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Facebook Friends as Social Capital
How Will They Respond to the Normative Request? *

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An experiment was conducted to test how social norms function online. In this experiment, the value of Facebook friends as social capital was measured by an actual amount of support received from them, and this evaluation is based on Bourdieu's (1986) theory on social capital, which insists that the social capital needs to be helpful in promoting one's intentional or purposeful action. Results suggest that people asked with strong provincial norms spend more time and energy fulfilling online requests than those asked without norms. The degree to which people are fulfilling online requests was also affected by tie strength, perceived level of reciprocity between sender and receiver, and receiver's level of altruism. However, online helping behavior was not associated with support type - the provision of either pro-social or instrumental support.

KEYWORDS CMC • SNS • Facebook • social capital • norms • online

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1. Introduction

Established in 2004, Facebook is a social networking website that facilitates interaction among similar people. It is organized around social networks corresponding to universities, institutions, and local communities. During the past few years, Facebook has become the important communication tool for many college students. They use it for emailing, messaging, sharing pictures, and more. More than 175 million active members are spending more than 3 billion minutes each day and uploading more than 850 million photos each month (Facebook, 2009). Even in South Korea, the number of Facebook users is continuously increasing, especially attracting younger generations who aged between 18～34 (Facebook, 2011).

As the popularity of Facebook increases, strategists and activists show interest in its utilization. Eisenbach (2008) evaluated Facebook as a generational transformation of American politics which would change the way campaigns are run. Cameron (2008) took practical steps by announcing nine Tory policy pledges in the first ever online-only advertising campaign, targeting young professionals and students on Facebook. Even during the presidential race, President Obama and his campaign team took advantage of Facebook by raising funds from online supporters (Stelter, 2008). Rasiej (2009), a New York advocate for technology in politics, said voters prefer the personal touch of a president who writes his own posts, resulting in politicians' rush to have a presence on Facebook and Twitter. The potential of Facebook as a political tool comes from its power in many-to-many communication.

The increase in the number of Facebook users not only draws the attention of political campaign planners but also motivates research on social influence via social networking sites (SNS). For

social scientists, using Facebook is actually a much more expansive act than at first it seems. It can be considered a social act which influences others (e.g., Facebook friends, other Facebook users) as well as the account owner him/herself. For those who log in daily, Facebook is inevitably the online space for the social arrangements of everyday life. If so, some questions arise. How do Facebook users interact with their so called 'online friends'? And how are online friends different from offline ones?

Parks and Roberts (1998) argue that overall qualities of offline friendships are higher than those of online friendships, while Chan and Cheng (2004) insist that the difference in quality (operationalized as interdependence, breadth, depth, code change, understanding, commitment, and network convergence) between online and offline friendship is moderated by the duration of the relationship, as such longer the duration, there is only the minimal difference exists between online and offline.

Metaphorically, an offline friendship seems to be like an old fashioned savings account. You have to put something in, and when you do, you get back more than you invested. Maintenance and investment are required processes for offline relationships. Friendship in facebook, on the other hand, is not an easily definable concept. According to Ellison, Steinfield, and Lampe (2007), people use Facebook to keep in touch with old friends or to maintain offline relationships. If this is true, there might be a lot in common between online and offline friendships. However, initiating or terminating the online relationship is too simple and easy, unlike offline relationship, therefore, comparing online with offline requires much caution. This study focuses on clarifying the meaningfulness of online friendships rather than forming the definition of it or comparing online with offline.

2. Theoretical Background

To evaluate the value of online friends, it seems necessary to examine online friendships from a couple of social capital perspectives. Social capital has drawn the attention of many social scientists since 1980s as a paradigm to capture the contributions of social elements in explaining a wide variety of individual and collective behaviors, ranging from status attainment and social mobility to political participation and psychological and physical well-being (see reviews in Portes 1998; Lin 1982; Lin, 2001; Lin, Ensel & Vaughn, 1981; Foley & Edwards, 1999).

In the late 1980s and early 1990s, social capital was conceptualized as a societal resource that links citizens to each other and enables them to pursue their common objectives more effectively. It taps the potential willingness of citizens to cooperate with each other and to engage in civic endeavors collectively. As such, it has proved influential as a means of countering the strong emphasis on the atomized individual that was so characteristic of politics (and economics) during the 1980s in the US and the UK.

Coleman and Putnam are two important social capital scholars and they had different view points on social capital. Coleman introduced the concept of social capital mainly in the course of his research on educational attainment and performance in schools. With the concept of social capital, he wanted to introduce "social structure" into the rational choice paradigm, rejecting the "extreme individualistic premises that often accompany it" (Coleman, 1988, p.95). For him, social capital inheres "in the structure of relations between persons and among persons, and is lodged neither in individuals nor in physical implements of production" (Coleman, 1990, p. 302).

In a similar vein, some of early network scholars focused on individual advantages that result from direct or indirect

participation in certain types of networks. Granovetter wrote about the importance of personal networks and informational channels for one's success in the job market (Granovetter, 1973), and Lin (1982) and Flap (1988) argued that informal social resources are utilized to accomplish occupational mobility in the United States. Later, Burt (1998) looked at the characteristics of networks that contribute to the professional success of male and female managers, such as early promotions.

While Coleman stresses it as a resource that is available to individuals, even though collectives also can be the beneficiaries, Putnam (2000) mainly points to social capital as a collective resource. By social capital, Putnam (2000) refers to norms of generalized reciprocity and trust, and networks of civic engagement that are organized horizontally. These ingredients of social capital reduce the information costs of the trustworthiness of other citizens and foster cooperation. According to his argument, associations, voluntary organizations, and mass-based political parties represent such networks and they help to inculcate such norms.

Although there is a conflict between scholars, generally speaking, social capital puts importance on resource acquisition via various social relationships. Accordingly, Facebook seems to be a good arena for social scientists to test previously discussed social capital issues because it creates many heterogeneous relations. On average, approximately 15 percent of users' Facebook networks are consisted of people never actually met face to face (Facebook, 2009). So while a subset of these online networks may be composed of traditional close friends, the majority are likely characterized by much lower levels of emotional closeness and intensity placing them on the end of the weak tie spectrum. As network difference increases, relations and their support potentials become more resourceful for individuals.

Acknowledging the fundamental notions of social capital and characteristics of Facebook networks, this study adopts Bourdieu's perspective. He defines social capital as "the aggregate of actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition, or in other words, to membership in a group which provides each of its members with the backing of collectively-owned capital, a 'credential' which entitles them to credit, in the various senses of the word" (Bourdieu, 1986, p. 248～249). Stated differently, it is a mutual asset that allows members to use social credits (that can be used as capital) to facilitate intentional actions. Therefore, the value of online friends as social capital needs to be measured based on how online friends help facilitate one's intentional or purposeful action.

Accordingly, in this manuscript, online friendships were measured based on enacted support perspectives (e.g., if the friend is mobilized, the relationship is meaningful). Previously, enacted social support has been measured by self-report measures in several studies (Aneshensel & Frerichs, 1982; Barrera, 1981; Barrera & Balls, 1983; Carveth & Gottlieb, 1979; Lefcourt, Martin & Saleh, 1984; Pearlin & Schooler, 1978; Sandler & Barrera, 1984; Sandler & Lakey, 1982). However, several scholars (Tardy, 1985; Dunkel-Schetter & Bennett, 1990; Wills & Shinar, 2000) have noted that behavioral observation of enacted support is better than self-report measures in terms of accuracy. Thus, the current study stresses more on dealing with the actual amount of support received and mobilizing resources (e.g., Do something for me, Do something for society, Get out and vote) than people's intention to help.

With the pursuit of knowledge on so called 'online friendships', the present manuscript attempts to test how

descriptive social norms can affect people's behavior under the context of social networking sites (e.g., Facebook). Individuals often look to social norms to gain an accurate understanding of and effectively respond to social situations, especially during times of uncertainty (Cialdini, 2001). Social norms have been found to influence a range of behaviors in a myriad of domains, including recycling (Schultz, 1999), littering (Kallgren, Reno & Cialdini, 2000), and tax evasion (Kahan, 1997). Cialdini (2001) has argued that a close examination of the seemingly inconsistent literature on norms and their impact on behavior yields a meaningful distinction between norms that inform us about what is typically approved/disapproved (injunctive norms) and those that inform us about what is typically done (descriptive norms). In other words, descriptive norms differ from injunctive norms which refer to what others think the person ought to do. More specifically, descriptive norms refer to people's perceptions of how other people are actually behaving in a given situation, regardless of what behaviors are socially sanctioned. In the study of Goldstein et al. (2008), descriptive norms significantly increased hotel guests' towel reuse, proving that normative appeals (e.g., 75% of guests who are asked to participate in our new resource savings program did help ~) can affect people's actual behavior. The author wonders what would happen online if certain requests are manipulated by descriptive norms.

As the President Obama example shows, finding an efficient way to mobilize online resources is important to strategists or activists. To verify the value of online friends as social capital, and to test how descriptive norms function online, this study investigates the effect of descriptive norms on online mobilization. This study also examines how descriptive norms function differently under the two different situations: when people were asked to provide either pro-social support or

instrumental support. Variables such as tie strength, reciprocity, and altruism will also be discussed for the better understanding of online mobilization. The next section introduces hypotheses of the study with rationales.

3. Rationales and Hypotheses

Social exchange theory (Befu, 1977) suggests that all human relationships are formed by the use of a subjective cost-benefit analysis and the comparison of alternatives. From the receivers' view point, when responding to the request, there might be motivational differences between when they were asked to provide pro-social support (e.g., Do this for the society) and when they were asked to provide instrumental support (e.g., Do this for me). In the context of interpersonal relationships, the provision of instrumental support can be regarded as an investment for the future benefit. Thus,

- H1: Requests for instrumental support are more effective than requests for pro-social support.

People's strong tie networks consist of close friends and family whom they have interacted with for a long time or frequently with intimacy, whereas, weak ties between people arise from infrequent and more casual contacts. Therefore the current study hypothesizes a significant main effect for tie strength such that strong tie relationships are more likely to fulfill requests. It is expected that strong ties are more likely to spend more time with the online image labeling task, and that they would label more images overall.

– H2: Strong ties provide more support than weak ties.

For those who log in daily, Facebook is inevitably the online space for negotiating the social arrangements of everyday life, and 'online friends' available to users through social networking sites (SNSs) like facebook.com are perceptually interrelated with each other, establishing and reinforcing the member's social identity in the group. Accordingly, strong online provincial norms (i.e., "the majority of my Facebook friends participated…") are also likely to function as antecedents for mobilization of other online entities. Thus, the current study hypothesizes a significant main effect for the normative conditions such that people who receive mediated requests with strong provincial norms spend more time and energy fulfilling requests.

– H3: Requests with strong provincial norms elicit more support than do requests with weak provincial norms or no norms.

The norm of reciprocation – the rule that obliges us to repay others for what we have received from them – is one of the strongest and most pervasive social forces in all human cultures (Gouldner, 1960). It helps us build trust with others and pushes us toward equity in our relationships (Kelln & Ellard, 1999). Homans (1961) defined social association as "an exchange of activity, tangible or intangible, and more or less rewarding or costly, between at least two persons." Later, Blau (1967) stated that people are anxious to benefit one another and to reciprocate the benefits they receive. Accordingly, reciprocity is likely to affect the degree to which the person is providing support.

– H4: Perceived level of reciprocity between sender and

receiver is positively related to helping behavior.

While reciprocity is related to interactions between people, altruism refers to ego's personality. Wilson (1975, p. 578) defines altruism as a tendency toward "self-destructive behavior performed for the benefit of others." Margolis (1982, p.15) says, "What defines altruistic behavior is that the actor could have done better for himself had he chosen to ignore the effect of his choice on others…" The abovementioned two definitions of altruism, made by sociologists, only put an emphasis on the costs to the altruist, not mentioning the motivation of altruist. Psychologists, on the other hand, emphasize the motivational aspect of altruism, noting that altruism must be performed voluntarily and intentionally without expecting any external reward (Bar-Tal, 1985). Although there is a viewpoint inconsistency between sociologists and psychologists, broadly speaking, altruism is unselfish concern for other people's happiness and welfare (Naver, 2008). Accordingly, altruism is likely to affect the degree to which people provide support.

− H5: Altruism is positively related to helping behavior.

4. Method

This study used a 2 (tie strength: strong, weak) × 2 (support type: pro-social, instrumental) × 3 (norm type: no norms, weak provincial norms, strong provincial norms) design. Participants were drawn in two steps and differentiated between primary and secondary groups. First, primary participants ($N = 356$) were recruited from the undergraduate classes at a large northeastern university and instructed not to discuss this study with anyone

until the completion of the experiment. This population was chosen not only for convenience, but also because undergraduates are among the heaviest users of SNS such as Facebook.

Primary participants were informed that they were participating in a study titled "Online friendships and resource mobilization." Participation was voluntary and this project had the approval of the institutional review board for human subjects. Each of the 356 primary participants were asked to choose one of their Facebook friends (referred to as a secondary participant), and to record his/her identity. Half of the primary participants were directed to choose a strong tie friend, and half were directed to choose a weak tie. A strong tie friend was operationalized as someone you have known for a long time with trust and positive feelings. A weak tie friend was operationalized as someone you do not know well and do not communicate with on a regular basis.

Primary participants then solicited their friends to complete an image labeling task. Of the strong ties identified by primary participants, half were asked to provide pro-social support, and another half were asked to provide instrumental support. In each of these conditions, secondary participants received one of three possible messages. One group received requests with a standard message which did not reference any norms. The second group received strong provincial norm requests, and the third group received weak provincial norm requests. The conditions outlined

Table 1. indicates the number of secondary participants for each cell

	Requesting pro-social support			Requesting instrumental support		
	no norms	weak provincial norms	strong provincial norms	no norms	weak provincial norms	strong provincial norms
strong tie	30	30	30	29	30	30
weak tie	30	29	30	29	30	29

above for strong ties also applied to those secondary participants in the weak tie condition. < Table 1 > indicates the number of secondary participants for each cell.

1) Request Message Type

All primary participants were required to send messages via email. The contents of the request message primary participants used were as follows.

(1) Requesting pro-social support

① Standard request messages (no norms)
Hey, (friend's name)! I'm doing a project for a non-profit organization. I'm donating my time and helping them collect data. Basically, I'm helping them generate labels for online images. They could use your help! Please go to [URL] and take the quick survey and label images. Label as many images as you can. Your participation will be a huge help. Thanks!

② Request messages with weak provincial norms
….They could use your help! **Many people have already helped out with this project.** Please go to [URL]….

③ Request messages with strong provincial norms
….They could use your help! **Many of my Facebook friends like you have already helped out with this project.** Please go to [URL]….

(2) Requesting instrumental support

① Standard request messages (no norms)
Hey, (friend's name)! I need your help with a class project I'm working on. I need people to provide labels for a series of online images. I'd really appreciate your help! Please go to [URL] and take the quick survey and label images. Label as many images as you can. Your participation will be a huge help. Thanks!

② Request messages with weak provincial norms
….I'd really appreciate your help! **Many people have already helped out with this project.** Please go to [URL]….

③ Request messages with strong provincial norms
….I'd really appreciate your help! **Many of my Facebook friends like you have already helped out with this project.** Please go to [URL]….

2) Task and Dependent Variables

In this study, an image labeling device was utilized to test the effect of descriptive norms on mobilization. The task required secondary participants to access a URL, label randomly generated images on a generic website the researcher created, and complete a brief survey. All primary participants were advised not to discuss the request message with their secondary participants until the completion of the experiment. All secondary participants were debriefed by researchers two weeks later regardless of their participation. Dependent variables (the degree to which people are fulfilling requests) were time spent on labeling images, and the number of images labeled.

3) Measures

Both primary and secondary participants were asked to complete an online survey. Three Likert-type items were used to measure tie strength (Marsden & Campbell, 1984; Wellman & Wortley, 1990), and included "This person is a…" (1 = casual acquaintance, 7 = very good friend), "How close are you with this person?" (1 = very distant, 7 = very close), and "Do you interact with this person voluntarily rather than because you are both members of the same social institutions?" (1 = not voluntary, 7 = completely voluntary). Cronbach's α for the tie strength scale was .80. The survey also measured contact frequency with two questions measuring how often they communicate with this person daily, and on how many days per week. Duration of relationship was measured in months and years. Finally, perceptions about relational reciprocity and equity (e.g., "on the whole, do you give more than you get in this relationship?"; Hartfield, Utne & Traupmann, 1979) and altruism (Rushton, Chrisjohn & Fekken, 1981) were also included. Cronbach's α for the altruism scale was .78. The values of tie strength and reciprocity between primary and secondary participants were calculated as follows.

(tie strength value for primary participant + tie strength value for secondary participant)/2

(reciprocity value for primary participant + reciprocity value for secondary participant)/2

5. Results

171 of the 356 primary participants were male, and the mean age was 19.7 years (SD = 1.4). Participants had on average 377.42 Facebook friends (SD = 161.15), and spent about 31 minutes

logged in per session ($SD = 21.40$). Approximately 72% of participants were freshmen and 19% were sophomores, followed by seniors with 5% and juniors with 4%. 69.3% were Caucasian/ White, 12.1% were Asian/Asian American, 8.7% were African American/Black, 7.9% were Hispanic/Latino, and 2.0% were others. All primary participants were single.

<Table 2> below summarizes the relationship between variables used in this study. Reported tie strength had a positive relationship with contact frequency ($r = .35$, $p < .05$), and duration of relationship ($r = .33$, $p < .05$), indicating that these two traditional scales of interpersonal relationship correspond to tie strength.

As expected, perceived level of reciprocity was positively associated with time spent labeling images ($r = .21$, $p < .05$) and the number of images labeled ($r = .28$, $p < .05$), suggesting that secondary participants are likely to provide more support as the

Table 2. Zero-order correlation coefficients

Item	*M (SD)*	time	num	tie	con	dur	net	long	reci	altr
time	114.2 (297.3)	1	.62*	.25*	.27*	.28*	.05	−.12	.21*	.31*
num	9.3 (21.6)		1	.22*	.20*	.23*	.03	−.08	.28*	.26*
tie	5.4 (1.8)			1	.35*	.33*	−.05	.09	.29*	−.02
con	3.9 (1.3)				1	.29*	−.09	.14	.20*	.13
dur	5.4 (4.7)					1	.10	−.06	.13	.10
net	377.4 (161.2)						1	.07	−.08	.12
long	31.2 (21.4)							1	.06	.08
reci	5.5 (1.6)								1	−.01
altr	3.9 (1.0)									1

* $p < .05$

a. time: time spent on labeling images, num: the number of images labeled, tie: reported tie strength, con: contact frequency, dur: duration of relationship, net: network size (the total number of facebook friends), long: minutes spent logged in per day, reci: reciprocity, altr: altruism.

Table 3. Descriptive statistics (time spent for labeling images; seconds)

Tie condition	Support type	Norm type	Mean	Std. Deviation	N
weak	pro-social	no norms	44.43	106.83	30
		weak norms	55.24	120.38	29
		strong norms	97.07	228.55	30
		Total	65.70	161.59	89
	instrumental	no norms	22.97	85.94	29
		weak norms	59.03	160.12	30
		strong norms	68.45	185.73	29
		Total	50.25	149.70	88
	Total	no norms	33.88	96.90	59
		weak norms	57.17	140.78	59
		strong norms	83.00	207.31	59
		Total	58.02	155.54	177
strong	pro-social	no norms	89.70	152.42	30
		weak norms	160.60	351.48	30
		strong norms	328.20	651.95	30
		Total	192.83	443.21	90
	instrumental	no norms	55.66	132.16	29
		weak norms	194.80	319.77	30
		strong norms	185.47	399.55	30
		Total	146.31	309.67	89
	Total	no norms	72.97	142.63	59
		weak norms	177.70	333.58	60
		strong norms	256.83	540.90	60
		Total	169.70	382.32	179
Total	pro-social	no norms	67.07	132.48	60
		weak norms	108.81	267.55	59
		strong norms	212.63	498.17	60
		Total	129.62	339.40	179
	instrumental	no norms	39.31	111.71	58
		weak norms	126.92	259.90	60
		strong norms	127.95	316.16	59
		Total	98.55	247.68	177
	Total	no norms	53.42	122.98	118
		weak norms	117.94	262.76	119
		strong norms	170.65	418.36	119
		Total	114.17	297.34	356

perceived level of reciprocity between participants was higher. Receiver's altruism was also positively related to time spent labeling images ($r = .31$, $p < .05$) and the number of images labeled ($r = .26$, $p < .05$), suggesting that people who have higher level of concern for other people's welfare generally provide more support. None of the variables was significantly related to network size and time spent logged in per day.

A total of 98 secondary participants (27.5 percent of secondary participants) responded to the request from primary participants. Of these, 55 were female. The response rate for strong ties was 37.9 percent and 16.9 percent for weak ties. < Table 3 > and < Table 4 > show means and standard deviations for the subjects in each condition on a particular dependent variable. Recall that the dependent variables－enacted support －were operationalized as time spent labeling images and the number of images labeled.

A 2 (tie strength: strong, weak) x 2 (support type: pro-social, instrumental) x 3 (norm type: no norm, weak provincial norm, strong provincial norm) between-subjects multivariate analysis of variance (MANOVA) was performed on two dependent variables.

Box's M test was significant ($p < .05$). This means that the variance and covariance matrices used in this study are statistically different from one another, and violate the assumption of the homogeneity of variance. However, Weinfurt (1995) suggests that if the cell sizes within the analysis are equal, it is still appropriate to continue with the application of MANOVA.

According to results of multivariate tests < Table 5 >, there was a significant effect for tie strength on dependent variables, *Wilks' Lambda* = .955, $F(2, 343) = 8.039$, $p < 0.01$, *effect size* = .045. A main effect was also found for norm type, *Wilks' Lambda* = .968, $F(4, 686) = 2.779$, $p < 0.05$, *effect size* = .032. However, there was no significant effect for support type (requests for either pro-social or instrumental support) on image labeling, *Wilks' Lambda* = .990,

Table 4. Descriptive statistics (the number of images labeled)

Tie condition	Support type	Norm type	Mean	Std. Deviation	N
weak	pro-social	no norms	4.13	10.41	30
		weak norms	5.00	11.83	29
		strong norms	8.07	24.98	30
		Total	5.74	16.99	89
	instrumental	no norms	1.93	7.27	29
		weak norms	5.93	15.82	30
		strong norms	4.83	13.61	29
		Total	4.25	12.77	88
	Total	no norms	3.05	8.99	59
		weak norms	5.47	13.89	59
		strong norms	6.47	20.10	59
		Total	5.00	15.02	177
strong	pro-social	no norms	8.60	18.63	30
		weak norms	15.60	31.74	30
		strong norms	26.10	32.40	30
		Total	16.77	28.91	90
	instrumental	no norms	4.55	10.21	29
		weak norms	11.83	23.76	30
		strong norms	14.23	28.06	30
		Total	10.27	22.27	89
	Total	no norms	6.61	15.10	59
		weak norms	13.72	27.86	60
		strong norms	20.17	30.64	60
		Total	13.54	25.95	179
Total	pro-social	no norms	6.37	15.13	60
		weak norms	10.39	24.49	59
		strong norms	17.08	30.09	60
		Total	11.28	24.31	179
	instrumental	no norms	3.24	8.88	58
		weak norms	8.88	20.23	60
		strong norms	9.61	22.49	59
		Total	7.28	18.37	177
	Total	no norms	4.83	12.50	118
		weak norms	9.63	22.36	119
		strong norms	13.38	26.74	119
		Total	9.29	21.63	356

Table 5. Multivariate tests

Effect		Value	*F*	Hypothesis *df*	Error *df*	*Sig.*	Eta Squared
Intercept	P	.175	36.334	2	343	.000	.175
	W	.825	36.334	2	343	.000	.175
	H	.212	36.334	2	343	.000	.175
	R	.212	36.334	2	343	.000	.175
Tie condition	P	.045	8.039	2	343	.000	.045
	W	.955	8.039	2	343	.000	.045
	H	.047	8.039	2	343	.000	.045
	R	.047	8.039	2	343	.000	.045
Support type	P	.010	1.741	2	343	.177	.010
	W	.990	1.741	2	343	.177	.010
	H	.010	1.741	2	343	.177	.010
	R	.010	1.741	2	343	.177	.010
Norm type	P	.032	2.765	4	688	.027	.032
	W	.968	2.779	4	686	.026	.032
	H	.033	2.794	4	684	.025	.032
	R	.033	5.618	2	344	.004	.032
Tie con. x S type	P	.004	.749	2	343	.474	.004
	W	.996	.749	2	343	.474	.004
	H	.004	.749	2	343	.474	.004
	R	.004	.749	2	343	.474	.004
Tie con. x N type	P	.012	1.010	4	688	.402	.006
	W	.988	1.009	4	686	.402	.006
	H	.012	1.009	4	684	.402	.006
	R	.011	1.946	2	344	.144	.011
S type x N type	P	.006	.520	4	688	.721	.003
	W	.994	.520	4	686	.721	.003
	H	.006	.519	4	684	.721	.003
	R	.006	.993	2	344	.721	.006
Tie con. x S type x N type	P	.004	.371	4	688	.829	.002
	W	.996	.370	4	686	.830	.002
	H	.004	.369	4	684	.831	.002
	R	.003	.590	2	344	.555	.003

a. P: Pillai's Trace, W: Wilks' Lambda, H: Hotelling's Trace, R: Roy's Largest Root

Table 6. Tests of between-subject effects

Source	Dependent Variable	Sum of Squares	*df*	Mean Square	*F*	*Sig.*	Eta Squared
Corrected Model	time	2552160	11	232014	2.768	.002	.081
	num	15126	11	1375	3.134	.000	.091
Intercept	time	4582286	1	4582286	54.668	.000	.137
	num	30348	1	30348	69.170	.000	.167
Tie condition	time	1100353	1	1100353	13.127	.000	.037
	num	6435	1	6435	14.667	.000	.041
Support type	time	88168	1	88168	1.052	.306	.003
	num	1446	1	1446	3.296	.070	.009
Norm type	time	807969	2	403984	4.820	.009	.027
	num	4303	2	2151	4.905	.008	.028
Tie con * S type	time	22913	1	22913	.273	.601	.001
	num	569	1	569	1.297	.256	.004
Tie con * N type	time	274018	2	137009	1.635	.197	.009
	num	1536	2	768	1.751	.175	.010
S type * N type	time	163552	2	81776	.976	.378	.006
	num	596	2	298	.680	.507	.004
Tie con * S type * N type	time	81881	2	40940	.488	.614	.002
	num	171	2	85	.196	.822	.001
Error	time	28834352	344	83820			
	num	150931	344	438			
Total	time	36027236	356				
	num	196796	356				
Corrected Total	time	31386513	355				
	num	166057	355				

a. time: time spent on labeling images, num: the number of images labeled.

$F(2, 343) = 1.741$, $p > 0.05$, *effect size* = .010. People asked to provide instrumental support did not spend significantly more time and energy on labeling images than those asked to provide pro-social support. Hypothesis 1, which posits that requests for instrumental support are more effective than requests for pro-social support, was not supported.

Levene's test of equality of error variance for two dependent variables was significant, violating the assumption of homogeneity of variance. However, Glass, Peckham, and Sanders (1972) suggest that if the cell size is equal, it is still appropriate to proceed with an ANOVA. Since that assumption was met in this study, the univariate results were examined.

< Table 6 > below summarizes tests of between-subject effects. Follow-up univariate ANOVAs indicate that both time spent for labeling images, $F(1, 344) = 13.127$, $p < 0.01$, *effect size* = .037, and the number of images labeled, $F(1, 344) = 14.667$, $p < 0.01$, *effect size* = .041, were significantly influenced by tie strength. Specifically, strong tie secondary participants provided more support (time spent: $M = 169.70$, $SD = 382.32$, the number of images labeled: $M = 13.54$, $SD = 25.95$) than weak tie secondary participants (time spent: $M = 58.02$, $SD = 155.54$, the number of images labeled: $M = 5.00$, $SD = 15.02$). This is support for the hypothesis 2, which posits that strong ties provide more support than weak ties.

Time spent and the number of images labeled were also significantly influenced by norm type, $F(2, 344) = 4.820$, $p < 0.05$, *effect size* = .027 and, $F(2, 344) = 4.905$, $p < 0.05$, *effect size* = .028, respectively. Subsequently, Tukey HSD and Bonferroni post hoc tests were conducted to compare three levels of norm type. As shown in < Table 7 > below, people asked with strong provincial norms provided with a higher level of support (time spent: $M = 170.65$, $SD = 418.36$, the number of images labeled: $M = 13.83$, $SD = 26.74$) than those asked without norms (time spent: $M = 53.42$,

Table 7. Post hoc tests (norm type)

Dependent Variable		(I) norms	(J) norms	Mean Differenc (I-J)	Std. Error	Sig.	95% CI	
							Lower Bound	Upper Bound
Time spent for labeling images	Tukey HSD	no	weak	−64.52	37.61	.199	−152.67	23.64
			strong	−117.22	37.61	.005	−205.38	−29.07
		weak	no	64.52	37.61	.199	−23.64	152.67
			strong	−52.71	37.53	.339	−140.67	35.26
		strong	no	117.22	37.61	.005	29.07	205.38
			weak	52.71	37.53	.339	−35.26	140.67
	Bonferroni	no	weak	−64.52	37.61	.262	−155.00	25.97
			strong	−117.22	37.61	.006	−207.71	−26.74
		weak	no	64.52	37.61	.262	−25.97	155.00
			strong	−52.71	37.53	.483	−143.00	37.59
		strong	no	117.22	37.61	.006	26.74	207.71
			weak	52.71	37.53	.483	−37.59	143.00
The number of images labeled	Tukey HSD	no	weak	−4.80	2.72	.182	−11.18	1.58
			strong	−8.55	2.72	.005	−14.93	−2.17
		weak	no	4.80	2.72	.182	−1.58	11.18
			strong	−3.75	2.72	.351	−10.11	2.62
		strong	no	8.55	2.72	.005	2.17	14.93
			weak	3.75	2.72	.351	−2.62	10.11
	Bonferroni	no	weak	−4.80	2.72	.236	−11.35	1.75
			strong	−8.55	2.72	.005	−15.09	−2.00
		weak	no	4.80	2.72	.236	−1.75	11.35
			strong	−3.75	2.72	.505	−10.28	2.78
		strong	no	8.55	2.72	.005	2.00	15.09
			weak	3.75	2.72	.505	−2.78	10.28

a. no: no norms, weak: weak norms, strong: strong norms.

Table 8. Homogeneous subsets

			N	Subset	
				1	2
Time spent for labeling images	Tukey HSD	no norms	118	53.42	
		weak norms	119	117.94	117.94
		strong norms	119		170.65
		Sig.		.199	.340
The number of images labeled	Tukey HSD	no norms	118	4.83	
		weak norms	119	9.63	9.63
		strong norms	119		13.38
		Sig.		.181	.353

a. Alpha = .05.

SD = 122.98, the number of images labeled: *M* = 4.83, *SD* = 12.50).

< Table 8 > shows that a weak provincial norm group (time: *M* = 117.94, *SD* = 262.76, the number of images labeled: *M* = 9.63, *SD* = 22.36) can be grouped with either a no norm group or a strong provincial norm group. To summarize, people asked with strong provincial norms spent more time on labeling images and labeled more images than those asked without norms, but they did not provide significantly more time and energy than those asked with weak provincial norms. This finding partially supports the hypothesis 3, which posits that requests with strong provincial norms elicit more support than do requests with weak provincial norms or no norms.

In the hierarchical regression analysis < Table 9 > below, demographic variables were entered in the first block, followed by a second block that includes reciprocity. Altruism was entered into the final block. As shown in Table 9, all the variables in the model accounted for 9.4% of the variance in predicting the time

Table 9. Summary of hierarchical regression analysis predicting time spent labeling images

Variables	Regression Coefficient	Standard Error	Standard Coefficient (β)
Step 1: Demographics			
Age	.002	.01	.01
Education	−.006	.04	−.01
Sex	−.04	.05	−.05
R^2 change: .002			
Step 2: Demographics + Reciprocity	.06	.02	.20*
R^2 change: .043			
Step 3: Demographics + Reciprocity + Altruism	.11	.05	.22*
R^2 change: .049			
R^2 = 9.4%*			

* $p < .05$.

spent labeling images. The demographic variables accounted for less than 1%, and none of these variables were significant predictors. Both reciprocity ($\beta = .20$) and altruism ($\beta = .22$) were significant predictors and accounted for 4.3% and 4.9% of the explained variance in the model, respectively. Hypothesis 4, which posits that reciprocity is positively related to helping behavior, was supported. Hypothesis 5, which posits that altruism is positively related to helping behavior, was also supported.

6. Discussion

The present research adopted an experimental research design to investigate whether or not descriptive norms affect the degree to which the online friend is providing support. The value of online friends as social capital was measured based on how online friends were helpful in facilitating one's intentional or purposeful action. A notable distinction of this study is that the dependent variable was an actual outcome of a resource mobilization request, adding increased validity to the results.

While self-reports from participants are easily and frequently acquired by social researchers, behavior itself is rarely directly observed. Compared to observing an actual behavior, self-reports of behavior are less reliable and have been found to vary with attitude (Ross, McFarland, Conway & Zanna, 1986); people with more positive attitudes report more positive actions than they actually performed; people with negative attitudes report more negative actions than actually performed. This manuscript is free from potential problems of self-report measures and attitude-behavior inconsistency criticism.

According to the results presented herein, strong provincial norms significantly influenced the degree to which people are fulfilling requests, suggesting that normative appeals (e.g., Many of my Facebook friends like you have already helped out with this project~) can affect people's actual behavior. This means that descriptive norms increase the salience of Facebook users' social identity within an online spatial boundary, resulting in more participation in image labeling task.

Consider this example: Yamada (pseudonym) is from Japan and he does not speak English very well. He recently became a graduate student in the Department of Communication. John (pseudonym) is a department chair, and he wants all of his

international students to speak English fluently because he thinks that academic performance of international students affects the department evaluation from outside. In this case, John can utilize a descriptive normative approach by saying that most Chinese alumni of this department have successfully finished the ELS advanced course, rather than directly urging Yamada to take a course. The descriptive norm (most Chinese alumni of this department…) can increase the salience of Yamada's social identity within an organization, leading him to follow the norm.

Tie strength also had a significant main effect for image labeling. 37.9% of strong tie secondary participants responded to the request and less than 1/5 weak ties provided with a favor. If the request were made face-to-face, most strong tie secondary participants, very likely, would have responded to the request because the task was easy. However, a request through online did not fully take advantage of intimate relationships between dyads (37.9% of strong ties). And considering the dominant proportion of weak ties in the Facebook network, so called online friends may not be helpful enough to achieve one's instrumental goals. Thus, from a social capital perspective, it is necessary to reconfirm the values of online friends.

In this study, online friends were considered meaningful and valuable if they provided a favor (if they were mobilized and activated) based on Bourdieu's (1986) view point on social capital, which insists that the social capital needs to be helpful in promoting one's intentional or purposeful action. Results indicate that only 98 out of 356 secondary participants (27.5 percent of secondary participants) responded to the request from primary participants. Therefore, the value of online friends as social capital is still questionable.

As anticipated, a perceived level of reciprocity between sender and receiver (H4) and receiver's altruism (H5) were

positively associated with the degree to which the person is providing support. Secondary participants were anxious to reciprocate for past favors, and this finding supports previous arguments on social exchange (Homans, 1961; Blau, 1967). This means that people who want to maintain balanced relationships with others tend to reciprocate for the benefits they received in the past, and an obligation to repay has led them to provide more support. Receiver's altruism was also positively related to the degree to which people are fulfilling requests, indicating that people who have higher level of sympathy for other people's happiness provide more support.

On the other hand, no statistically significant support type effect was found in this study. In the context of interpersonal relationships, the provision of instrumental support can be regarded as an investment for future benefit. However, people asked to provide instrumental support did not necessarily spend more time on labeling images and label more images than those asked to provide pro-social support. This might be attributed to a perceptual disconnection between an image labeling task and the provision of pro-social support.

The results of this study have several implications for those involved with online mobilization and social norms. These findings highlight the utility of employing social science research and theory rather than business communicators' senses, hunches, rough estimates, lay theories, or best guesses in developing persuasive appeals. These findings also suggest that in order to optimize social identity effects, it is wise for communicators to ensure that an important social identity is not only salient but that the norms associated with the identity are known and also salient. This assumes that the effective norm is consistent with the direction in which the communicator would like to move the audience. The results from the current investigation also indicate

that communicators implementing a descriptive normative component to their persuasive appeals or information campaigns should ensure that the norms of the reference group are as situationally similar as possible to the intended audience's circumstances or environment.

To summarize, results of this study bridge the gap in research between perceptions of and access to online resources by providing a baseline for responses to modest online requests for help. Additionally, these results suggest that limited online support resources accrue to Facebook users beyond that found in traditional networks. While more conclusive results would have been nice, such findings are always a possibility in preliminary research.

The area of online mobilization will also benefit from subsequent research which compares offline with online in terms of perceived cost differences in requesting normative support. While the current study limited the area to online and examined the effect of a couple of variables on support enactment, the contextual cues (e.g., nonverbal cues such as facial expressions, postures, dress, social status, as well as vocabulary, grammar, tone, accent) may affect the helping behavior of support providers. The major sources of "damaging information" are social contextual cues perceived and exchanged during face-to-face interactions. Therefore, future research should consider the contextual differences between online and offline in requesting normative support.

The author hopes to address some of the limitations of the current study. First, future studies should find ways to minimize participant suspicion about the mobilization task. Low response rates (27.5%) may be attributed to information overload, the perception that the request was a spam message, as well as concerns about malware and viruses. Second, a larger sample size

will enable us to complete more rigorous analyses and comparisons. Third, the inclusion of other independent variables such as personalness of communication, impression management, and pursuit of bridging and bonding social capital would improve the quality of mobilization research. Fourth, the current study limited communication to single requests. It is unclear how the number of requests to friends about task would impact the results. Finally, it is recommended to develop a kind of more elaborative continuous dependent variable which adds strength to results.

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