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Beyond Reciprocity: Gratitude and Relationships in Everyday Life

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Abstract

The emotion of gratitude is thought to have social effects, but empirical studies of such effects have focused largely on the repaying of kind gestures. The current research focused on the relational antecedents of gratitude and its implications for relationship formation. The authors examined the role of naturally occurring gratitude in college sororities during a week of gift-giving from older members to new members. New members recorded reactions to benefits received during the week. At the end of the week and 1 month later, the new and old members rated their interactions and their relationships. Perceptions of benefactor responsiveness predicted gratitude for benefits, and gratitude during the week predicted future relationship outcomes. Gratitude may function to promote relationship formation and maintenance.

Keywords

gratitude; relationships; positive emotion; social functions of emotion

The empirical literature on the emotion of gratitude has much to say about whether grateful individuals will repay a benefactor or a fortunate bystander (e.g., Bartlett & DeSteno, 2006; Tsang, 2006). The link is so strong that repayment behavior has sometimes been taken to imply feelings of gratitude. However, recent research has shown that repayment behavior can also be associated with unpleasant feelings of indebtedness (Watkins, Scheer, Ovnicek, & Kolts, 2006); this evidence suggests a need to revisit assumptions about the situational features of the *positive emotion of gratitude*. More important, however, apart from this one-time repayment gesture, the empirical literature is silent on the role of gratitude in interpersonal relationships. In this study, we explored aspects of gratitude that lie beyond reciprocity. We suggest that gratitude promotes relationship formation and maintenance.

Previous research has suggested that the main ingredients of gratitude are an *intentional* gesture that is of *value* to the recipient (Lane & Anderson, 1976; Tesser, Gatewood, & Driver, 1968; Weiner, Russell, & Lerman, 1978, 1979) and *costly* to the benefactor (Okamoto & Robinson, 1997; Tesser et al., 1968). Given that benefits bring information about the relationship motivations of the benefactor (Ames, Flynn, & Weber, 2004), we suggest an additional critical appraisal for the emotion of gratitude that is interpersonal in nature: *perceived responsiveness to the self* (Reis, Clark, & Holmes, 2004). Perceived responsiveness is an appraisal that is

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associated with feeling understood, valued, and cared for by another individual (Reis et al., 2004). For example, if one gives a gift certificate to a local mall or spends the same amount of money to give a CD that she knows is the recipient's favorite band, the latter better demonstrates responsiveness to one's self. It really is the thought that counts.

Conceptualizing gratitude as a positive emotion involving interpersonal appraisals influences consideration of its function. If emotions are social coordinating systems (e.g., Keltner & Haidt, 1999) that direct one's goals and motivations (Schwarz & Clore, 2007) in line with emotion-relevant appraisals (Lerner & Tiedens, 2006), then considering the relational implications of gratitude is essential for understanding its role in social life. As a first step, we recently found that gratitude was uniquely associated with a reappraisal of the benefactor's positive qualities and promoted relationship-enhancing motivations toward the benefactor (Algoe & Haidt, 2008). These benefactor-focused cognitive sequelae, perhaps coupled with a broadened cognitive set that comes with its status as a positive emotion (e.g., Fredrickson & Branigan, 2005), suggest that the previously documented repayment effects of gratitude may be just the tip of the iceberg. Gratitude may alter and improve relationships in many ways.

To date, however, there is no empirical evidence—correlational or experimental—associating gratitude with the promotion of relationships. To obtain a high degree of experimental control, most studies have used vignette methods or have induced gratitude toward a stranger in the laboratory. To our knowledge, no psychological studies have examined the role of gratitude in real, ongoing relationships.

The Present Study

We took advantage of an institutionalized gratitude practice to examine the social functions of gratitude at the individual, dyadic, and group levels. At the University of Virginia, sororities choose their new members at the beginning of the Spring semester. A few weeks later, many sorority chapters hold an event known as "Big Sister Week." For a 4-day period, "Little Sisters" (new members) each get pampered anonymously by a "Big Sister" (a Little Sister the previous year). Big Sisters plan events for and deliver gifts to their Little Sisters during Big Sister Week, then reveal their identities at the end of the week. Big Sister Week is understood by the sorority sisters as a means to welcome new members and tie them in to the larger group. It is a naturally occurring gratitude intervention. To study its effects, we asked Little Sisters to report on the benefits they received throughout the week, and we asked both Little and Big Sisters to report on their relationships after Big Sister Week ended.

Method

Participants

From a larger study on the lives of women in sororities (N = 278), 160 Little Sisters (n = 82) and Big Sisters (n = 78) from three sororities completed at least one questionnaire relevant to the present studies (see table notes for analysis-specific sample sizes). Demographic information was provided by 131 participants. Consistent with the demographics of the University of Virginia sorority system, participants described themselves predominantly as White (92.4%), with 3.8% Asian American, and 3.9% as being of other racial or ethnic backgrounds. On average, participants were approximately 19 years old (M = 19.2 years, range = 18 to 22).

Design

The study consisted of two types of data: (a) reports from Little Sisters about the individual benefits they received during the 4 days of Big Sister Week, and (b) follow-up reports about

the relationship from Little and Big Sisters after "Revelations" (when Big Sisters revealed their identities to their Little Sisters) and again 1 month later. One set of analyses focused on features of the benefits that predict gratitude, using the first type of data. A second set of analyses focused on whether these momentary feelings of gratitude were associated with changes in relationships assessed using the second type of data.

Procedure

Recruitment—Sisters were paired by the sorority, and Big Sisters were anonymous to their Little Sisters until the end of Big Sister Week, so we could not recruit pairs directly. To allow us to match Little and Big Sisters for statistical analyses, our recruitment goal was to enlist the large majority of members in each sorority.[1] Each sorority earned a percentage of $600 toward its preselected philanthropy, dependent on the percentage of people who committed to and subsequently completed the study. From each sorority, 74%–81% volunteered, with 67% of all volunteers being Little or Big Sisters. Experimenters spoke with all Big and Little Sisters in separate groups to explain their participation in this part of the study.

Little Sisters during Big Sister Week—The Little Sisters were asked to complete a questionnaire online as soon as possible after each benefit conferred on them by their Big Sisters. They were asked to give a brief description of the event, answer questions about their feelings, and rate the benefit and the (still anonymous) Big Sister. The 78 Little Sisters completed a total of 496 event records during Big Sister Week, an average of 6.4 records per person. On average, Little Sisters reported completing event records approximately 2 hr (M = 2.18 hr, Mdn = 30 min) after the event took place.

Revelations—To mark the end of Big Sister Week, each sorority has an event called "Revelations" during which Big Sisters reveal their identities to their Little Sisters. Big and Little Sisters were sent an e-mail the morning after Revelations with a link to a questionnaire.[2] This brief questionnaire asked participants to report on their interaction with, and feelings about, their "new Sister" at Revelations. Seventy-one Little Sisters and 76 Big Sisters completed this questionnaire; 86% of all responses came in within 24 hr of Revelations.

One-month follow-up—One month later, Big and Little Sisters received an e-mail with a link to an online questionnaire. The questionnaire asked participants to report their feelings about and recent interactions with their new Sister. A total of 67 Little Sisters and 64 Big Sisters completed this questionnaire; 83.7% of responses were received within 24 hr after the questionnaire was sent.

Results

Predictors of Gratitude

In these analyses, we examined the benefits from Big Sister Week to test our overarching hypothesis that the relational features of the benefit are central to feelings of gratitude. Specific hypotheses are described in each analysis. Analyses primarily relied on the Little Sister event records, which included direct reports of benefit appraisals and emotions. This approach has the methodological strength of multiple reports from multiple respondents, so we used multilevel random coefficient modeling to test our hypotheses. We used a series of hierarchical linear modeling (HLM) analyses to test for differences between sororities. Although the means

[1]All members reported on various aspects of sorority life, but these data are outside the scope of the present report on Big Sister Week and are not reported here.

[2]Rather than holding Revelations on the last night of Big Sister Week, one sorority held it in the morning 36 hr later; there were no differences by sorority on these measures.

were significantly lower for participants in one sorority than those for the other two sororities for the majority of variables, there were no significant differences among sororities on the slopes for the critical analyses. That is, the processes seemed to be the same for women in the three sororities; we collapsed across sorority for all analyses. Descriptive statistics are included in Table 1 for the three sororities combined.

For all analyses using multilevel modeling in this report, we used the following basic equations (example shows equations for thoughtfulness predicting gratitude):

$$\text{Level 1:GRAT}_{ij}=b_{0j}+b_{1j}(\text{thoughtfulness})+r_{ij};$$
$$\text{Level 2:}b_{0j}=g_{00}+u_{0j}, \quad (1)$$

$$b_{1j}=g_{10}+u_{1j}, \quad (2)$$

where b_{1j} can be interpreted as the unstandardized regression coefficient. When additional predictors are included in the Level 1 model (e.g., liking), corresponding Level 2 equations were included in the model.

Testing the Role of Perceived Responsiveness

In line with our social functional approach, we predicted that perceived responsiveness to self would predict gratitude. We operationalized perceived responsiveness by asking participants how thoughtful their Big Sister was in providing the particular benefit. Our prediction was supported: Perceived responsiveness predicted feelings of gratitude, $B = .46$, $p < .001$, $d = 0.79$.

Robustness of predictors—Analyses of situational features demonstrated that the surprisingness of the event and liking for the benefit predicted stronger feelings of gratitude: $B = .19$, $p = .001$, $d = 0.43$,[3] and $B = .54$, $p < .001$, $d = 0.87$, respectively. These results are consistent with previous emotion theories (Berscheid & Ammazzaloroso, 2004;Ortony, Clore, & Collins, 1988) and conceptually replicate findings linking value of benefit to gratitude (Tesser et al., 1968). To test the robustness of perceived responsiveness as a predictor, we included all three primary predictors of gratitude—surprisingness of event, liking for the benefit, and thoughtfulness of the benefactor—in the model simultaneously. Liking and thoughtfulness remained as significant predictors, $B = .42$, $p < .001$, $d = 0.62$, and $B = .19$, $p = .001$, $d = 0.30$, respectively, whereas surprise became nonsignificant, $B = .02$, *ns*. Gratitude was associated both with features of the benefit and with appraisals of the benefactor.

Might cost signal relational motives?—To address this question, we first constructed a series of HLM equations to test the basic prediction from earlier empirical literature: Cost of the benefit predicts feelings of gratitude. Cost was operationalized in two ways: Little Sister's perception of the Big Sister's effort ("How much effort do you think that your Big Sister went to in order to do this for you?"), and benefactor's reports of dollars spent on each benefit (provided at the end of the week and matched with 224 Little Sister event records). On both measures, cost predicted gratitude ratings. The more dollars the benefactor spent, the more gratitude the recipient felt, $B = .009$, $p = .05$, $d = 0.26$ (every $100 increase in cost raised the gratitude rating .9 on a 7-point scale). In addition, the greater the perceived effort of the benefactor, the more gratitude the recipient reported feeling, $B = .36$, $p < .001$, $d = 0.59$. These findings support previous research linking cost with gratitude.

[3]This one slope differs significantly by sorority: Participants in Sorority C had a steeper slope on this variable than did participants in Sorority B, $B = .32$, $p = .01$. This variable is not relevant to the basic theoretical processes we propose.

We predicted that perceived responsiveness would mediate the relationship between cost and gratitude. We followed the four-step approach of Baron and Kenny (1986) to examine whether perceived responsiveness mediated the effect for each predictor variable (cost and effort). For cost in dollars, Step 1 is described above: Cost of the benefit predicts gratitude ratings. Cost of the benefit also predicted ratings of thoughtfulness, $B = .007$, $p = .01$, $d = 0.34$ (Step 2). Next, ratings of thoughtfulness predicted gratitude ratings when controlling for cost, $B = .50$, $p < .001$, $d = 0.85$ (Step 3), whereas cost no longer predicted ratings of gratitude, $B = .006$, $p > .2$ (Step 4). Ratings of the benefactor's thoughtfulness suggested full mediation of the effect of cost on ratings of gratitude as supported by a Sobel (1982) test, $z = 2.37$, $p = .02$.

We ran the same four steps to determine whether inclusion of perceived thoughtfulness into the model was also consistent with mediation of the effect of perceived effort on ratings of gratitude. Step 1 is described above. Step 2 demonstrated that perceived effort also predicted perceived thoughtfulness of the benefactor, $B = .62$, $p < .001$, $d = 1.21$. Finally, perceived thoughtfulness predicted ratings of gratitude when controlling for ratings of effort, $B = .37$, $p < .001$, $d = 0.63$ (Step 3), whereas the effect of effort on ratings of gratitude was reduced, $B = .13$, $p = .02$, $d = 0.21$ (Step 4). The Sobel test suggests that perceived thoughtfulness mediated the effect of effort on gratitude, $z = 6.20$, $p < .001$. Although the effect of effort on ratings of gratitude remained statistically significant in this final step, the effect size is diminished.

Gratitude as a Predictor of Relational Outcomes

In-the-moment feelings about the benefactor—To test the hypothesis that Little Sisters' gratitude predicted their feelings about the Big Sister in the moment, we used the event records from Big Sister Week. Little Sisters evaluated their relationship with their (anonymous) Big Sisters after receipt of each benefit on three items; the extent she thought her Big Sister understood her and how much she liked and felt close to her Big Sister in that moment. These three items were averaged to create a composite measure of "relationship quality" ($\alpha = .94$; computed from the aggregated responses across event records).

As before, we tested this hypothesis with a series of HLM equations. Ratings of gratitude predicted reports of a better relationship with the Big Sister, $B = .28$, $p = .000$, $d = 0.64$. This effect held when controlling for how much the Little Sister said she liked the benefit, $B = .14$, $p = .000$, $d = 0.34$, and $B = .24$, $p = .000$, $d = 0.55$, for gratitude and liking, respectively.

Revelations and follow-up for Little and Big Sisters—Informant reports, Little Sisters' estimates of missed records, and Big Sister lists of benefits provided indicated that Little Sisters received anywhere from 10 to 14 benefits throughout the 4-day period. Little Sisters who reported on at least 6 of these events were retained in the current analyses to ensure a sufficient number of events to gauge the "average" gratitude from the week. The average gratitude from the week was used to predict relationship outcomes from the Revelations and 1-month follow-up questionnaires.

There were two dependent measures of interest from the Revelations questionnaire (see Table 2 for scale range, alphas, average ratings, and sample size for each analysis). The first was a composite interaction evaluation measure, composed of impressions that the Little Sisters and Big Sisters had of their interactions. The eight items included evaluations such as how pleased and how disappointed (reversed) with this particular person and how close or "connected" to her. An average score was created for each participant. The second dependent measure from the Revelations questionnaire was the degree to which the Sister felt like she was "an integral part of the sorority at that moment."

There were also two dependent measures from the follow-up questionnaire, completed 1 month after Revelations. First, a composite relationship quality score was computed for each

participant by averaging ratings from items such as, “She is one of my best friends at UVA,” “To what extent do you feel you understand or ‘get’ your Sister?” “Do you feel like your Sister is supportive of you and your accomplishments?” Second, all participants estimated the number of hours they had spent “hanging out” with their Sister in the previous week.

Results for Little Sisters—Results displayed in the lower left panel of Table 2 demonstrate that Little Sisters’ average gratitude from Big Sister Week predicted both of the ratings at Revelations: feelings about their interactions with their Big Sisters and feelings of integration with the sorority. One month later, Little Sisters’ average gratitude ratings from Big Sister Week also predicted their reports of the quality of their relationships with their Big Sisters, although they did not predict the amount of time Little Sisters said they had spent with their Big Sisters in the previous week. These findings support both dyadic- and group-level social functional analyses of gratitude.

Results for Big Sisters—Evidence in support of the social functional account using benefactor data is displayed in the lower right panel of Table 2. The Little Sisters’ average feelings of gratitude from Big Sister Week significantly predicted their Big Sisters’ evaluations of the interaction at Revelations, although it did not predict the Big Sisters’ feelings of integration at that time. Also, Little Sisters’ average feelings of gratitude from Big Sister Week predicted outcomes for the Big Sisters on each of the 1-month follow-up measures: Big Sisters’ ratings of relationship quality and reports of how much time they spent with the Little Sister in the previous week.[4] (These effects were marginally significant, $p < .1$, but were of moderate effect size, $d = 0.64$ to 0.85).

Discussion

These data provide the first evidence that the emotion of gratitude is associated with relationship formation. Gratitude was predicted by relational appraisals of a benefit: Both liking for the benefit and rated thoughtfulness of the Big Sister (a measure of perceived responsiveness) were robust predictors of gratitude. The effect of “liking” replicates previous findings for associations between value of the benefit and feelings of gratitude (Tesser et al., 1968; Tsang, 2007). Importantly, the index of perceived responsiveness was a more consistent predictor of gratitude than effort, cost, or surprise, and is a factor that has been left out of many previous analyses.

Gratitude may initiate a relationship-building cycle between recipient and benefactor. At the time of the event, the Little Sister’s gratitude predicted her feelings about her unknown benefactor, and this association could not be accounted for by her liking for the benefit itself. Moreover, Little Sisters’ average gratitude ratings from Big Sister Week reliably predicted both Little Sisters’ and Big Sisters’ ratings of their interactions and relationship 1 month later, in support of predictions about the dyadic function of gratitude. All of these effects were moderate to large. Finally, at the group level, gratitude may help solve the problem of integration and cooperation of group members: Little Sisters’ gratitude predicted their feelings of integration within the sorority at Revelations.

By assessing relational appraisals and relationship outcomes in a real-world context, this study is a first step toward determining how and whether gratitude can influence dyadic relationships. Given its correlational nature, it is not the definitive assessment of whether gratitude causes

[4]Conceptually, Big Sister Week, with its shower of thoughtful events, is a natural “gratitude” induction. However, we have considered the possibility that these relationship-relevant effects may be related to positive emotion in general and may not be specific to gratitude. See http://faculty.virginia.edu/haidtlab/algoe.supplemental.material.doc for results of secondary analyses including admiration and satisfaction ratings.

improved dyadic and group relationships, as predicted by the social functional model of emotion. However, the prospective design of the relationship analyses gives us some confidence in the direction of the effects from gratitude to relationships. We look forward to future experimental evidence to demonstrate relational processes and outcomes associated with gratitude.

There is much more to be learned about the role of gratitude in social life. However, we believe that the study reported here indicates for the first time that gratitude is about more than repaying benefits; it is about building relationships. The social functional account fits with and extends previous empirical findings to propose that gratitude is a detection-and-response system to help find, remind, and bind ourselves to attentive others. Relationships with others who are responsive to our whole self—our likes and dislikes, our needs and preferences—can help us get through difficult times and flourish in good times. Gratitude can be understood as an emotion that serves the social function of promoting such relationships.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table 1

Average Ratings From Little Sister Event Records During Big Sister Week

Variable	*M*	*SD* Level 1	*SD* Level 2	Reliability
Gratitude	4.93	1.01	0.88	.79
Liking for event	4.63	1.06	0.64	.66
Surprise about event	3.76	1.49	0.79	.60
Thoughtfulness (of BS in providing this benefit)	4.66	1.04	0.66	.67
Cost of benefit	24.34	18.63	4.51	.22
Effort	4.28	1.07	0.70	.69
Relationship quality (from)	4.27	0.72	0.92	.88
BS understands/“gets” me	4.07	0.96	0.94	.88
Close/connected with BS	4.14	0.94	0.96	.83
Liking for BS	4.63	0.61	0.93	.91

Note. $n = 76$ for all analyses but cost ($n = 43$). *M*, *SD* Level 1, and *SD* Level 2 reflect the intercept, standard deviation of *r*, and standard deviation of U_0, respectively, in unconditional HLM models in which the listed variable was the dependent variable. Reliability estimates, which may be viewed as the average within-subject reliabilities across records, are reported directly by HLM. BS = Big Sister. Scales ranged from 0 (*low*) to 6 (*high*).

Table 2

Relationship Outcomes and Estimates for Predicting Them From Little Sister Gratitude Ratings

Descriptive statistic	Little Sisters			Big Sisters		
	α	***M***	***SD***	***α***	***M***	***SD***
Revelations: Integration with sorority	—	4.88	1.21	—	4.97	1.05
Revelations: Interaction evaluation	.91	6.14	0.85	.89	5.20	0.60
Follow-up: Relationship quality	.95	3.73	1.15	.94	3.81	0.67
Follow-up: Time with sister (hours)	—	2.06	2.33	—	2.66	2.46
Analysis estimate	*B*	*p*	*d*	*B*	*p*	*d*
Revelations: Integration with sorority	**0.42**	.04	0.68	0.25	.24	0.43
Revelations: Interaction evaluation	**0.32**	.02	0.75	**0.26**	.02	0.85
Follow-up: Relationship quality	**0.56**	.003	1.04	**0.23**	.10	0.64
Follow-up: Time with sister (hours)	−0.14	.74	0.11	**0.91**	.08	0.68

Note. Scales ranged from 0 (e.g., *none or not at all*) to 6 (e.g., *extremely*), except estimated hours spent with sister in previous week. Estimates of outcomes were included only if matched with a Little Sister who reported at least 6 of her events during Big Sister Week. Little Sisters: $n = 41$ (Revelations), $n = 39$ (follow-up); estimates include only Little Sisters who had one Big Sister. Big Sisters: $n = 33$ (Revelations), $n = 30$ (follow-up). In the lower half of the table, bold type represents effects that were significant at $p < .05$ or marginally significant at $p \leq .10$.