsai & Ghoshal, 1998). One possible explanation is that SNSs have unique characteristics, such as open environment and possible anonymity. SNSs are voluntary and open participation systems. Some of users whom individuals frequently communicate can be total strangers and they usually do not have established personal relationships. This characteristic of open participation between strangers in SNSs is different from interpersonal communities. Further, sharing rumor is risky. Rumor is not verified and has no strong evidentiary basis. Therefore, it becomes difficult to share rumors with strangers in SNSs, especially when my identity can be easily uncovered.

Table 10. Summary of Results		
Hypothesis		**Result**
H1	Users' social interaction ties influence their trust in other SNS users positively.	Supported**
H2	Users' shared language influences trust in other SNS users positively.	Supported***
H3	Users' shared vision influences trust in other SNS users positively.	Supported***
H4	Users' social interaction ties influence their intention of sharing rumor in SNSs positively.	Rejected
H5	Users' identification influences their intention of sharing rumor in SNSs positively.	Rejected
H6	Users' trust influences their intention of sharing rumor in SNSs positively.	Supported***
H7	Users' norm of reciprocity influences their intention of sharing rumor in SNSs positively.	Supported***
H8	Users' personal outcome expectations influence their intention of sharing rumor in SNSs positively.	Supported***

Note 1: Path significant *p<0.05, **p<0.01, ***p<0.001
Note 2: Partial Mediation effect was observed (SIT → TR → ISR).

Table 11. Additional Tests of Mediation Effect							
			Coefficient in Regressions				
IV	**M**	**DV**	**I → DV**	**IV → M**	**IV + M → DV**		**Mediation**
					IV	M	
SIT	TR	ISR	0.344***	0.488***	0.481***	0.180	Fully mediating
ID	TR	ISR	0.315***	0.560***	0.556***	0.135	Fully mediating
SL	TR	ISR	0.192***	0.468***	0.467***	0.000	Fully mediating
SV	TR	ISR	0.303***	0.488***	0.482***	0.118	Fully mediating

Note 1: IV = independent variable; M = mediator; DV = dependent variable.
Note 2: * Significant at the 0.001 level;**
**   ** Significant at the 0.01 level;**
**   * Significant at the 0.05 level**

Additional analysis was performed to measure mediation effect between social interaction ties and intention of sharing rumor. As a result, trust fully mediates the impact on social interaction ties on intention of sharing rumor. Due to their open and anonymous nature, therefore, SNS users share rumors when preexist trust has been established between them. In other words, SNS users are not likely to jeopardize their positions in SNSs.

Third, contrary to the expectation, there is no significant relationship between identification and intention of sharing rumor. An additional PLS analysis was performed, which indicated that identification exerted positive and strong effect on trust (β=0.560, p<0.001). Moreover, as shown Table 11, identification and intention of sharing rumor were fully mediated through trust. Accordingly, a possible explanation for the finding may be that identification has indirect effect on intention of sharing rumor via trust, but no direct effect

on it.

Fourth, trust and norm of reciprocity had a strong effect on intention of sharing rumor. The result is consistent with Blau (1964), which indicates that norm of reciprocity builds trust, which in turn is centrally important to social exchange relationships. Tsai and Ghoshal (1998) also argue that individuals who share a vision will be more likely to become partners sharing or exchanging their resources in the organizational settings. In sum, SNS users are willing to share rumors due to a sense of trust towards others and fairness in exchanging rumor, without close and frequent interaction among them.

Finally, the result indicates that personal outcome expectations play a significant role underlying intention of sharing rumor. This is consistent with the previous rumor literature, which explains that rumor is considered to be useful and beneficial so that individuals share rumors in order to explain uncertain circumstances and overcome personal anxiety by finding facts.

6.2 Implications for Research and Practice

6.2.1 Implications for Research

The components and dimensions of social capital are well discussed in the literature of social sciences and IS. What is less understood is how the core elements of social capital interact with each other. Three key aspects of this study signify the contribution to the theory of social capital and SNSs.

This is not to say that previous approaches to rumor have been fruitless.

Neither do those findings claim that the individual-level variables should not be abandoned, nor only social views are appropriate for explaining rumor sharing behavior. However, so much little attention has been paid to sharing of unverified information or knowledge in the MIS field. A rumor, unless communicated, is just a thought or image in an individual's mind. It is communication that provides rumor with substance. Including social interaction in the study of rumor will not only enhance mundane realism, but also add an important theoretical dimension to rumor research (Bordia & DiFonzo, 2002).

Where prior studies have focused on the psychological factors and perceptions that ultimately encourage sharing verified knowledge at the individual level, this study sought to explore the different motivations that can affect rumormongering and rumor sharing behavior. The results of this study broadened our understanding of the factors that shape the sharing behaviors of SNS users which have a social focus. Further, the study has gone some way towards enhancing our understanding of social factors that affect rapid rumor dissemination in SNSs.

Second, this study investigates the interplay relationships among the three dimensions of social capital. Prior studies focus on an individual's motivations behind information sharing in virtual communities or SNSs, and little research examines the internal relationships of social capital. This study examines the three relationships: structural capital has a significant impact on relational capital; cognitive capital also has a significant impact on relational capital. This study furthers our understanding of the internal attributes of

social capital.

Third, this study extends the prior work on the unique characteristics of rumor. Previous findings suggest the reason why individuals share knowledge, but they are only concerned about verified one. This study highlights the need to further investigate rumor-based content, which appears to be a valuable resource in SNSs. The empirically validated model with variables included in this study provides a good starting point for building future studies on this topic.

Last, this study has gone some way towards enhancing our understanding SNSs. Rather than studying virtual communities and knowledge sharing behavior; this paper studies the intention of sharing rumor in the context of SNS. This study extends prior literature by examining sharing unverified knowledge behaviors among SNS users, which is a different setting than the more commonly examined virtual communities of practice setting.

6.2.2 Implications for Practice

SNSs like Facebook, Twitter, and KakaoTalk are reshaping the way people take collective actions. It has been argued that the 'instantaneous nature' of SNS influenced the speed at which significant social events were unfolding. Indeed, it is quite remarkable that SNSs spread news so fast. Both the structure of social networks and the process that distributes the news are not designed with this purpose in mind. On the contrary, they are not designed at all, but have evolved in a random and decentralized manner (Doerr et al., 2012). In this regard, SNSs ease the spread of rumor; there are particular

properties of SNSs, which are the reason for this. The social factors that this study has identified assist in our understanding of rumor sharing behavior being observed in SNSs.

Information overload is a term coined by Alvin Toffler that refers to the presence of bewildering amounts of information, more that can be effectively absorbed or processed by an individual. SNSs have created a new way of feeding information to people. Because of the existence of having so much information available, people either cannot assimilate it all or feels too overwhelmed (Lu & Yang, 2011). This study had predictions that SNS, with its low transaction costs, high speed, and global reach, would facilitate the spread of rumor. Valid and timely information sharing is beneficial to most of SNS users; however, SNSs are also subject to several impediments such as information overload and misinformation. In light of this, the empirical findings in this study provide a new understanding of personal motivations of acquiring and sharing rumors with other SNS users.

Moreover, during any social turmoil, people face the ingestion of information, almost instantaneously, without knowing the validity of the content and the risk of misinformation. According to Sunstein (2009), rumors spread through two different but overlapping processes: social cascades and group polarization. Cascades occur because we tend to rely on what other people thing and do when lacking information of our own. Group polarization means that when likeminded people get together, they often come up with a more extreme version of what they thought before they started to talk to one another, thus ending up with biased assimilation. There are harmful

consequences of SNS rumoring.

In this study, several real-world examples were given to the respondents, and they acknowledged many of them. As Garrett (2011) and other studies suggest, respondents revealed the same tendency that rumor exposure promotes rumor belief. People are likely to trust personal acquaintances more than they trust individuals who travel outside their social circles (Metzger, Flanagin, & Medders, 2010). Taken together, the current findings suggest a role of SNSs in promoting rumormongering and rumor sharing behavior. To sum up, this study provides insights into controlling rumormongering and rumor sharing in SNSs by applying the concept of social capitals and personal outcome expectations.

6.3 Limitations and Future Research Direction

Although the findings are encouraging and useful, this research has several limitations that require further examination and additional research.

Structural capital was assessed by each individual's social interaction ties in SNSs. The research results show social interaction ties have no influence on intention of sharing rumor. Although previous studies also used social interaction ties as the indicator for structural capital (Chiu et al., 2006; Tsai & Ghoshal, 1998; Wasko & Faraj, 2005), social interaction ties may not be the best indicator for structural capital with regard to the unique nature of rumor sharing. Further research could attempt to explore other indicators or multiple

measures for structural capital, such as degree centrality or betweenness centrality. In addition, there is room to add other variables to explore how to effectively control rumors. Future studies could investigate other factors which are predicted by rumor quality and quantity. Finally, this study measures intention of sharing rumor in terms of perceived usefulness, importance, and evidentiary basis based on ISD (DiFonzo & Bordia, 2007). Future research may include other dimensions for rumor quality and quantity, such as types of rumor, credulity, and frequency.

Another limitation of this study is that this study surveyed the relatively younger users of only three SNSs, which limits the generalizability of the results. This study differs from prior studies using professional communities of practice, generally in the form of virtual community. KakaoTalk users have preexisted relationships among each other, but Facebook and Twitter users do not necessarily meet each other in a face-to-face way to build relationships online. This limitation also identifies an avenue for future research, namely exploring the difference in intention between identified and anonymous SNS users.

In addition, this study acknowledges that the content posted and shared in SNSs may not always fall neatly into the two content types (verified knowledge and rumor) that are examined here. Additionally, the two content types themselves are multifaceted, so depending on the individual belief and the context of their situation or position, the content that is shared can vary widely. In a study such as this, it would be impossible to query subjects on every single type of verified knowledge or rumor that could possibly be

posted and shared.

However, verified knowledge and rumors are critical fuel for driving certain SNSs such as Twitter, Facebook, and KakaoTalk, it is valuable to examine the motivators for sharing such content in general. This study uncovers and empirically demonstrates that rumor serves as a scarce and valuable resource that can help with the creation and sustenance of SNSs, and the findings suggest that rumor should be viewed differently from other types of content. Not much IS studies have examined and demonstrated the role of rumor in cultivating and maintain SNSs. Future research should extend this research by examining the sharing behaviors of other type of content.

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초   록

   루머(Rumor)는 항간에 떠도는 중요한 정보 중 아직 진실로 입증되지 않은 내용을 담고 있으며, 문제시될법한 상황에 대한 불안감이나 위험을 줄여주는 기능을 한다. 사회구성원들 사이에서 정보와 지식이 공유되듯 루머가 퍼지는 현상 또한 앎에 대한 욕구에서 비롯한 커뮤니케이션의 결과물이다. 특히 트위터, 페이스북, 카카오톡 등으로 대표되는 소셜네트워크서비스(SNS)가 인기를 끌자 루머 역시 급속도로 확산되고 있다. 여타 매체에 비해 SNS는 메시지를 즉흥적으로 광범위하게 퍼뜨리는데다, 이에 제동을 걸기도 쉽지 않기 때문이다.

   기존 연구는 루머가 확산되는 동인을 찾기 위해 심리학적 접근법을 사용했다. 그 결과 루머가 퍼지기 위해 네 가지 요소(불확실한 상황, 불안감, 소재의 중요성, 루머의 신뢰성)가 결정적으로 작용함이 밝혀졌다. 그러나 루머 확산이 사회적 현상임에 반해 기존 연구는 개인적 차원에 머물러 한계를 보였다. 루머는 검증되지 않은 지식으로써 일종의 지적 자원이다. 이는 더 많은 사람이 언급하고 신뢰할수록 더 중요한 정보로 인식됨을 의미한다. 즉, 루머는 사회적 맥락에서 통용됐을 때 가치가 높아진다. 본 연구는 최근 정보 확산의 시발점으로 주목 받는 SNS 상에서 사용자들이 루머를 공유하려는 의도에 미치는 영향을 사회적 차원에서 밝혀냈다. 이를 위해 본 연구에는 사회적 자본 이론(Social Capital Theory)과 사회 인지 이론(Social Cognitive Theory)이 적용됐다.

   연구 결과, SNS 상에서 사용자들이 루머를 전달하는 의도에 큰 영향을 미치는 요인은 신뢰(Trust), 호혜 규범(Norm of Reciprocity), 개인적 결과 기대(Personal Outcome Expectations)로 나타났다. 첫째로 '신뢰'가 꼽힌 이유는 개방성과 익명성을 특징으로 하는 거대한

SNS 공간에서 사용자들은 믿을 수 있는 상대에게만 검증되지 않은 정보를 전달하기 때문으로 분석된다. 추가적으로 시행된 분석에서 기각된 가설인 동일시(Identity)와 사회적 교류(Social Interaction Ties)가 '신뢰'를 통해 루머 공유 의도(Intention of Sharing Rumor)에 직접 매개됨이 드러났다. 서로에 대한 동일시나 긴밀한 교류보다는 서로에 대한 신뢰가 루머 공유에 직접적인 영향을 준다는 의미다. 둘째, '호혜 규범'을 통해서는 루머가 교환 가능한 지적 자원으로써 상대방에게 도움을 주기 위해 공유되는 경향이 있음을 확인할 수 있었다. 마지막으로 사회 인지 이론 측면에서 바라본 '개인적 결과 기대'는 사용자가 자신에게 사회적 이득이 생기기 때문에 루머를 공유한다는 가설을 뒷받침했다.

　기존 연구가 온라인 상에서 검증된 정보나 지식의 공유에 미치는 영향을 분석했다면, 본 연구는 '루머'라는 새로운 장을 열었다는 데 의의가 있다. '마녀사냥'이나 '신상 털기' 등 SNS 상에서 악성 루머 확산에 따른 부작용이 사회적 문제로 지목 받고 있다. 향후 연구는 SNS를 포함한 온라인이나 모바일 환경에서 루머 공유에 영향을 미치는 요인을 추가적으로 밝혀낼 뿐만 아니라, 기업·개인이 루머를 관리할 수 있는 기제나 시스템, 부정적인 루머에 뒤따른 피해를 최소화할 수 있는 방향으로 나아갈 것을 제안한다.

주요어: 루머 공유, 지식 공유, 사회적 자본 이론, 사회 인지 이론,
　　　　소셜 네트워크 서비스
학　번: 2011-20571

APPENDIX: Questionnaire (in Korean)

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설문 안내

▶ 본 설문에서 언급되는 **미검증 정보**(소문·루머)란 **지식의 한 형태**로써 사람들 사이에 돌고 있는 정보 중 아직 진실로 입증되지 않은 것을 말합니다. 주로 나 자신과 연관된 정보로써 내용으로는 현재나 미래에 문제시될 수 있는 상황 속 불안이나 불확실성을 줄여주는 내용, 또는 그에 대한 희망·낙관을 담고 있습니다.

▶ 심리적으로는 주로 **"내가 처한 상황을 이해하고 위험관리를 돕는 기능"** 을 합니다.

▶ 미검증 정보의 **실제 사례들**

[자연재해] "태풍 ○○○이 지나간 뒤엔 음식을 구할 수 없으니 미리미리 생필품을 구매해달라."

[유명인] "연예인 ○○○가 XXX 정치인과 스폰서 관계이며 경제적 지원을 받았다고 한다." / "인터넷에서 인기 여배우 ○○○의 적나라한 'A양 동영상'이 도는 중이라고 한다."

[내가 속한 조직] "올해 목표치를 상향 달성함에 따라 회장님 지시로 성과급이 ○○% 오를 것이다." / "○○ 기업이 다음 주부터 최대 수천 명의 직원을 해고시킬 것이다."

[증권·경제] "○○○ 의원이 국회에서 했던 발언 대문에 관련 업체 XXX의 주가가 뛸 것이라고 한다."

[미스터리] "1970년대 UFO가 뉴 멕시코 등지에서 암소 8,000마리를 납치해 생체실험 한 뒤 피 한 방울도 남기지 않은 채 버렸다고 한다."

[사회 현안] "현존하는 약으로는 치료 불가능한 슈퍼 박테리아 ○○○에 감염된 환자가 속출한다고 한다." / "○○ 지역에서 탈옥범에 의한 성폭행 사건이 있었으니 밤길을 조심하라." 등

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Ⅰ. SNS 사용에 관한 질문 [객관식은 택 1]

1-1. 평상시 주 사용 SNS	① 트위터 ② 페이스북 ③ 카카오톡 ④ 기타 (　　　　　)
1-2. 해당 SNS 사용 기간	약 (　　　)년 (　　　)개월
1-3. 해당 SNS 숙달 정도	① 매우 미숙 ② 미숙 ③ 보통 ④ 능숙 ⑤ 매우 능숙
1-4. 해당 SNS 사용 빈도	① 1일 5회 이상 ② 1일 5회 미만 ③ 1달 5회 이하 ④ 1년 5회 이하
1-5. 해당 SNS 사용 목적	① 인맥 형성・관리 ② 지인과의 친목 유지・도모 ③ 각종 정보 검색 ④ 개인 정보 공유 ⑤ 지식・노하우 공유 ⑥ 경제적・물질적 보상 획득 ⑦ 엔터테인먼트・취미 ⑧ 기타 (　　　　　　　　　　　)

※ **앞서 선택한 소셜네트워크서비스(SNS)에서 평상시 대화하는 사람들에 대해**, 개별 질문을 잘 읽은 뒤 동의하는 정도에 따라 각각의 숫자에 표시해주시기 바랍니다. 감사합니다.

Ⅱ. 미검증 정보 공유 동기와 의도에 관한 질문

1. 신뢰	전혀 그렇지 않다	그렇지 않다	별로 그렇지 않다	보통이다	약간 그렇다	그렇다	매우 그렇다
1. 내가 주로 교류하는 SNS상의 사람들은 서로를 정직하게 대한다.	①	②	③	④	⑤	⑥	⑦
2. 내가 주로 교류하는 SNS상의 사람들은 서로를 악용하지 않는다.	①	②	③	④	⑤	⑥	⑦
3. 내가 주로 교류하는 SNS상의 사람들은 서로간의 약속을 지킨다.	①	②	③	④	⑤	⑥	⑦
4. 내가 주로 교류하는 SNS상의 사람들은 고의로 다른 사람의 SNS 활동을 방해하지 않는다.	①	②	③	④	⑤	⑥	⑦

2. 개인적 결과 기대	전혀 그렇지 않다	그렇지 않다	별로 그렇지 않다	보통이다	약간 그렇다	그렇다	매우 그렇다
1. 위와 같은 정보를 공유한다면 내 미래에 대한 불확실성이 해소되는데 다소 도움이 될 것이다.	①	②	③	④	⑤	⑥	⑦
2. 위와 같은 정보의 공유를 통해 나는 성취감을 느낀다.	①	②	③	④	⑤	⑥	⑦
3. 위와 같은 정보를 공유한다면 SNS상에서 인맥을 넓히는데 도움이 될 것이다.	①	②	③	④	⑤	⑥	⑦

3. 공유된 언어	전혀 그렇지 않다	그렇지 않다	별로 그렇지 않다	보통이다	약간 그렇다	그렇다	매우 그렇다
1. 나와 내가 주로 대화하는 SNS상의 사람들은 서로의 의사소통 패턴을 이해할 수 있다.	①	②	③	④	⑤	⑥	⑦
2. 나와 내가 주로 대화하는 SNS상의 사람들은 서로 통하는 용어를 사용한다.	①	②	③	④	⑤	⑥	⑦
3. 나와 내가 주로 대화하는 SNS상의 사람들은 유행어나 이모티콘을 쓸 때 서로 알고 있는 것을 사용한다.	①	②	③	④	⑤	⑥	⑦

4. 공유된 비전	전혀 그렇지 않다	그렇지 않다	별로 그렇지 않다	보통이다	약간 그렇다	그렇다	매우 그렇다
1. 나와 SNS로 연결된 사람들은 우리 중 누군가에게 문제가 생겼을 때 '도와줘야겠다'는 생각을 공유한다.	①	②	③	④	⑤	⑥	⑦
2. 나와 SNS로 연결된 사람들은 우리 중 누군가를 돕는 게 즐겁다는 가치관을 공유한다.	①	②	③	④	⑤	⑥	⑦

5. 동일시	전혀 그렇지 않다	그렇지 않다	별로 그렇지 않다	보통이 다	약간 그렇다	그렇다	매우 그렇다
1. 나는 나와 SNS로 연결된 사람들 사이에서 일종의 소속감을 느낀다.	①	②	③	④	⑤	⑥	⑦
2. 나와 SNS로 연결된 사람들에게 일종의 친밀감을 느낀다.	①	②	③	④	⑤	⑥	⑦
3. 나와 SNS로 연결된 사람들에 대한 긍정적인 감정을 갖고 있다.	①	②	③	④	⑤	⑥	⑦
4. 나와 SNS로 연결된 사람들과 교류한다는 점이 기쁘다.	①	②	③	④	⑤	⑥	⑦

6. 호혜 규범	전혀 그렇지 않다	그렇지 않다	별로 그렇지 않다	보통이 다	약간 그렇다	그렇다	매우 그렇다
1. SNS상에 위와 같은 정보를 공유한다면 이와 관련된 정보를 가진 다른 사람들도 내게 공유해줄 것이다.	①	②	③	④	⑤	⑥	⑦
2. SNS상에 위와 같은 정보를 공유한다면 향후 이와 관련된 질문이 생겼을 때 다른 사람들이 대답해줄 수 있을 것이다.	①	②	③	④	⑤	⑥	⑦
3. SNS상에서 다른 사람의 고급 정보를 얻기 위해서는 내가 먼저 관련된 정보를 공유할 필요가 있다.	①	②	③	④	⑤	⑥	⑦

7. 사회적 상호작용 관계	전혀 그렇지 않다	그렇지 않다	별로 그렇지 않다	보통이 다	약간 그렇다	그렇다	매우 그렇다
1. 나와 SNS로 연결된 사람들 중 몇몇과는 온·오프라인에서 친목을 도모하는데 많은 시간을 보낸다.	①	②	③	④	⑤	⑥	⑦
2. 나와 SNS로 연결된 사람들 중 몇몇과는 온·오프라인에서 친밀한 사회적 관계를 갖고 있다.	①	②	③	④	⑤	⑥	⑦

7. 사회적 상호작용 관계	전혀 그렇지 않다	그렇지 않다	별로 그렇지 않다	보통이 다	약간 그렇다	그렇다	매우 그렇다
3. 나와 SNS로 연결된 사람들 중 몇몇과는 온·오프라인에서 자주 의사소통 한다.	①	②	③	④	⑤	⑥	⑦
4. 나와 SNS로 연결된 사람들 중 몇몇과는 개인적으로도 꽤 친하다고 할 수 있다.	①	②	③	④	⑤	⑥	⑦

8. 미검증 정보 공유 의도	전혀 그렇지 않다	그렇지 않다	별로 그렇지 않다	보통이 다	약간 그렇다	그렇다	매우 그렇다
1. 나는 미검증됐지만 전체적으로 중요한 정보를 몇몇 사람과 공유할 의사가 있다.	①	②	③	④	⑤	⑥	⑦
2. 나는 꽤 비중 있지만 사실인지 확인되지 않은 정보를 몇몇 사람과 공유할 수 있다고 생각한다.	①	②	③	④	⑤	⑥	⑦
3. 나는 미검증됐지만 누군가가 듣고 난 뒤 도움이 될만한 정보를 몇몇 사람과 공유할 의사가 있다.	①	②	③	④	⑤	⑥	⑦
4. 나는 미검증됐지만 꽤 유익한 정보를 공유할 의사가 있다.	①	②	③	④	⑤	⑥	⑦
5. 나는 미검증됐지만 내게 중요한 정보를 몇몇 사람과도 공유할 수 있다고 생각한다.	①	②	③	④	⑤	⑥	⑦

Ⅲ. SNS 사용자 특성에 관한 질문 [객관식은 택 1]

1. 연령	만 ( )세	2. 성별	①남 ②여	3. 학력	① 고졸 이하 ② 고졸 이상 ③ 대학 재학 ④ 대졸 이상 ⑤ 기타 ( )
4. 직업	① 고등학생 이하 ② 대학생·대학원생 ③ 제조업 ④ 금융업 ⑤ 서비스업 ⑥ 의료업 ⑦ 공무원 ⑧ 방송·통신업 ⑨ 도·소매업 ⑩ 유통업 ⑪ 기타 ( )				
5-1. SNS를 통해 루머를 접해본 경험이	① 있다 ② 없다 ③ 기타 ( )				

5-2. SNS를 통해 루머를 전달한 경험이	① 있다 ② 없다 ③ 기타 ( )
5-3. 루머를 주로 전달받는 경로	① 가족·친구 ② 동료 ③ SNS상으로만 아는 지인 ④ 인터넷상 불특정인 ⑤ 기타 ( )
5-4. 루머를 주로 전달하는 경로	① 가족·친구 ② 동료 ③ SNS상으로만 아는 지인 ④ 인터넷상 불특정인 ⑤ 기타 ( )