

# Effects of Organizational Use of *KakaoTalk*, a Mobile Instant Messaging (MIM) Service, on Employees' Attitudes toward Current Organization in Korea

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## ABSTRACT

Present-day organizations have become largely dependent on mobile instant messaging services (MIMs) for various organizational purposes. Focusing on the increasing use of MIMs in today's organizations, this study aims to explain how different aspects of *KakaoTalk*, the most dominant MIM in Korea, influence employees' attitudes toward their current employers, and how these attitudes impact the employees' intentions to stay at their present workplaces. Overall, with the exception of one factor (satisfaction with *KakaoTalk* use), all other factors (perceived quality of information exchanged through *KakaoTalk*, belongingness through *KakaoTalk*, and *KakaoTalk* overload) significantly influenced employee's attractiveness toward their current employers. Specifically, while *KakaoTalk* overload's effect on perceived organizational attractiveness was negative, two other factors were positively associated with it. Perceived organizational attractiveness also strongly influenced employees' intention to stay at their present workplaces. These findings contribute to expanding practical and theoretical understandings regarding the critical roles of MIMs in the efficient management of organizations in this hyper-connected society.

*Keywords:* Mobile Instant Messaging (MIM), *KakaoTalk*, Attraction-Selection-Attrition (ASA) Model, Organizational Attractiveness, Intention to Stay

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## 1. Introduction

Instant messaging (IM) services have grown to become a prominent tool for computer-mediated communication (CMC). Such services have received much attention from scholars and practitioners (e.g.,

Hsieh and Tsent, 2016; Lundy and Drouin, 2016; Oghuma et al., 2016; Shiu and Lenhart, 2004; So, 2016), especially for the convenient, synchronized, and personal interactions that they encourage. Before the development of mobile phones, especially smartphones, IM services were mostly PC-based. As Internet-sup-

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ported mobile technologies further advanced, mobile instant messaging services (MIMs) started to penetrate many aspects of our everyday lives. Today, it is possible to observe MIMs serving as one of the most dominant of communication tools available (Kim et al., 2015a; Kim et al., 2014; Oghuma et al., 2015).

In particular, MIMs are rapidly replacing traditional (i.e., face-to-face, written) and PC-based CMC forms (e.g., MS messenger on PC) of communication in the workplace. Indeed, with the expansion of features offered within MIMs that assist communication in the organizational context (e.g., group chat; exchange of text, audio, and video files; voting systems) MIMs have grown to become one of the most used and relied-upon communication tools for organizations, transforming how communication occurs within organizations (Pazos et al., 2013; Sheer and Rice, 2017; Youlianto and Irwansyah, 2016). Accordingly, scholars have explored the impact that MIM use has had on organizational life, such as how it facilitates communication or increases performance (Kim et al., 2014; Lee et al., 2016; Sheer and Rice, 2017; Youlianto and Irwansyah, 2016).

However, there remains much to be explored in regards to MIMs within organizational contexts. First, the existing literature tends to focus attention on the technological aspects of MIMs (e.g., social presence, synchronicity) in scrutinizing how they are used to build human relationships within organizations (Cho and Kim, 2013; Mahatanankoon, 2016; Sheer and Rice, 2017). Second, due to the dominantly functionalist approaches, previous studies tend to place emphasis on the positive aspects of MIMs—for example, facilitation of communication (Cho and Kim, 2014) and increase in employee outcome (e.g., job performance, job satisfaction) (Lee, 2012; Mahatanankoon, 2016; Sheer and Rice, 2017). However, except a few studies (Lee et al., 2016; Lee

and Park, 2015; Shin and Shin, 2016), this research has tended to de-emphasize or overlook the potential negative effects (e.g., attenuation of work-life boundaries, increased stress) that integration of a technology, which is primarily used for intimate, personal communication, into the workplace can have on organizational members. Moreover, although previous studies have explored how employees' uses of IM negatively impact personal and organizational behaviors (Cameron and Webster, 2005; Quan-Haase, 2010; Renneker and Godwin, 2003), it should be considered that converged with smartphone-related technologies, MIMs in today's organizations are intensively used for even more diverse purposes compared to the past. That is, while previous studies have examined IM uses in the exchange of messages, mainly on the PC, MIMs in today's organizations are used for not only interpersonal message exchange but also file sharing, file editing, decision-making (e.g., voting functions), group chat, and so on. This implies the possibility of more serious and substantial effects on employees' personal and organizational outcomes. Nevertheless, it is difficult to find research that has extended previous findings to MIM uses in today's organizations.

Therefore, considering these limitations of previous research on uses of MIMs in organizations, in this study, we examine how employees' experiences with MIMs are associated with their attitudes toward their organization and how those attitudes are associated with their intentions to continue work at their current place of employment. Specifically, based on the Attraction-Selection-Attrition (ASA) model (Schneider, 1987), we examined how various aspects of MIM use predicts, both positively and negatively, employees' perceived organizational attractiveness and its influence on intentions to stay at current workplaces. Considering Korean organizations' pre-

dominant uses of MIMs for organizational purposes (Lee, 2013; Lee and Park, 2015), we examine our topic within the particular context of Korea, particularly focusing on the organizational uses of *KakaoTalk*, the most widely used MIM in Korea. The following section introduces recent trends in *KakaoTalk* use and discusses the theoretical framework that guides this investigation.

## II. Research Context and Theoretical Backgrounds

### 2.1. Trends in *KakaoTalk* Use in Korea

Approximately 83 percent of those ages 6 and older owned a smartphone (Kim et al., 2015a). Moreover, according to nationwide studies funded by Korea's Ministry of Science, ICT and Future Planning (Kim et al., 2015a; Kim et al., 2015b), the most dominant use of ICTs in general and mobile Internet in particular is that of communication. One particular study (Kim et al., 2015b) showed that 99.1 percent of Koreans surveyed used mobile Internet for instant messaging and 80.9 percent for social network sites. Korea Press Foundation (KPF) (2015a) reported that among the numerous mobile communication/social-networking apps available in Korea, the MIM app, *KakaoTalk*, boasts the highest number of users and usage rate. Specifically, in 2015, about 48 percent of Koreans were users of *KakaoTalk*, and approximately 95 percent of social media users between the ages of 20 and 49 were found to be in active use of the app.

With such ubiquitous use of *KakaoTalk*, it has naturally expanded its influence to organizations, now playing a central role in organizational communication practices. 64.4% of employees in Korea

were using smart devices for organizational purposes (Jang, 2015). In particular, mobile messengers represented by *KakaoTalk* was the most often used method on smart devices. Companies are largely reliant on the app for various communicative purposes. For example, the app is used to set up meetings as well as to conduct them, while it is also used for idea development sessions and delivery of task orders, among many other uses (Oghuma et al., 2015). For these functions that it offers, *KakaoTalk* is considered to be an efficient tool among many employers as well as employees.

Nevertheless, it is not difficult to find news articles reporting on the excessive uses of *KakaoTalk* for work in Korea and the negative effects that such overdependence has brought upon the personal and professional lives of employees, most particularly, attenuating work-life boundaries (Choi, 2016; Kim, 2016; Park, 2016). Kim (2016) and Park (2016) reported that employees in Korea seriously suffer from 'being always on' with *KakaoTalk*. As Kim (2016) further addressed, it is not uncommon for Korean employees to receive *KakaoTalk* messages after 10 pm. In a recent survey study (Yang and Park, 2016) with 1,040 Korean employees, about 62 percent reported that "being always on" through smartphones has made life "uncomfortable," and about 58 percent of these respondents pointed to MIMs (over social network sites, phone/SMS, and email) as the main reason for their negative perception. In the same study, approximately 42 percent of employees reported that their workload increased "somewhat" or "considerably" after they started to use smartphones. As such, smartphones and, in particular, *KakaoTalk* have become dominant yet more or less invasive tools for communication in Korean companies.

### 2.2. Research on Instant Messaging Services

Paying attention to the usefulness of IM for organizational purposes, previous studies have investigated diverse issues related to IM use in the workplace. Such studies are primarily concerned with the adoption or diffusion of IM in the workplace and the benefits from IM use for organizational purposes. First, a group of studies have focused on the main factors leading people to adopt or continue to use IM in the work context (Glass and Li, 2010; Kiddie, 2014; Luo et al., 2010; To et al., 2008; Wang et al., 2012). They tried to understand what motivated employees to use IM for work purposes based on various theoretical models. For instance, Glass and Li (2010) applied the Technology Acceptance Model (TAM)—a well-known and reliable model explaining individuals' adoption of new technologies—to comprehend the process involved in motivating employees to use IM services.

Next, another research topic is related to the positive roles of IM in the improvement of personal and organizational aspects (Bardram and Hansen, 2010; Cameron and Webster, 2005; Cho et al., 2005; Cramton, 2001; Garrett and Danziger, 2007; Licari, 2005; Muller et al., 2003; Ou et al., 2010; Quan-Hasse et al., 2005). Particularly in the area of communication studies, scholars have placed much attention on the effects of IM uses in terms of enhanced communication in the workplace (Quan-Hasse et al., 2005). According to these studies, IM use is advantageous for organizational members in that they are able to more efficiently exchange task information and to constantly interact with other organizational members. Further, owing to the communicative efficiency of IM, employees' use of IM for work was positively associated with various outcomes including social presence (Ogara et al., 2014), context-based workplace awareness (Bardram and Hansen, 2010), social capital (Sheer and Rice, 2017), and so on.

These findings are helpful for understanding the general processes involved in adopting IM within the workplace as well as the main benefits from IM use for organizational purposes. However, existing studies are limited in scope, with lack of thorough examination regarding certain issues. First, although previous research has explored the negative aspects (e.g., privacy invasion, organizational control, etc.) of IM use in the workplace (Herbsleb et al., 2002; Licari, 2005), there has been a lack of examination regarding the negative influences in terms of personal outcomes in the organizational context. Particularly, as the overdependence on MIMs has become a serious problem in Korean organizations, it is necessary to thoroughly investigate the personal impact of such intensive use. Second, previous research has not fully explained how IM use can ultimately affect personal outcomes. That is, although existing studies explain the relationships between IM use and direct dependent variables, such as social presence and social capital, they have not focused on how outcomes obtained through IM use may further impact other personal and organizational outcomes. Therefore, considering such limitations of previous studies, this present study aimed at investigating how informational, relational, and affective variables related to MIM use in the workplace influence employees' attitudes toward their employers and their intention to stay at their current organization. The following section will further elaborate on the theoretical background of this study, explaining the relationships among the main study variables.

## 2.2. Attraction-Selection-Attrition (ASA) Model and Organizational Attractiveness

Considering the increasingly noticeable role of *KakaoTalk* in Korean organizations, this present study focused on understanding how multiple di-

mensions of MIM use, specifically *KakaoTalk* use, in Korea influences employees' attitudes toward the organizations they are affiliated with, and whether these attitudes lead to the employees' intentions to stay with their current organizations. Although there exist numerous factors of leading employees to leave from their current employer, one of the most powerful predictors of employees' turnover is a lack of organizational attractiveness that is closely related to employees' attitudes toward their organization (Gomes and Neves, 2011). That is, when employees experience low level of attractiveness, they are less likely to stay at their current organization.

Here, it should be considered that among various theoretical approaches, Schneider (1987)'s Attraction-Selection-Attrition (ASA) model has been well-known as an appropriate theory for explaining the role of organizational attractiveness in determining organizational selection and attrition. This model was originally proposed to explain the internal homogeneity of an organization (Schneider, 1987). In the processes of selecting a future employer, job applicants evaluate how the organization's goals and values are well matched to their ones. When the congruence between organizational and personal values and goals increases, those applicant experience higher level of attractiveness of that particular organization and are more likely to accept the job offer from the organization. Over time, more and more people whose goals and values are similar with their organization remain, increasing the internal homogeneity of the organization (Dickson et al., 2008). This addresses the importance of organizational attractiveness for leading people to have a certain attitude toward their current employer and make a decision to work for an organization.

Therefore, the ASA model has been widely applied to understanding the processes of job seeking and

employee recruitment (Chapman et al., 2005). That is, the ASA model explains applicants' personal decision to select their future employer as well as organizational decision to select employees. Moreover, because organizational attractiveness is a key factor in leading employees to stay with their current employer, the ASA model has often been extended to research on organizational attractiveness among existing members' attitudes towards their current organizations (Mowday et al., 2013; Moynihan and Pandey, 2008). Paying major attention to the important role of organizational attractiveness in determining future and current employees to select a particular organization, previous studies have tried to understand the predictors as well as outcomes of organizational attractiveness. Finally, based on those findings from previous studies, this present research also paid major attention to the associations among main study variables—communication-related variables (i.e., satisfaction with *KakaoTalk* use), organizational attractiveness, and intention to stay.

### 2.3. Communication, Organizational Attractiveness, and Intention to Stay

It needs to be understood that, according to Chapman et al. (2005), organizational attractiveness is predicted by various organization-related variables including job/organization characteristics (e.g., company size, payment, promotion opportunities), perceived fits (e.g., person-organization fit (POF)), and so on. Similarly, Lievens and Highhouse (2003) identified two categories of organizational attributes that predict organizational attractiveness, which they referred to as instrumental and symbolic attributes. While instrumental attributes involve the tangible components (e.g., payment) of an employing organization, symbolic attributes are associated with the

intangible and value-oriented aspects (e.g., POF). Previous studies have found much evidence supporting the critical roles of such predictors in determining organizational attractiveness. For example, a number of studies have observed the positive effects that POF, a key symbolic attribute, has on organizational attractiveness across a diversity of organizational settings (Cable and Judge, 1997; Cho et al., 2014; Lievens et al., 2001; Turban et al., 2001).

Despite the extensive research conducted on the predictors of organizational attractiveness, not much attention has been given to the predictive roles of communication-oriented factors. According to Putnam and Mumby (2014), organizational communication is one of the most critical and necessary conditions for successful management of an organization. Regardless of organization type, internal and external communication practices are the most necessary component of decision-making processes, production and sales, human resource management, and so on (Putnam and Mumby, 2014). Employees' organizational lives are also largely dependent on the state of communication that occurs within the organizational boundaries (Akkirman and Harris, 2005). Therefore, as the literature of communication satisfaction shows, the ways in which employees experience the communication that occurs within their organizations become crucial criteria for how they evaluate their organizational lives (Carrière and Bourque, 2009; Cho et al., 2013; Clampitt and Downs, 1993; Downs and Adrian, 2004; Pincus, 1986). Thus, we can infer from this literature that there will be a considerable association between communication-oriented factors and organizational attractiveness. Therefore, in this study, considering the dominant communicative role of *KakaoTalk* within Korean organizations, we examined how various factors related to *KakaoTalk* use predicted organiza-

tional attractiveness among Korean employees.

Specifically, the following four different factors of *KakaoTalk* use within organizations were identified and each was considered a predictor of organizational attractiveness. First, as elaborated above, employees' satisfaction with general communication in the workplace is one of the more influential factors that affect organizational lives. Therefore, it is meaningful to investigate how employees' satisfaction with communication through a major medium, MIMs in Korean organizations, influences their attitude toward current employers. Next, as known well, IM services are useful tools for improving relationships among employees (Sheer and Rice, 2017). Therefore, this present study focused on employees' perception of belongingness with their organization through communicative interactions that take place in *KakaoTalk*. This was because the main function of MIMs is to connect employees with one another. Thirdly, another fundamental function of MIMs in the workplace is the efficient sharing of diverse types of information. Moreover, although the quantitative aspects of information exchange are important, the quality of these exchanges have become increasingly important due to the speed and volume of information shared. Therefore, this study aimed at examining how the quality of information exchanged through *KakaoTalk* influences employees' attitudes toward their current employers. Lastly, unlike previous research that has investigated the positive roles of MIMs for organizational performance, this research placed attention on the potential negative effect of MIM use overloads on organizational attractiveness, considering the problems related to the over-reliance on *KakaoTalk* in Korean organizations. The following section will introduce the four predictors and propose the hypotheses regarding their effects on organizational attractiveness.

## 2.4. General Satisfaction with MIM Use

Previous research in organizational communication has shown that communication satisfaction levels of employees play a crucial role in enhancing various organizational outcomes (e.g., job satisfaction, organizational commitment, organizational socialization) (Carrière and Bourque, 2009; Chen et al., 2006; Cho et al., 2013; Clampitt and Downs, 1993; Downs and Adrian, 2004; Pincus, 1986). According to uncertainty reduction theory, when communicators are exposed to ambiguous and uncertain situations, they are likely to experience higher levels of stress and to seek out more information to reduce the uncertainties (Bradac, 2001; Kramer, 1993; Kramer, 1999). This is related to findings that have shown that communication of poor quality occurring among communicators within an organization increases ambiguities and exacerbate role conflicts (Kramer, 1999), which, in the end, negatively affect organizational performance (Jackson and Schuler, 1985; Tubre and Collins, 2000). For example, Sutcliffe et al. (2004) found that communication failures were significantly associated with medical mishaps. As such, existing research has accumulated much evidence that points to the importance of communication satisfaction in determining the quality of employees' organizational lives (Chen et al., 2006; Mueller and Lee, 2002; Putti et al., 1990).

Considering Korean employees' strong dependence on *KakaoTalk* as a technology for organizational communication (Jang, 2015; Oghuma et al., 2015), employees' satisfaction with this MIM service is expected to be an influential factor in predicting organizational outcomes. Particularly, based on previous findings that suggest positive associations between personal perceptions of organizational communication and evaluations of one's organization, it is comprehensible that the satisfaction felt with MIM use

will be positively associated with favorable attitudes toward one's employing organization. Consequently, the following hypothesis was established:

*H1: Satisfaction with KakaoTalk use for organizational purposes will be positively associated with employees' organizational attractiveness.*

## 2.5. Perceived Quality of Information Exchanged through MIMs

As previous studies have addressed, the main function of MIMs can be found in the efficient exchange of information. With MIMs delivering diverse types of information (e.g., text-based documents, photos, music, etc.) simultaneously (Ogara et al., 2014), they are now widely identified as forms of media that provide a rich and interactive communication experience. Using such interactive communication channels, organizational members can rapidly and conveniently exchange a vast amount of information of different types so as to accomplish given tasks. This efficiency of MIMs in organizational settings has led to MIM conversations substituting traditional, offline meetings, as is the case with *KakaoTalk* in Korea.

Nevertheless, this functional efficiency of MIMs for organizations can only be realized or enhanced with the transfer of high quality information. As scholars have addressed, although the amount of information provided/received is important for organizational performance, the quality of this information is also critical for completing a given task in an adequate manner (Lee et al., 2002; Li and Lin, 2006; O'Reilly, 1982). In particular, research on information management has emphasized the importance of acquiring information that is of timely, reliable, and accurate nature (Lee et al., 2002; Miller, 1996).

Therefore, in order to thoroughly understand organizational communication as occurring within MIMs, it is further necessary to examine the quality of information exchanged over MIMs. Accordingly, this study tested the relationship between the quality of information exchanged through *KakaoTalk* and employees' attitudes toward their organizations. More specifically, considering information quality as an antecedent of organizational attractiveness, the following hypothesis was established:

*H2: The perceived quality of information exchanged through KakaoTalk will be positively associated with employees' organizational attractiveness.*

## 2.6. Belongingness through MIMs

Maslow (1943) identified five basic needs that motivate human actions: physiological, safety, belongingness, esteem, and self-actualization needs. Among these five needs, belongingness is closely associated with organizational members' perceptions of affiliation with or commitment to their organization (Cook and Wall, 1980; Stum, 2001). When members feel lower levels of belongingness with their organization, they tend to experience lower levels of job security, organizational satisfaction, and job performance, among others (Porter et al., 1974; Riketta, 2002; Tett and Meyer, 1993; Yousef, 1998). On a more problematic level, low levels of belongingness are associated with negative attitudes toward the organization, which can lead to public vocalization of criticism. For example, Gossett and Kilker's (2006) research found that dissatisfied organizational members turned to counterinstitutional websites to publicly voice their own concerns about their organizations. In this way, lack of belongingness has been found to have negative effects on members'

organizational attitudes as well as organizations themselves.

It is important to note that organizational communication has been identified as the most crucial and fundamental factor in building an individual's sense of belonging to the workplace (Pratt, 1998; Puttie et al., 1990; Smidts et al., 2001). In order to increase belongingness, organizational members must be involved in formal (e.g., official meetings, training sections) and informal (e.g., coffee time, parties) communication with other members. Previous research has stressed the positive impact that such forms of organizational communication practices have on members' belongingness-related factors, such as organizational identification and organizational commitment (Bartels et al., 2007; Smidts et al., 2001; Wiesenfeld et al., 1998). Therefore, it is plausible to predict that MIMs, a useful communication channel for internal communication, both formal and informal, will help organizational members build a sense of connectedness with one another. Therefore, this study hypothesized the positive effect of belongingness through MIMs on organizational attractiveness:

*H3: Belongingness through KakaoTalk will be positively associated with employees' organizational attractiveness.*

## 2.7. MIM Overload

With the rapid development and diffusion of new ICTs and the continuous advancement of telecommunication infrastructure, we frequently experience excessive levels of communication interactions. More often than not, the overwhelming amount and speed in which the interactions take place render it difficult to adequately process the communicative cues that are being exchanged (Lee et al., 2016; Levitin, 2016). Therefore, as a number of studies have strongly



addressed, communication overload and information overload have become serious social problems (Lee et al., 2016; Levitin, 2016). According to Farace et al. (1977), communication overload can be defined as, "the rate and complexity of communication inputs to an individual" (p. 202). Based on this definition, previous studies have investigated multiple aspects of communication overload in organizational settings (Brandel, 2008; Cho et al., 2011; Edmunds and Morris, 2000; Eppler and Mengis, 2004). These studies have found that communication overload in the workplace indicates that employees are (a) receiving too much information to fully process and efficiently use it to accomplish a given task; (b) losing time needed to adequately select the information necessary for uncertainty reduction; (c) being required to constantly interact with other members due to the synchronic nature of new ICTs; (d) "always on," reading, processing, and sending organizational messages. Considering these negative impacts of communication overload on organizational attitudes and outcomes and considering the overdependence on *KakaoTalk* in Korean organizational settings, it becomes possible to predict that employees' excessive use of *KakaoTalk*, or *KakaoTalk* overload, will be associated with a reduction of organizational attractiveness.

The concept of *technostress* is also helpful for understanding the potential negative effects of communication overload in the context of MIMs. Technostress is defined as, "a state of arousal observed in certain employees who are heavily dependent on computers in their work" (Arnetz and Wiholm, 1997, p. 36). This idea suggests that, when individuals are exposed to overuse or obtrusive use of a technology, they are likely to feel high levels of stress (Grover and Purvis, 2011; Ragu-Nathan et al., 2008). Indeed, as Orlikowski (2007) noted, the fast development of

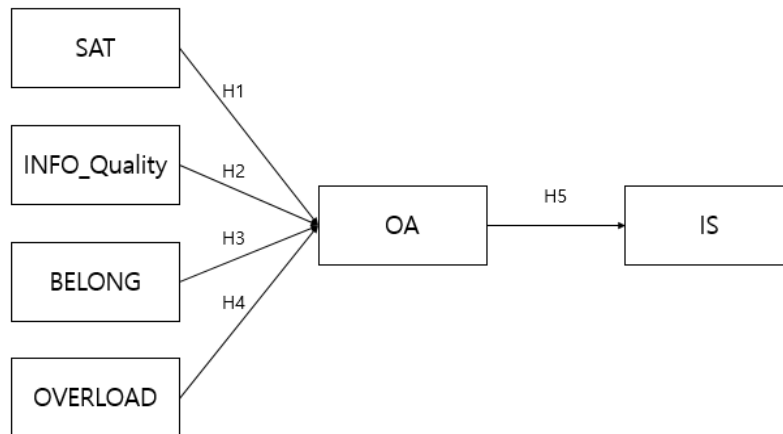
ICTs pushes people to "be always on" anytime and anywhere, which brings about the attenuation of boundaries between work and personal life. This ultimately implies an increase of workload and stress, primarily caused by overdependence on ICTs. Therefore, considering the high synchronicity and ubiquity of MIM communication, it is highly plausible that communication overload due to overdependence on *KakaoTalk* will be negatively associated with employees' attitudes toward their employers. Based on these concepts of communication overload and technostress, the following hypothesis was established:

*H4: KakaoTalk overload will be negatively associated with employees' organizational attractiveness.*

## 2.8. Intention to Stay

As elaborated above, those four specific predictors related to *KakaoTalk* uses would impact Korean employees' perceived attractiveness toward their current organization in either positive or negative ways. Moreover, it must be considered that the ASA model has been expanded to explain the positive effects that organizational attractiveness can have on current employees' intentions to stay with their employers (Mowday et al., 2013; Moyniha and Pandey, 2008). In other words, the more attractiveness employees perceive about their current organization, the more likely they stay at the organization. Therefore, based on this expanded application of the model, we established and tested the following hypothesis:

*H5: Organizational attractiveness will be positively associated with employees' intentions to stay at their current organization.*



Note: SAT = Satisfaction with *KakaoTalk* use, INFO\_Quality = Perceived quality of information exchanged through *KakaoTalk*, BELONG = Belongingness through *KakaoTalk*, OVERLOAD = *KakaoTalk* overload, OA = Organizational attractiveness, IS = Intention to stay

<Figure 1> Research Model

<Figure 1> shows this research's main model composed of four predictors, organizational attractiveness, and intentions to stay at current organizations.

### III. Methods

#### 3.1. Participants

An online survey was conducted to collect the data for this study. Using a purposive sampling, only those who were currently employed by an organization and actively using *KakaoTalk* for their work. Primary investigators used their own personal networks to reach to targeted research participants. Through this process, a total of 168 surveys were collected and used for the statistical analyses. There were relatively more male participants (61.3%), compared to female. The majority of research participants (91.7%) held some college or higher educational degrees. The average age was 34.1 years, and average organizational tenure was 6.93 years. In terms of

occupational categories, the majority of participants (90.5%) identified as office workers, while the remaining minority held some type of service or sales job. Most participants (86.3%) held permanent job positions as opposed to temporary positions, such as part-time or dispatched jobs. In terms of organizational status, while approximately 18 percent of participants were of 'director or higher status', about 80 percent were of 'manager or lower status'. The median monthly household income was \$3,000 - \$4,000.

#### 3.2. Instruments

In order to measure the main study variables, we used multiple five-point Likert scales, which ranged from 1 = *Strongly disagree* to 5 = *Strongly agree*. As <Table 1> shows, internal consistency of each of all measurements was acceptable. That is, Cronbach's alpha for each measurement was higher than the general standard of 0.7 (Nunnally, 1978). All of survey items were listed on <Table 1>.

### 3.2.1. Satisfaction with *KakaoTalk* Use

In this study, satisfaction with *KakaoTalk* use is the extent to which employees are satisfied with communicating with their colleagues and boss through

*KakaoTalk*. To measure this variable, we used three items that mainly asked about participants' satisfaction with using *KakaoTalk*. Research participants were asked to rate the extent to which they agreed with each of the three items.

<Table 1> Factors and Survey Items

Factors	Survey Items
Satisfaction with <i>KakaoTalk</i> use ( $M=2.54$ , $SD=0.96$ , $\alpha=0.91$ )	I feel enjoyment in communicating with my boss and colleagues through <i>KakaoTalk</i> for organizational purposes Communication with my colleagues and boss through <i>KakaoTalk</i> for organizational purposes gives me pleasure Communication with my colleagues and boss through <i>KakaoTalk</i> for organizational purposes is interesting to me
Perceived quality of information exchanged through <i>KakaoTalk</i> ( $M=3.27$ , $SD=0.92$ , $\alpha=0.92$ )	Task-related messages shared through <i>KakaoTalk</i> are <b>accurate</b> Task-related messages shared through <i>KakaoTalk</i> are <b>reliable</b> Task-related messages shared through <i>KakaoTalk</i> are <b>timely</b> Task-related messages shared through <i>KakaoTalk</i> are <b>trustworthy</b> Task-related messages shared through <i>KakaoTalk</i> <b>include enough information to complete a given task</b> Task-related messages shared through <i>KakaoTalk</i> are <b>exchanged in a speedy manner</b>
Belongingness through <i>KakaoTalk</i> ( $M=2.05$ , $SD=0.88$ , $\alpha=0.95$ )	As I receive more <i>KakaoTalk</i> messages from my colleagues and boss, I feel more attached to my organization When I don't frequently receive <i>KakaoTalk</i> messages from my colleagues and boss, I feel alienated When I frequently receive <i>KakaoTalk</i> messages from my colleagues and boss, I feel more affiliated with my organization When I don't frequently receive <i>KakaoTalk</i> messages from my colleagues and boss, I feel lonely When I don't frequently receive <i>KakaoTalk</i> messages from my colleagues and boss, I feel ignored by my organization When I frequently receive <i>KakaoTalk</i> messages from my colleagues and boss, I feel more valued by my organization
<i>KakaoTalk</i> overload ( $M=2.97$ , $SD=1.07$ , $\alpha=0.94$ )	I receive task-related information through <i>KakaoTalk</i> extremely often I receive task-related orders through <i>KakaoTalk</i> extremely often I receive <i>KakaoTalk</i> messages checking up on the progression status of my tasks extremely often I receive task-related <i>KakaoTalk</i> messages even after work time extremely often I receive <i>KakaoTalk</i> messages about organization and division events extremely often
Organizational attractiveness ( $M=2.75$ , $SD=0.83$ , $\alpha=0.81$ )	My organization is the best workplace My organization provides employees with top quality treatment Working for my organization will be a good chance for my future promotion and achievement
Intention to stay ( $M=2.89$ , $SD=0.81$ , $\alpha=0.83$ )	I want to stay at this organization as an organizational member I believe that my current organization is a lifetime workplace I am not planning to change jobs at this time

### 3.2.2. Perceived Quality of Information Exchanged through *KakaoTalk*

Based on previous research on information quality (Lee et al., 2002; Li and Lin, 2006; Miller, 1996), we identified multiple dimensions that compose information quality. This variable refers to the extent to which employees perceive six qualitative aspects of information shared through *KakaoTalk*. Reflecting these dimensions, we created six items to measure the perceived quality of task-related information shared through *KakaoTalk* (see <Table 1>).

### 3.2.3. Belongingness through *KakaoTalk*

Belongingness through *KakaoTalk* was operationalized as the extent to which employees feel that they belong to their organization when they have interactions with other members through *KakaoTalk*. This variable was measured with a modified version of Cemalcilar’s (2010) scale for school belongingness, including six items. We reworded the original items so as to reflect the use of *KakaoTalk* in organizational settings.

### 3.2.4. *KakaoTalk* Overload

This variable was assessed as the extent to which employees perceive that they are being overloaded

by excessive use of *KakaoTalk*. In order to measure *KakaoTalk* overload, we modified five items that were originally proposed by Chung and Goldhaber (1991)’s to measure communication overload.

### 3.2.5. Organizational Attractiveness

This variable was operationalized as the extent to which employees positively evaluate and perceive their current organization. To measure organizational attractiveness, we used three items from Highhouse et al. (2003)’s original scale (see <Table 1>).

### 3.2.6. Intention to Stay

Intention to stay refers to how strongly employees wish to stay at their current organization. This variable was measured through items from Chew and Chan (2008)’s original scale (see <Table 1>).

As mentioned above, the internal consistency reliability score for each of all of those composite measurement was acceptable (see <Table 1>), and composite reliability values for all of measurements were also higher than 0.7 as well (Fornell and Lacker, 1981) (see <Table 2>). Moreover, in terms of convergent validity, the values of average variances extracted (AVE) for all of measurements were also acceptable (higher than 0.5) (Fornell and Lacker, 1981).

<Table 2> Statistics of Construct Items

Constructs	CR	AVE	1	2	3	4	5
1 Satisfaction with <i>KakaoTalk</i> use	0.91	0.77	1				
2 Perceived quality of information exchanged through <i>KakaoTalk</i>	0.92	0.66	0.26**	1			
3 Belongingness through <i>KakaoTalk</i>	0.94	0.72	0.58***	0.23**	1		
4 <i>KakaoTalk</i> overload	0.93	0.71	0.19*	0.49***	0.39***	1	
5 Organizational attractiveness	0.81	0.58	0.27**	0.21**	0.31***	0.01	1
6 Intention to stay	0.84	0.64	0.20**	0.24**	0.27**	0.01	0.67***

## IV. Results

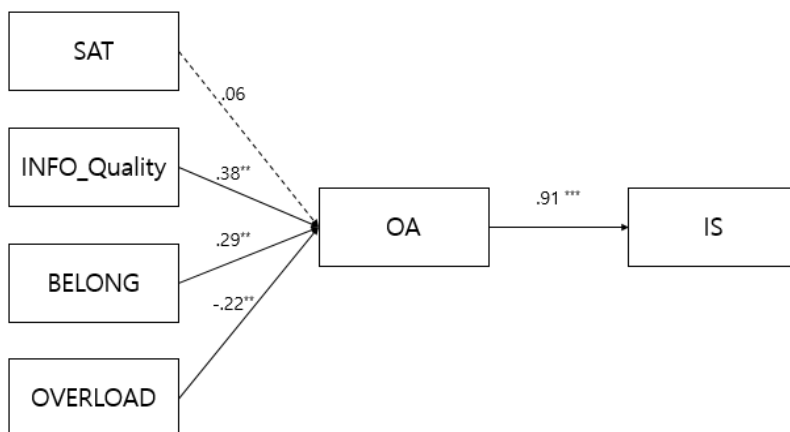
Based on a confirmatory factor analysis (CFA), a model composed of the main study variables with observed items was defined. Then, paying attention to those proposed hypotheses, we sought the parsimonious model of well explaining the data (Kline, 2005). Through this process, it was possible to evaluate the validity of multiple latent constructs. Based on Hu and Bentler (1999)'s suggestions, both comparative and absolute fit indices were reviewed. Those indices include the root mean square error of approximation (RMSEA, smaller than .08), the comparative fit index (CFI, larger than .90), and infinite fit index (IFI, larger than .90). In addition, to test the proposed model, we reviewed the variance explained as well as regression weights for each path. In order to more thoroughly analyze the significance for each of all paths, each path was assessed via 300 bootstrap runs. The SEM results showed acceptable model fits ( $\chi^2$  ( $df=288$ ) = 573.02, CFI = .92, IFI = .92, RMSEA = .08). <Figure 2> shows the main results from the SEM analysis.

H1 through H4 predicted the effects of four *KakaoTalk*-use predictors on organizational attractiveness. Results for H1 showed that employees' satisfaction with *KakaoTalk* use was not significantly associated with the organizational attractiveness they held toward their current organizations ( $\beta = .06$ ,  $p = .46$ ). Thus, H1 was rejected.

H2 tested the association between the perceived quality of information of *KakaoTalk* messages and organizational attractiveness. According to the SEM results, quality of information was positively related to organizational attractiveness on a significant level ( $\beta = .38$ ,  $p = .004$ ). Thus, H2 was supported.

H3 hypothesized that employees' perceived belongingness through *KakaoTalk* use would be positively associated with organizational attractiveness. The SEM results showed that belongingness positively predicted organizational attractiveness ( $\beta = .29$ ,  $p = .008$ ), supporting H3.

Finally, H4 hypothesized a negative association between employees' overload of *KakaoTalk* use and organizational attractiveness. The SEM results supported H5, indicating that as employees experienced



Note: SAT = Satisfaction with *KakaoTalk* use, INFO\_Quality = Perceived quality of information exchanged through *KakaoTalk*, BELONG = Belongingness through *KakaoTalk*, OVERLOAD = *KakaoTalk* overload, OA = Organizational attractiveness, IS = Intention to stay

<Figure 2> Results from SEM

excessive use of *KakaoTalk*, the level of attractiveness they assigned to their organizational was reduced ( $\beta = -.22, p = .007$ ). The inclusion of these four predictors into the research model increased the explained variance of organizational attractiveness by 19.9% ( $R^2 = .199$ ).

H5 predicted a positive association between organizational attractiveness and employees intentions to stay at their current organizations. The effect of organizational attractiveness on the intention to stay at current organization was statistically significant ( $\beta = .91, p < .001$ ). The inclusion of organizational attractiveness into the model increased the explained variance of employees' intentions to stay at their current organizations by 73.5 percent ( $R^2 = .735$ ). H1 was fully supported.

## V. Discussion

### 5.1. Summary and Interpretation of Research Findings

With the development of mobile communication technologies, we have observed rapid and notable changes in the communicative processes occurring within organizational settings. The development of smartphones in particular has largely impacted the organizational environment, accelerating the speed in which organizational communication takes place, rendering organizational members to be always connected with one another, increasing organizational performance, and so forth. Present-day organizations are especially reliant on MIMs, a communication technology resulting from the convergence between mobile technologies and instant messaging services. As elaborated above, organizations' heavy dependence on MIMs, especially *KakaoTalk* in Korea, has

brought about a great level of public attention. Although MIMs play a critical and positive role in enhancing organizational performance and employee relationships, MIMs are also considered to be a source of work stress and barrier to achieving a healthy work-life balance. Therefore, we examined the micro-mechanisms involved in the role of MIMs, aiming to explain how different aspects of *KakaoTalk* use predicts, both positively and negatively, employees' attitudes toward their current employers, and how these attitudes further influence these employees' intentions to stay at their present workplaces. Overall, the SEM results showed that our model composed of communication-oriented variables as predictors, organizational attractiveness, and intentions to stay was empirically supported. We discuss the specific observations by hypothesis below.

First, we found that employees' perceptions of the quality of information exchanged through *KakaoTalk* positively predicted organizational attractiveness. One of the largest strengths of MIMs as an organizational communication tool is the immediacy of communication that they offer. MIMs allow for rapid and timely exchange of information that is needed in accomplishing a given task. Indeed, researchers have highlighted MIMs' contributions to enhancing information processing procedures within organizations (Cho and Kim, 2014; Lee, 2012; Mahatanakoon, 2016; Sheer and Rice, 2017). However, apart from this technical and functional efficiency, limited attention has been given to understanding the qualitative nature of the information exchanged through MIMs. Thus, based on measurement and analysis of the latter, we were able to observe a potential positive effect of information quality on organizations. More specifically, stronger levels of perceived information quality in terms of accuracy, trustworthiness, comprehensiveness, and timeliness, were significantly asso-

ciated with higher levels of attractiveness felt toward one's organization.

Next, the significant association between belongingness in MIMs and organizational attractiveness is also a noteworthy finding. While the exchange of task-oriented information is a main function of MIMs, so is the building of personal relationships (Sheer and Rice, 2017). In the process of communicating with other employees as well as employers, employees intentionally and unintentionally share relationship-oriented information in addition to task-oriented information, allowing for the forming and strengthening of intimate, personal bonds. Nevertheless, previous organizational research has tended to approach MIMs in terms of their role in information processing. Therefore, placing focus on MIMs' role in the building of personal relationships, we were able to observe that the sense of belonging employees perceived through *KakaoTalk* use was positively associated with their organizational attractiveness

Third, our study findings showed that, among the participants, higher levels of *KakaoTalk* overload were associated with lower levels of organizational attractiveness. We have seen in previous research that communication overload occurs with overdependence on communication technologies and that this can be a serious problem such as role conflicts, role ambiguity, job stress, and so on (Brandel, 2008; Cho et al., 2011; Edmunds and Morris, 2000; Eppler and Mengis, 2004). Advanced ICTs, particularly mobile communication technologies tend to exacerbate such problems by putting people into positions of more frequent exposure to a large amount of information, regardless of what time it is and where they are. MIMs, of which characteristics include immediacy, ubiquity, and multiplexity, can act as a central tool in the excessive dissemination of information within organizations. Therefore, it is not surprising

to observe the negative association between *KakaoTalk* overload and organizational attractiveness.

Lastly, unlike the initial prediction, there was no significant association between employees' satisfaction with the organizational uses of *KakaoTalk* and organizational attractiveness. This result may be related to the pervasiveness of *KakaoTalk* uses for organizational purposes. As described above, the use of *KakaoTalk* has become very common in Korean organizations, implying that members most likely consider *KakaoTalk* as a casual and necessary means for organizational communication and performance. Therefore, as *KakaoTalk* use has already become a fully embedded organizational practice, whether one is satisfied or not with the use itself may not significantly influence employees' attitudes toward their current employer. In the end, this finding further supports the authority of *KakaoTalk* as the most important communication tool in today's Korean workplaces.

## 5.2. Academic Contributions

One of the main academic contributions of this study is that its findings help us more accurately comprehend the ways in which organizational exchanges across MIMs affect organizations. As elaborated above, although previous research has covered various issues associated with IM in general or MIMs specifically, it is still necessary to further examine the variety of positive and negative roles that MIMs play in employees' organizational lives. Therefore, this research, which focused on the informational, relational, and affective aspects of MIM uses provide scholars with opportunities to understand MIM use in the work context in more complex ways. This implies that the study's model can be used as a theoretical foundation for future researchers interested in developing expanded models explaining MIM use

in hyper-connected organizations.

In addition to this general theoretical implication, this study further contributes to theory in the following specific aspects. Indeed, mainly due to their heavy reliance on MIMs, Korean employees encounter constant exchange of enormous amounts of information regarding tasks, schedules, events, personal relationships, and so forth. This implies that they are highly likely to experience information overload in their organizations and that, mainly because of the increased uncertainties caused by such information overload, these employees may experience role ambiguities and conflicts (Eppler and Mengis, 2004; Schneider, 1987). Nevertheless, previous research has not fully examined the negative organizational impact of heavy dependence on MIMs. Therefore, this study's main finding in regards to overloaded use of MIMs aids in the comprehension of the less explored aspects of MIM uses in organizational contexts.

Moreover, the negative effects of MIM overload on organizational members address the importance of the quality of information exchanged through MIMs. That is, even under the circumstances of over-dependence on MIMs, if employees are able to access high-quality information, they can overcome the potential problems from information overload. Regarding this, the present study observed that the quality (e.g., timeliness, accuracy, reliability, etc.) of information exchanged through *KakaoTalk* was positively associated with employees' attitudes toward their current employers. Therefore, this research serves as empirical evidence that can support future researchers interested in the investigation of potential roles of information quality in improving personal and organizational performance.

### 5.3. Practical Contributions

The most noteworthy findings from this study were the significant influence of the two variables, 'quality of information exchanged through *KakaoTalk*' and '*KakaoTalk* overload', on organizational attractiveness and ultimately on intentions to stay at current organization. Considering these findings, the following can be suggested. First, it is highly recommended for Korean organizations to set organizational regulations or guidelines regarding the use of MIMs for organizational purposes. With the expansion of SNS use, an increasing number of organizations have produced organizational handbooks for their members (e.g., employees, students, athletes) so as to provide guidance regarding the sound use of such online services (Vaast and Kaganer, 2013). The main purpose of such guidelines is to prevent organizational members both from engaging in inappropriate conduct and feeling stressed. Considering that Korean employees suffer from too much reliance on *KakaoTalk* for organizational purposes, Korean organizations need to develop specific and strict rules for members' adequate use. Particularly, organizational use of *KakaoTalk* after working hours must be prohibited by organizational policies.

Although, as this present study found, the over-dependence on *KakaoTalk* may be problematic, its usefulness for organizational and relational purposes should not be underestimated. Therefore, organizations need to monitor organizational members' MIM uses by regularly conducting systematic audit of organizational communication. As Downs and Adrian (2012) suggest, communication audits can help organizations identify communication-oriented problems that may potentially lead to loss in organizational benefits. Therefore, through regular audits of MIM communication, especially communication conducted within *KakaoTalk* in Korea, organizations can find optimistic ways to strategically use the partic-



ular medium and to minimize the organizational costs that can be incurred by inefficient and inadequate communication.

## VI. Limitations and Future Directions

While this study aids our understanding of the role of MIMs in organizational contexts, both theoretically and practically, there remain some limitations that should be addressed in future research. First, while the ASA model is useful for explaining how use of *KakaoTalk* can affect organizational attractiveness and ultimately intentions to stay with organizations, this is only one aspect of many consequences that can be led by MIM use in an organizational context. Therefore, it is recommended that future researchers expand their attention to other important organizational outcome variables related to quality of work and work culture, such as job performance, job satisfaction, creativity, motivation, organizational identity, and so on. We may also benefit from studies that explore the influence of organizational MIM use on overall psychological and social well-being, such as life satisfaction, life stress, and work/family or work/life balance.

Next, future research should consider studying a sample that allows for comparisons between employers/leaders and employees/members in terms of uses of and attitudes toward MIMs. Such differentiated examination will help us better understand how MIMs are incorporated into the work environment. Furthermore, content or text analysis of the communication that takes place within MIMs will deepen this understanding. For example, analyses of who initiates MIM conversations (e.g., leader or member?), how conversations are conducted (e.g., top-down

orders/instructions or participatory discussions?), or what types of messages are being shared (e.g., formal, work-related information or informal, personal information?) will give us observations from a different point of view, complementing the data collected by surveys, such as this current study.

Finally, in terms of representativeness of samples, future research needs to collect data from more diverse groups of employees, covering various industrial and occupational areas. This would be helpful for improving the generalizability of research findings. Moreover, it should be considered that this particular study was conducted in Korea and limited to Koreans' use of *KakaoTalk*. Therefore, the results should be understood within the context of Korea, where work culture is still dominantly characterized by authoritative leader-member relationships and collectivism and where smart, mobile technology has penetrated almost all aspects of personal and professional life. Organizational use of and attitudes toward MIMs are expected to differ in other cultural or national contexts.

Overall, much is left to be understood about how MIMs are being used within organizations and what those outcomes of use are. Active research into the topic from will aid in the strategic integration of MIMs into the workplace so that they work more efficiently and beneficially for both the organization as well as its members.

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