

Presence of Others and Online Helping Behavior

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Ling-Ling Wu

Yi-Chen Lee

Yang-Ching Fan

Abstract

People can see how others respond to charitable events on social networking sites (SNSs). The effect of the presence of others can be explained by two contrastive accounts: the bystander effect and social learning theory. The former predicts that the perceived presence of others causes people to be less likely to help people, whereas the latter predicts the opposite. This research supported the social learning theory by finding that the perceived presence of others on SNSs positively affected intention to help, recommending behavior, and monetary donation via the mediating effects of awareness of needs and perceived responsibility to help. Additionally, this study proposed that perceived tie strength between SNS friends and psychological closeness between donors and beneficiaries would moderate the effects of the perceived presence of others. The results did not empirically confirm the moderating effect of tie strength but supported the negative moderating effect of psychological closeness.

Keywords: Presence of others, awareness of need, perceived responsibility, helping behavior, tie strength, psychological closeness (psychological distance), bystander effect

Introduction

For nonprofit organizations (NPOs), the main sources of funding include donations from individuals, businesses, charitable foundations, and governmental agencies. Contributions from individuals account for the vast majority (over 70%) of donations to NPOs (Giving USA Foundation 2015). Thus, reaching out to possible donors is crucial for the prosperity of NPOs. Given the popularity of social networking sites (SNSs) such as Facebook, Twitter, YouTube, and Instagram, these platforms can serve as useful channels for NPOs to promote their vision, manage their brand image, and, most importantly, seek potential supporters. Like other online media (e.g., e-mail), SNSs can be used by NPOs to disseminate information and interact with potential donors. However, the most salient characteristics that differentiate SNSs from other kinds of media are their social features, which allow users to follow and interact with their friends, as well as other users with similar interests.

SNSs naturally create a situation where the presence of others is pronounced. For instance, Facebook highlights how many others are interested in a posted message (i.e., the number of “likes” or other emojis, or the number of “shares”). Online users tend to be aware of the number of likes because it is considered to represent the degree of popularity. Previous research has shown that the presence of others strongly affects people’s behavior (Latané and Nida 1981). Furthermore, the presence of others is commonly and strongly perceived by users on SNSs (Bekkers 2004). Therefore, it is worth investigating how the online presence of other people affects the helping behavior of users in the context of SNSs.

The effect of the presence of others on helping behavior has shown mixed results in the literature (Latané and Darley 1968; Lincoln 1977; Latané and Nida 1981; Wu, Huang and Kao 2004; Fischer,

Krueger, Greitemeyer, Vogrinic, Kastenmüller, Frey and Kainbacher 2011; Van Bommel, Van Prooijen, Elffers and Van Lange 2012). Two different accounts have been used to explain the effect of presence of others on helping behavior: the bystander effect and social learning theory. The bystander effect, or “bystander apathy,” is a social psychological phenomenon in which people are less likely to help a person in distress when more people are present (Latané and Darley 1968; Fischer et al. 2011). This is because individuals in that situation tend to feel less responsible for helping a person in need, even though they are aware of the need. The bystander effect is supported by some empirical studies (Latané and Darley 1968; Latané and Nida 1981). However, other studies have supported the account of social learning theory and have found that the presence of others increases people’s donations due to role modeling (Lincoln 1977; Wu et al. 2004) or other social concerns, such as self-presentation (Van Bommel et al. 2012).

The social context of SNSs is different from that in physical face-to-face contexts, where the effects of others’ presence are typically assessed. Baym and Boyd (2012) referred to this as socially mediated publicness, or quasi-publicness, because of the blurred boundaries on SNSs between audience and public, private self and public self, and offline and online contexts. Therefore, there remains a need for further research on whether the effect of others’ presence as examined in physical social contexts can be duplicated in SNS contexts. As mentioned above, SNSs naturally create a situation where the presence of others is pronounced. Whether that presence enhances or diminishes helping behavior on SNSs is an unsettled matter (Sproull, Conley and Moon 2005). The first purpose of this research, then, was to investigate the effect of others’ presence on helping behavior—including charitable helping intention, recommending behavior, and monetary donation—in the context of SNSs. We also assessed the role of the relationships between people in online social environments—including donor-recipient relationships (i.e., psychological closeness perceived by potential donors) and the relationship between a potential donor and his or her online friends (i.e., tie strength)—in the effect of others’ presence on helping behavior.

Literature Review

Helping Behavior with the Presence of Others

As mentioned above, the effect of others’ presence on helping behavior can be explained by the bystander effect (Latané and Darley 1968; Fischer et al. 2011) and social learning theory (Bandura 1986). In the former, a person is less likely to help in a critical situation when more passive bystanders are present (Latané and Darley 1968; Fischer et al. 2011). For example, if there is a car accident, a person is less likely to help when other people are around. This effect is caused by a diffusion of responsibility, where people feel less personal responsibility to help since they ascribe most of the responsibility to other bystanders (Garcia, Weaver, Moskowitz and Darley 2002).

However, studies have increasingly shown that the bystander effect is not applicable to certain social contexts, especially when the identity of an individual in a group is or is likely to be disclosed (Van Bommel et al. 2012). Identity disclosure eliminates the feeling of anonymity, and in this context, people care what others think and expect of them. That is, the presence of others enhances the level of social pressure to assume social responsibility and comply with social norms (Gao, Greenberg and Wong-On-Wing 2015; Levine and Crowther 2008). As a result, the diffusion of responsibility to help decreases, and the bystander effect decreases in an environment where identity is disclosed or where people know each other.

Social learning theory, meanwhile, predicts that the presence of others will increase helping behavior (Levine and Crowther 2008). A great deal of research has supported the social learning explanation of different kinds of prosocial behavior (Bandura 1986; Levine and Crowther 2008; Van Bommel et al. 2012; Wu et al. 2004). When a person is in a state of public self-consciousness, they tend to worry about how others observe and evaluate them (Solomon and Schopler 1982). Therefore, they will observe the proper behaviors of others and learn from them to comply with social norms (Duflo and Saez 2002). Helping others is typically considered a socially desirable behavior that is learned and encouraged by members of groups. Therefore, the presence of others will, according to social learning theory, further

enhance an individual's intention to display a behavior, such as helping others, thereby complying with social norms.

Social Contexts of SNSs

In the SNS environment where users typically reveal their actual identities, public displays of self and relationships between communicators are crucial components. Baym and Boyd (2012) emphasized that the publicness of SNSs is different from that of the physical world in that the boundary between self and public is blurred. Nonetheless, past research has indicated that public communication through social media allows people to become more aware of their social image (Boyd and Ellison 2007; Van Dijck 2013). SNS users are strategic in their self-presentation (Van Dijck 2013) and carefully consider public evaluations of the self (Kim and Yang 2017). When editing personal profiles and sharing posts on Facebook, users tend to be mindful of such evaluations (Donath and Boyd 2004; Bullingham and Vasconcelos 2013).

Since people are socially conscious of themselves on SNSs, the presence of others should affect online prosocial behaviors, which are typically deemed compatible with social norms. In particular, social learning theory, rather than the bystander effect, should serve to better explain the effects of the presence of others on SNSs. Moreover, previous research has suggested that visibility cues decrease the bystander effect and increase prosocial behaviors (Van Bommel et al. 2012; Gao et al. 2015; Levine and Crowther 2008). Therefore, it is logical to infer that the presence of others in the context of SNSs will increase, rather than decrease, people's helping behaviors online.

Facebook provides solid measures of the public behaviors of online users, such as the number of likes, comments, and shares (Kim and Yang 2017). Even though these three types of figures can represent the presence of others, they convey very different meanings. First, the meaning of the number of likes is divergent. Clicking "like" does not necessarily indicate agreement with the post but could mean "I have read it." Furthermore, with recently launched emoticons on Facebook, likes can contain various emotions (e.g., thumbs up, sadness, anger, love, happiness). Therefore, interpreting likes has become more complex. Similarly, comments can deliver different messages, including positive and negative ones. Meanwhile, the number of shares typically represents a strong position and shows concern about the shared information. In this study, therefore, the number of shares on Facebook was used to represent the presence of others on SNSs. Moreover, the perceived presence of others, rather than the actual number of shares, was investigated since people's perceptions of the number of shares vary from person to person. For instance, 50 shares on Facebook might represent a fairly large number for some users but not for others. That is, each reader's perception is different, and it is this perception that affects people's subsequent judgments and behaviors. Therefore, this study investigated perceptions of the presence of others rather than the actual number of people on SNSs.

Effect of the Presence of Others on Helping Behavior in SNSs: Awareness of Need as a Mediator

Awareness of need, also known as "perceived need," is the first prerequisite for any helping behavior. More specifically, awareness of need refers to an individual's awareness of a helping target's need for support, including what kind of need it is, where the need is, and who needs help (Bekkers and Wiepking 2011). Previous studies have shown that the degree of the need for help is positively related to the likelihood that help will be given (Cheung and Chan 2000). In other words, the more people think an individual needs help, the more they are willing to help (Angermeyer, Buyantugs, Kenzine and Matschinger 2004). From the perspective of social learning, when seeing others give to a charity, people may consciously or subconsciously take this as a signal that the helping behavior is the right thing to do. According to Lincoln (1977), when people observe another person donate, there is an increase in subsequent helping actions and donations. Therefore, it is logical to infer that when people observe others helping, their awareness of the need to help is enhanced, which further increases their intention to help.

The number of likes or shares on a Facebook post for a charitable event signals how the peers of Facebook users react to the post. Duflo and Saez (2002) suggested two reasons why peers play an important role in the decision to give and prosocial behaviors. The first is that information from peers

raises awareness of the need to help since people may lack enough information to make decisions about charitable giving. The second is that social norms may influence the decision to give. That is, the prosocial behavior of peers, especially a large number of them, may suggest what is expected of individuals in the group. Some studies have shown that people adapt their giving to what others in their environment are giving (Wu et al. 2004). Similarly, Banerjee (1992) indicated that giving arises from peer effects. Information obtained from peers may be an important factor for deciding whether to give and how. Therefore, the information conveyed via the number of others on SNSs should raise the awareness of need and further enhance the helping behaviors of users, including helping intention, recommending the Facebook post, and donating money. To sum up, the presence of others on SNSs may generate a higher level of awareness of the need to help others, which can mediate the effect on an individual's donation behavior, as stated in hypotheses H1a, H2a, and H3a:

H1a: The perceived presence of others positively influences helping intention indirectly via the mediating effect of the awareness of need.

H2a: The perceived presence of others positively influences recommending behavior indirectly via the mediating effect of the awareness of need.

H3a: The perceived presence of others positively influences monetary donation indirectly via the mediating effect of the awareness of need.

Effect of the Presence of Others on Helping Behavior on SNSs: Perceived Responsibility as a Mediator

The construct of perceived responsibility has been used to explain the bystander effect. In the context of donations, past studies have shown that when people believe their contribution does not make a difference, they are less likely to give (Smith and McSweeney 2007). Therefore, based on the bystander effect, the presence of others may generate a lower level of perceived responsibility to help others and hence negatively affect an individual's helping behavior. However, studies have increasingly found that the bystander effect does not apply to social contexts where compliance with prosocial norms is emphasized and regarded as personal responsibility. Van Bommel et al. (2012) suggested that "accountability cues," such as the presence of a camera or wearing a nametag, may eliminate feelings of anonymity in social contexts. Such cues cause people to become aware that their actions can be attributed to the personal level. Moreover, when people believe others perceive their presence, they might seek to display optimal behavior to avoid apprehensions concerning others' expectations and evaluations (Gao et al. 2015). Perceived responsibility can be referred to as the acknowledgment of a social norm; further, increasing the number of bystanders makes social norms salient and increases the helping intention (Levine and Crowther 2008).

Attention to the public self is easily triggered on SNSs due to the characteristics facilitating social interactions (Donath and Boyd 2004). That is, in SNS contexts, people are more likely to perceive themselves as socially visible, rather than anonymous, such that perceived responsibility should increase as the number of others increases. Therefore, it is hypothesized that the signals of other people present on SNSs will lead to a higher degree of social pressure—that is, a higher degree of perceived responsibility toward people in need—and eventually increase helping behavior. Accordingly, hypotheses 1b, 2b, and 3b are stated as follows:

H1b: The perceived presence of others positively influences helping intention indirectly via the mediating effect of perceived responsibility.

H2b: The perceived presence of others positively influences recommending behavior indirectly via the mediating effect of perceived responsibility.

H3b: The perceived presence of others positively influences monetary donation indirectly via the mediating effect of perceived responsibility.

Tie Strength

Sharing information with friends and receiving information shared by friends are two of the most popular activities on SNSs (Boyd and Ellison 2007; Choi, Seo and Yoon 2017). Typically, people have different relationships with their friends online, and tie strength is generally considered one of the best ways to classify the social relationships with these individuals collectively called "friends" (Gilbert and

Karahalios 2009). Strong ties—usually significant others like close friends or relatives—refer to people who are close and whose social circles closely overlap with one’s own (Levin and Cross 2004; Gilbert and Karahalios 2009). Meanwhile, loose acquaintances, or friends of friends, are considered weak ties. Weak ties often convey novel information that is not usually circulated in the close network of strong ties. Past research has shown that online message readers perceive strong-tie sources as more trustworthy than weak-tie sources (Chow and Chan 2008; Choi et al. 2017). Nonetheless, readers would rather use weak ties when searching for new information, even if it is perceived as less trustworthy and reasonable (Levin and Cross 2004; Chow and Chan 2008). This effect of tie strength is also found in online contexts. Pan and Chiou (2011) found that the perceived trustworthiness of comments and reviews on the Internet was affected by the perceived strength of the social relationship between the reviewer and the information seeker. Information shared by relatives or friends represents endorsement and has a greater impact than information shared by weak-tie friends.

In the situation of helping, potential donors are more likely to notice the act of giving by friends with stronger social bonds (Bekkers and Wiepking 2011). Schervish and Havens (1997) found that people asked to give by relatives or friends will donate larger amounts of money. That is, potential donors should be more likely to understand the difficulties of victims who are mentioned by relatives or friends, and a higher level of awareness of victims’ needs should be perceived if the information is provided and endorsed by relatives or friends.

Aside from the awareness of need, the opinions of strong ties in the donor’s social network might also increase social pressure on the donor. That is, when a friend of a strong tie asks for a donation, the social pressure will be stronger. Therefore, feeling a responsibility to take action tends to be stronger when a strong tie requests a donation (Bekkers 2004). Although donors sometimes deny the importance of social pressure (Polonsky, Shelley and Voola 2002), Smith and McSweeney (2007) found that donations were strongly related to social pressure. In the context of SNSs, charity information can be shared by friends with various tie strengths, and the sharing may imply recommendation or solicitation (Hortt 2015). Bekkers and Wiepking (2011) found that solicitations by people with closer social ties are more likely to be honored. Based on this, we hypothesized that, in the context of SNSs, the perceived tie strength of friends who share charity posts will positively affect a potential donor’s awareness of need and the perceived responsibility to help.

H4a: The perceived tie strength between an online donor and a friend who shares a charity story on an SNS positively affects awareness of the victim’s needs.

H4b: The perceived tie strength between an online donor and a friend who shares a charity story on an SNS positively affects the donor’s perceived responsibility.

Tie Strength as a Moderator of the Effects of the Presence of Others

Social learning theory suggests that individuals are more likely to choose significant others who share more model–observer similarities as their role models (Bandura 1986). Likewise, to learn about proper behavior in a reference social group, people may observe others in a similar social group (Duflo and Saez 2002; Wu et al. 2004). Moreover, the words and deeds of significant others tend to be more influential than those of weak ties (Schunk and Zimmerman 1997). We can conclude that information endorsed by a strong-tie group is more influential and trustworthy than that endorsed by a weak-tie group. As mentioned earlier, information or knowledge from strong ties is usually perceived as more useful, credible, and reasonable. This means that Facebook posts shared by stronger ties should receive more attention and increase the awareness of need, as suggested by H4a. It follows that the information, including the number of others, should more strongly affect the receiver of the message. That is, the presence of others should lead to a higher degree of need awareness for posts shared by strong ties than by weak ties. Therefore, aside from the direct effect of tie strength, we also hypothesized that tie strength would have a moderating effect on the effects of the presence of others.

Research on the bystander effect has also highlighted the advantages of strong ties in helping situations. Fischer et al. (2011) found that situations where bystanders knew each other (friends and acquaintances combined) produced a smaller bystander effect than situations where they were complete strangers. In social contexts, people may be concerned about the evaluations and expectations of others when the

person's public self is elicited. According to Bekker and Wiepking (2011), refusing to give in social contexts could not only endanger one's reputation but also one's relationship with peers. That is, the numbers of others, in the condition of strong ties, should be linked to a higher degree of social pressure and perceived responsibility. That is, we infer that, in the case of strong ties, increasing the presence of others will decrease the bystander effect and increase the willingness to help. Meanwhile, the presence of others should not affect perceived responsibilities as much in the weak-tie condition since social pressure and reputation concerns are not as strongly perceived. The bystander effect and social learning theory both suggest a beneficial effect of strong ties in the effect of the presence of others. Accordingly, the following hypotheses propose that tie strength positively moderates the effects of the presence of others:

H5a: Perceived tie strength positively moderates the relationship between the perceived presence of others and the awareness of need, such that the positive relationship is stronger in strong-tie than in weak-tie conditions.

H5b: Perceived tie strength positively moderates the relationship between the perceived presence of others and perceived responsibility, such that the positive relationship is stronger in strong-tie than in weak-tie conditions.

Psychological Closeness

Aside from the relationship between potential donors and their friends online, the relationship between potential donors and benefit receivers could be another important social link in the context of helping. Even though potential donors probably do not personally know the victims in need, they may experience some level of psychological closeness with them. Psychological closeness, sometimes called psychological distance, is one's subjective experience of feeling close to or distant from an event, location, or person (Trope and Liberman 2010; Williams, Stein and Galguera 2014). There are four dimensions of psychological closeness: temporal, social, spatial, and hypothetical (Trope and Liberman 2010). Past research has shown that the various dimensions of psychological closeness are cognitively related to each other and influence levels of mental construal, prediction, preference, and action (Trope and Liberman 2010; Choi et al. 2017). Recent studies have suggested that psychological closeness—in terms of time points, spatial locations, or social relationships—can affect people's intentions to donate (Ein-Gar and Levontin 2013).

As mentioned above, all dimensions of psychological distance are related, and they influence judgment and behavior in similar ways (Choi et al. 2017; Touré-Tillery and Fishbach 2017). When individuals view donation recipients as in-group, they are more willing to help (Ein-Gar and Levontin 2013). This intergroup effect, as a type of social distance, has been successfully employed in marketing contexts (Zhao and Xie 2011) as well as helping contexts (Levine and Thompson 2004). Moreover, Touré-Tillery and Fishbach (2017) found that spatial closeness often corresponds to social similarity and promotes prosocial action as well. For instance, people from the same city or country have more similarities than those from different cities/countries. Further, people usually expect their behaviors to have more effects on temporally proximal events (Touré-Tillery and Fishbach 2017). For example, victims might consider a donation received the next day to be more helpful than one acquired in a month. Studies have shown that people are more likely to help those who are similar to themselves (Levine and Thompson 2004).

Psychological closeness between potential helpers and beneficiaries can increase motivation and emotional involvement in helping behavior (Williams et al. 2014). When psychological closeness is high, potential helpers are more likely to feel they have been mentally transported into the tragic situation or imagine it more vividly with high levels of empathy (Stocks, Lishner and Decker 2009). Therefore, they tend to be more intensively aware of victims' needs. Past research has shown that psychological closeness increases moral obligation (Williams et al. 2014). Therefore, it is reasonable to infer that when individuals feel close to charity recipients, they could be more likely to be aware of their needs and feel more responsible for helping. Accordingly, we propose the following:

H6a: The degree of psychological closeness between donors and victims positively affects the awareness of victims' needs.

H6b: The degree of psychological closeness between donors and victims positively affects donors' perceived responsibility.

Psychological Closeness as a Moderator of the Effects of the Presence of Others

We have suggested that tie strength between potential donors and their online friends could moderate the positive effects of the perceived presence of others. Additionally, the psychological closeness potential donors perceive between them and victims could also serve as an important social context. When donors see victims as part of their in-group, they tend to help due to being emotionally involved (Williams et al. 2014). When donors are emotionally involved with people in need, they tend to be more aware of the need of and feel responsible for the beneficiary, and hence are more likely to help (Williams et al. 2014), albeit without influence from third parties (i.e., the presence of other people). Therefore, the effects of the perceived presence of others should be less salient when donors feel psychologically close to beneficiaries. However, when donors feel psychologically distant from victims (e.g., major disasters occurring in foreign countries), they typically do not feel as emotionally involved with the victims. In such situations, the effect of public attention is more likely to emerge such that the effects of the perceived presence of others should become more salient. That is, the effects of the perceived presence of others on the awareness of need and perceived responsibility are more salient in the condition of low psychological closeness than in the condition of high psychological closeness, as hypothesized in H7a and H7b:

H7a: Psychological closeness negatively moderates the relationship between the perceived presence of others and the awareness of need. The effect of the perceived presence of others on awareness of need is stronger for donors perceiving a low level of psychological closeness than for those perceiving a high level of psychological closeness with the beneficiary.

H7b: Psychological closeness negatively moderates the relationship between the perceived presence of others and perceived responsibility. The effect of the perceived presence of others on perceived responsibility is stronger for donors perceiving a low level of psychological closeness than for those perceiving a high level of psychological closeness with the beneficiary.

Figure 1 shows the complete conceptual framework of this research.

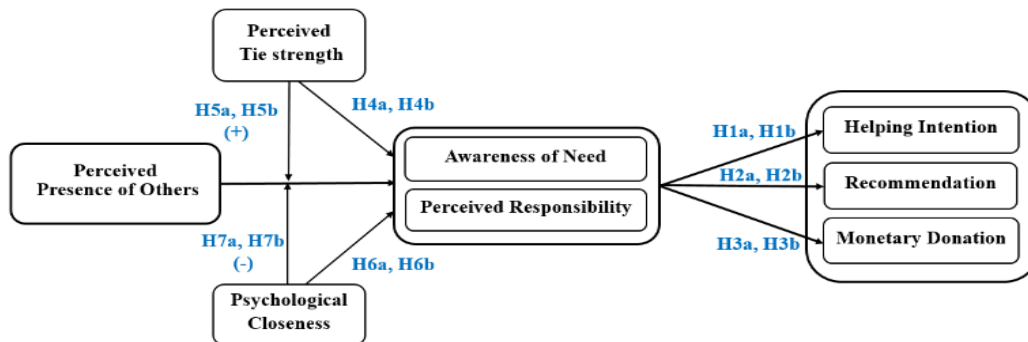


Figure 1. Research Conceptual Model

Methodology

Research Design and Materials

A survey method was employed to test the hypotheses. Participants were asked to read information provided in Facebook posts about people who need help and then answer questions regarding the variables in this research. The independent variables included participants' perceptions of the presence of others who were also interested in the same Facebook post, the degree of tie strength with the friend who recommended the Facebook post, and their psychological closeness with the victim in the post. The dependent variables included participants' helping intention, recommending the post, the amount

of money to donate, awareness of the victim’s need, and perceived responsibility to help. Finally, the participants’ demographic information was also collected.

The Facebook posts telling the charitable stories were constructed and adapted from real Facebook posts. There are several benefits of adapting rather than directly adopting actual posts. First, there might be no charity stories posted or shared by the participant’s friends on Facebook. Second, even if there are charity posts, the variance in the independent variables might not be large enough to show the effects. For instance, given that all of the participants are citizens of Taiwan, they are likely to receive charity stories, if any, occurring in Taiwan (psychologically close) rather than in other countries, such as Switzerland (psychologically distant). Third, the content of charity stories could vary in many ways such that many confounding variables probably exist. Therefore, Facebook posts of charity stories were constructed that systematically reflected variations in the three independent variables while other aspects of the posts (e.g., number of words, posted pictures) were kept as consistent as possible. Below, we explain how information regarding each of the three independent variables was presented in the posts.

The construct of the presence of others was operationalized by the number of shares instead of the number of likes since people who share typically have a higher degree of interest and involvement in the story. To reflect the number of shares of real Facebook posts, we collected data for 187 NPOs (49, 113, and 25 NPOs for each of the three most popular charity categories: “women and youth,” “the disabled,” and “the elderly,” respectively) on the website iGiving and used the number of shares for those real posts. The construct of psychological closeness could be determined by temporal, spatial, and social causes (Trope and Liberman 2010). To choose one dimension to represent psychological closeness, we conducted a pilot study with 70 samples to see which one generated the largest variance in psychological closeness. The results showed that only spatial distance (country) could generate a significant difference in psychological closeness ($M_{close} = 3.35$ vs. $M_{distant} = 2.79$; $t = 2.045$, $p < .05$). Therefore, spatial distance (country: Taiwan vs. Switzerland) was employed.

The construct of tie strength refers to the relationship between participants and their friend who recommended the charity story. Tie strength between Facebook users and their Facebook friends can be illustrated by the friend's list on Facebook users’ accounts. Participants were asked to tell us the top 5 (strong ties) or bottom 5 (weak ties) names on their friend’s list. Later, one of those names was randomly chosen as the friend who recommended the charity story on Facebook, and the recommender’s name appeared at the top of the post. For each of the three independent variables, two versions (high vs. low number of shares; strong tie vs. weak tie strength; distant vs. close psychological closeness) were constructed, and eight versions of Facebook posts were constructed. See Figure 2 for an example.



Figure 2. An Example Facebook fan page

Measurements

Even though information about others’ presence, tie strength, and psychological closeness were manipulated in the Facebook posts and presented to the participants, the independent variables were participants’ subjective perceptions of this information since perceptions form the basis for further judgments and behavior. All variables were measured on a 7-point Likert scale or semantic differential scale. Participants’ perceptions of the presence of others were measured by the question, “According to your observation, the amount of people paying attention to this charitable event is....” For all other variables, we adapted scales from previous studies and modified the scales to suit our study. Perceived tie strength was assessed by three items adapted from Levin and Cross (2004): interaction, perceived closeness, and perceived importance of friends. Perceived psychological closeness was measured by three items (perceived closeness, perceived connectedness, and perceived we-ness regarding victims) adapted from Aron, Aron, and Smollan (1992). Participants’ helping intentions were measured by the

item, “I would like to help this person” (Ein-Gar and Levontin 2013). Participants’ recommending behavior was measured by three items (interaction, forwarding, and keep tracking intentions) adapted from Alhabash, McAlister, Hagerstrom, Quilliam, Rifon, and Richards (2013) and Oeldorf-Hirsch and Sundar (2015). Donating behavior was measured by the amount of monetary donation the participants indicated (Ein-Gar and Levontin 2013) if they had won a lottery valued at NT\$1000 (equivalent to USD 30). The construct of awareness of need was measured by a scale adapted from Batson, Eklund, Chermok, Hoyt, and Ortiz (2007) and Sierksma, Thijs, Verkuyten, and Komter (2014). Perceived responsibility was measured by a scale adapted from Webb, Green, and Brashear (2000); Basil, Ridgway, and Basil (2006); and Fischer, Greitemeyer, Pollozek, and Frey (2006). Social desirability was also included as a control variable since helping behavior is socially desirable. This was measured by a scale developed by Stöber (2001).

Participants and Procedure

In total, 437 volunteered participants were recruited; 19 (4%) samples were deleted due to invalid responses. Among the 418 valid participants, 367 (87.8%) were students and 51 (12.2%) nonstudents; 310 (74.2%) were 20–29 years old, 92 (22%) were younger than 19, and 16 (3.8%) were older than 30. The sample tended to be young and student saturated. To assess external validity, we conducted a Kolmogorov-Smirnov test (K-S test) to evaluate the differences between student and nonstudent participants. The results of the K-S test showed no significant differences between the student and nonstudent participants in terms of their evaluations of the perceived presence of others; for the group of low presence of others, $n = 220$, $z = .92$, $p = .36$; for the group of high presence of others, $n = 198$, $z = .79$, $p = .57$; perceived tie strength: $z = .53$, $p = .94$; perceived psychological closeness: $z = .36$, $p = .99$; awareness of need: $z = .41$, $p = .99$; perceived responsibility: $z = .96$, $p = .32$; helping intention: $z = .36$, $p = .99$; recommending behavior: $z = .92$, $p = .40$; and money donation: $z = .75$, $p = .63$. Therefore, external validity was not a concern, and the data for student and nonstudent samples were combined for further analysis. The participants were randomly assigned to one of the eight versions of Facebook posts and were asked to read the post and answer the questions in the survey. Each participant received three posts—one for each of the three charitable groups (i.e., women and youth, the disabled, the elderly)—and they were asked to answer the same questions for each of the posted charity stories. After finishing the survey, each participant received NT\$150 (about USD 5) for participating in the study.

Results

Reliability and Validity of the Measurements

PLS-SEM was used to analyze the collected data (Hair et al. 2011). There were no reliability and validity results for the constructs of the perceived presence of others, helping intention, and monetary donation because they were measured with a one-item scale. Three indicators were deleted (PR3, SD2, and SD3) because their factor loadings (.57, .27, and .26, respectively) on their corresponding constructs were too low (below the threshold of .70). The standardized factor loadings for all of the remaining 22 items, ranging from .71 to .97, were satisfactory. The Cronbach’s α values for the measurement scales of all constructs, ranging from .67 to .97, also indicated acceptable reliability (Hair et al. 2010). While the Cronbach’s α for social desirability (.67) was below the threshold of .70, it was very close. Moreover, social desirability was a control variable and hence did not affect the results of the hypothesis testing. The values of the composite reliabilities (CRs) for the constructs, ranging from .82 to .97, were all above the suggested threshold of .70; the average variance extracted (AVE) values of the constructs exceeded the recommended threshold of .50 (Fornell and Larcker 1981). Moreover, the discriminant validity of the measurements was also acceptable because the square root of the AVEs for each construct (tie strength = .96, psychological closeness = .88, awareness of need = .85, perceived responsibility = .92, recommending behavior = .87, social desirability = .77) were all larger than the correlation coefficients among the corresponding constructs. Overall, the measurements of this study had satisfactory reliability and construct validity.

Testing the Mediation Effects

The overall goodness of fit of the conceptual model to the empirical data was tested as well. The value of standardized root mean square residual (SRMR = .05) was below the recommended threshold of .08 (Henseler et al. 2016), indicating an acceptable level of goodness of fit. While the value of the normed fit index (NFI = .87) did not exceed the threshold of .90, it was very close (Byrne 2008). The Chi-squared and degree of freedom ration (χ^2/df) was 2.83 (1178.37 / (418-1)), which is below the threshold of 3 (Bagozzi and Yi 2008), suggesting no significant differences between the conceptual model and the data. Thus, the proposed model presented an acceptable level of statistical fit to the empirical data. Bootstrapping (5,000 resamples) was used to generate samples for hypothesis testing (Nitzl et al. 2016). The direct effects of the three independent variables, as well as the indirect effects via the mediators of awareness of need and perceived responsibility, were tested on the three dependent variables; the results are shown in Table 1. The direct effect of perceived presence of others on helping intention was not significant ($\beta = -.02, p = .28$). Nonetheless, the indirect effect via awareness of need ($\beta = .05, p = .00$) and perceived responsibility ($\beta = .07, p = .00$) were both highly significant. That is, both awareness of need and perceived responsibility fully mediated the effect of perceived presence of others on helping intention. Hypotheses H1a and H1b are thus empirically supported.

Table 1. Summary of Mediation Effect Tests

Hypotheses	Direct Effect Coefficients (std.)	Indirect Effect Coefficients (std.)		Total Effect Coefficients (std.)	Results of Hypothesis Testing
		Via	Bootstrap		
		Mediators	95% CI		
PPO→HI	-.02 (.03)	.12*** (.04)	 [.05; .19]	.10** (.04)	
H1a: via AN		.05*** (.02)	[.02; .08]		Supported
H1b: via PR		.07*** (.03)	[.02; .12]		Supported
PPO→RB	.06** (.03)	.10*** (.03)	 [.04; .16]	.16*** (.04)	
H2a: via AN		.03*** (.01)	[.01; .05]		Supported
H2b: via PR		.07*** (.03)	[.02; .13]		Supported
PPO→MD	-.05 (.04)	.04*** (.02)	 [.01; .08]	-.01 (.05)	
H3a: via AN		.00 (.01)	[-.02; .02]		Not supported
H3b: via PR		.04*** (.02)	[.01; .08]		Supported

Notes: PPO (perceived presence of others), AN (awareness of need), PR (perceived responsibility), HI (helping intention), RB (recommending behavior), MD (monetary donations)

* $p < .10$; ** $p < .05$; *** $p < .01$; HI ($R^2 = .69$), RB ($R^2 = .58$), MD ($R^2 = .17$), AN ($R^2 = .11$), PR ($R^2 = .37$)

For the dependent variable of recommending behavior, the direct effect of perceived presence of others was highly significant ($\beta = .06, p = .03$). Furthermore, the indirect effects via awareness of need ($\beta = .03, p = .01$) and perceived responsibility ($\beta = .07, p = .01$) were also highly significant. That is, awareness of need and perceived responsibility partially mediated the effect of perceived presence of others on recommending behavior. Hypotheses 2a and Hypothesis 2b are thus strongly supported.

For the dependent variable of monetary donation, perceived presence of others did not have a significant direct effect ($\beta = -.05, p = .12$). Its indirect effect via awareness of need ($\beta = .00, p = .44$) was also insignificant. However, its indirect effect on monetary donation via perceived responsibility was significant ($\beta = .04, p = .01$). That is, awareness of need did not mediate the effect of perceived presence of others on monetary donation, but perceived responsibility did. Hypothesis 3a is thus not supported while hypothesis 3b is supported.

Testing the Moderation Effects

Before assessing the moderating effect of perceived tie strength, we examined its main effects on awareness of need and perceived responsibility. The results showed that perceived tie strength significantly and positively affected awareness of need ($\beta = .12, p = .01$) and perceived responsibility ($\beta = .07, p = .03$). Hypotheses 4a and 4b are thus empirically supported.

However, the interaction effect between perceived tie strength and perceived presence of others was not significant for awareness of need ($\beta = -.01, p = .40$) and not significant for perceived responsibility ($\beta = -.02, p = .22$). As shown in Figures 3 and 4, the empirical results suggested that perceived tie strength

did not moderate the effects of the perceived presence of others. Hypotheses 5a and 5b are thus not empirically supported.

The main effects of psychological closeness were also tested. The results showed that psychological closeness had positive and significant effects on awareness of need ($\beta = .22, p = .00$) and perceived responsibility ($\beta = .57, p = .00$). Hypotheses 6a and 6b are thus strongly supported.

Furthermore, the interaction effect between psychological closeness and perceived presence of others was significantly negative on awareness of need ($\beta = -.11, p = .03$). As shown in Figure 5, the effect of perceived presence of others was stronger when the victims were psychologically distant from the potential donors than when they were psychologically close. Similarly, the interaction effect between perceived presence of others and psychological closeness on perceived responsibility was also negative, though the effect was marginal ($\beta = -.06, p = .07$). As shown in Figure 6, the effect of perceived presence of others on perceived responsibility was significantly stronger for participants in the psychologically distant condition than those in the close psychological condition. In summary, the empirical results strongly supported H7a and marginally supported H7b, showing that perceived psychological closeness negatively moderated the effects of the perceived presence of others.

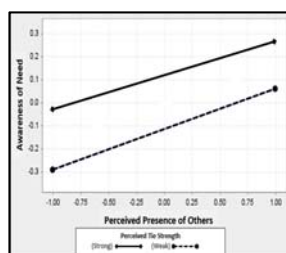


Figure 3 The interaction effects between perceived presence of others and perceived tie strength on awareness of need

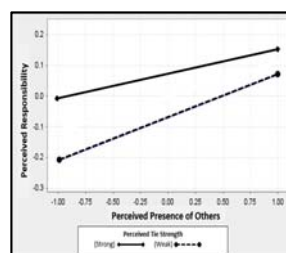


Figure 4 The interaction effects between perceived presence of others and perceived tie strength on perceived responsibility

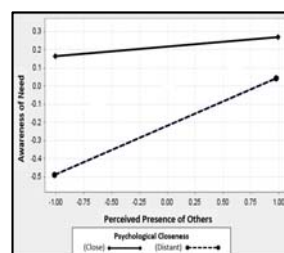


Figure 5 The interaction effects between perceived presence of others and psychological closeness on awareness of need

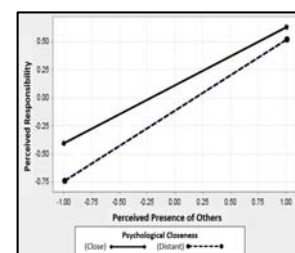


Figure 6 The interaction effects between perceived presence of others and psychological closeness on perceived responsibility

Conclusion and Discussion

This study found that the perceived presence of others increased people's intention to help and recommending behaviors via the mediation of awareness of victims' needs and perceived responsibilities. Also, the perceived presence of others led to a higher degree of monetary donation via perceived responsibility but not via awareness of needs. Perceived responsibility seemed to play a stronger role than awareness of need as a mediator for the effect of perceived presence of others.

Aside from perceived presence of others, perceived tie strength and psychological closeness both had significantly positive influences on awareness of victims' needs and perceived responsibility to help. These results corroborate previous research and support the idea that close friends and relatives can be critical social factors in prosocial behavior and that people may experience more involvement in psychologically close events than in distant ones (Fischer et al. 2011; Williams et al. 2014).

Most importantly, psychological closeness not only directly affected awareness of need and perceived responsibility but also negatively moderated the effect of perceived presence of others. For victims who are deemed as psychologically close by potential helpers, the effect of perceived presence of others was not as strong as the effect for victims perceived as psychologically distant. Moreover, the empirical results showed that tie strength did not moderate the effect of perceived presence of others. The effects of the presence of others were as strong for posts shared by close friends as for those shared by acquaintances. Even though people pay attention to posts shared by close friends, people may be also attracted to and influenced by information shared by acquaintances as well. This could be because friends with weak tie strength are more likely to share heterogeneous and novel information.

Managerial Implications, Limitations, and Future Research

This study's results can provide useful and practical insights for NPOs, especially when they embrace SNSs as an important marketing channel to reach possible supporters. The interaction mechanisms (i.e., like, share, and comment functions) of SNSs may serve as useful channels to distribute information about charitable events and get people to pay attention to those who are in need. Most importantly, others who are also interested in the charitable event can create social content that will have a significant influence on the prosocial behavior of online users.

This research has several limitations. First, the sample was mainly composed of students. Even though the student and nonstudent samples did not differ in terms of their responses to the survey questions, they may differ in other ways related to prosocial behavior. Second, only one SNS, Facebook, was assessed. Even though Facebook is the most popular SNS, it is still different from other SNSs in many ways. Third, only one dimension of psychological closeness was investigated; therefore, other aspects of psychological closeness should be assessed in future research.

There are several avenues for future research in this area. First, research could be conducted to address the external validity issues mentioned in the previous paragraph. For instance, research could be done with a more heterogeneous sample and on different kinds of SNSs (e.g., Twitter, and Instagram) to see if the hypotheses are still supported. Second, other dimensions of psychological closeness should be examined, such as temporary distance (near future vs. distant future) and social distance (in-group vs. out-group). Third, it would be interesting to investigate whether helping others is only a one-time action or can be a continuous action in the online environment. Fourth, the act of helping others can be induced by the social environment, such as the presence of others, but also by individual factors, such as personality, compassion, and empathy (Stocks et al. 2009). There could be interesting interactions between these two kinds of causes in SNSs since such social environments are "quasi-public" (Baym and Boyd 2012). Fifth, many other forms of the presence of others online could also be assessed. Sixth, western cultures and eastern cultures differ in the level of people's compliance with their social norms. Further comparative studies between western and eastern cultures should also be conducted. Lastly, aside from the two mediators discussed in this research, there could be other variables that also mediate the effect of the presence of others in the context of online helping behavior.

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