

Contents lists available at [ScienceDirect](http://www.sciencedirect.com)

Journal of Experimental Social Psychology

journal homepage: www.elsevier.com/locate/jesp

Thanks, but no thanks: The role of personal responsibility in the experience of gratitude

Rosalind M. Chow^{a,*}, Brian S. Lowery^b

^a Carnegie Mellon University, Tepper School of Business, 5000 Forbes Ave., Pittsburgh, PA 15213, USA

^b Stanford Graduate School of Business, 515 Memorial Way, Stanford, CA 94305 USA

ARTICLE INFO

Article history:

Received 23 June 2009

Revised 10 December 2009

Available online xxx

Keywords:

Gratitude

Responsibility

Responses to help

ABSTRACT

Current theories of gratitude suggest that individuals feel grateful when they perceive someone else to be responsible for a desired outcome. However, it is unclear whether individuals must also feel a lack of personal responsibility in order to feel gratitude. This paper provides evidence that in achievement contexts, without the belief that they are responsible for their success, individuals do not experience gratitude, even when they acknowledge the help they have received. In two studies, the more helpful participants thought an experimenter had been, the more grateful they felt, but only if they also spontaneously felt responsible for (Study 1) or were induced to feel responsible for (Study 2) their outcomes.

© 2010 Elsevier Inc. All rights reserved.

Introduction

We often depend on others to achieve our goals; students help each other to study for tests, coworkers help each other when a project is not progressing. Although the receipt of such help often elicits gratitude (Bartlett & DeSteno, 2006; Lazarus & Lazarus, 1994; McCullough, Kilpatrick, Emmons, & Larson, 2001), people are not always grateful for help, even if they acknowledge the receipt of help (c.f., Broll, Gross, & Piliavin, 1974; Gross, Wallson, & Paliavin, 1979; Nadler, Fisher, & Streufert, 1974). When and why is it that people will not feel grateful for help that they recognize has brought them a desired outcome?

We address these questions by focusing on the foundation of gratitude: perceptions of responsibility. Although emotion appraisal theories assume that the experience of gratitude requires the perception that another person is responsible for a desired outcome (e.g., Weiner, 1979, 1985), it is unclear if individuals must also feel a lack of personal responsibility in order to feel gratitude. In this paper, we propose that when outcomes influence how individuals experience the self, such as in achievement contexts, the experience of gratitude may require both the acknowledgement of help from another *and* the perceptions of personal responsibility. Conversely, it is possible that individuals may feel less grateful for help when they do not feel personally responsible for their outcomes, because the lack of personal responsibility alters their experience of the help.

Personal responsibility and gratitude

According to emotion appraisal theories (Roseman, 1984, 1991; Weiner, 1985), gratitude is an attribution-dependent emotion that arises from a two step process, whereby individuals: (1) recognize that they have received a positive outcome, and (2) attribute the outcome to the efforts of another (Weiner, 1985). Thus, gratitude is fundamentally grounded in perceptions of responsibility; the more individuals perceive others to be responsible for the attainment of a desired outcome, the more grateful they should feel (e.g., Solomon, 1977). However, it is unclear if the complementary assertion – that the more individuals feel responsible for their outcomes, the less grateful they should feel – is true.

Despite this lack of clarity on how gratitude may be influenced by perceptions of personal responsibility, the role of the self has been largely ignored by gratitude researchers. Instead, researchers have focused on how characteristics of the helper or help influences individuals' propensity to experience gratitude (e.g., Tsang, 2006b; Watkins, Scheer, Ovnicek, & Kolts, 2006), and on how the experience of gratitude can lead to positive psychological and social consequences (e.g., Bartlett & DeSteno, 2006; McCullough, Kilpatrick, Emmons, & Larson, 2001; Tsang, 2006a). In these efforts, researchers have relied on scenario or laboratory inducements of gratitude where participants can clearly see the effect of others on their outcomes, but are unlikely to be able to claim personal responsibility for those outcomes. For example, participants are asked to consider a scenario in which a friend helps them to purchase needed textbooks (Tsang, 2006a, 2006b), a friend helps them move (Watkins et al., 2006), or a confederate helps the participant to complete a study by plugging in a loose monitor cord (Bartlett &

* Corresponding author.

E-mail address: rchow@cmu.edu (R.M. Chow).

DeSteno, 2006). In these cases, gratitude is experienced because individuals perceive themselves to have received a benefit from another (Solomon, 1977).

However, these situations are also similar in that they do not involve outcomes where the individuals' experience of the self would be influenced by the outcome; whether the outcome is successful or not holds no import for how the individual feels about the self. In other words, the outcomes studied are not self-relevant. From our perspective, in situations where an outcome is not self-relevant, individuals are primarily concerned with the outcome itself – whether it is positive or negative – and are unconcerned with whether they were personally responsible for those outcomes. Thus, in non self-relevant situations, individuals will feel grateful to the extent that they acknowledge that another person has intentionally given, or attempted to give, help that has resulted in a positive outcome (McCullough, Kilpatrick, Emmons, & Larson, 2001; McCullough, Tsang, & Emmons, 2004). This can occur even though they may not feel personally responsible for the outcomes.

In contrast, in many situations, individuals are not only concerned with whether they have received a positive outcome or not, they also desire the positive psychological benefits associated with a success, such as positive self-esteem and pride (Weiner, 1979, 1985). These types of situations involve self-relevant outcomes, in that the outcome influences how individuals feel about the self. In such situations, personal responsibility becomes a focal concern; an inability to claim responsibility for their outcomes deprives individuals of many of the benefits associated with success (Weiner, 1979). To receive a positive outcome without the perception of personal responsibility and its corresponding psychological benefits is not an outcome for which individuals will feel grateful. Thus, we propose that perceptions of personal responsibility *can* have a role in the experience of gratitude, and predict that personal responsibility will play a *positive* role in individuals' experience of gratitude. When outcomes are self-relevant, such as in achievement situations, individuals must feel personally responsible for an outcome in order to feel grateful for help they have received. In contrast, when individuals do not feel responsible for a success, they will not feel grateful for help that led to the positive outcome, even if they acknowledge that the help was instrumental to their outcome.

The experience of help

Most attributional theories of emotion assume that feelings of gratitude are driven by individuals' experience of the help (e.g., Lazarus & Lazarus, 1994; Weiner, 1985). According to this perspective, when recipients of help believe that help signifies caring and concern, they experience the help as supportive (Fisher, DePaulo, & Nadler, 1981; Fisher, Nadler, & Whitcher-Alagna, 1982), which should increase their sense of gratitude. Consistent with this theoretical approach, it is possible that when individuals do not feel responsible for their success, they underestimate the supportiveness of a helper. Thus, recipients of help may acknowledge the usefulness of the help without also experiencing the helper as supportive, which might result in less gratitude.

Overview of studies

We predict that, when assessing an achievement outcome, whether individuals will be grateful for help will depend on: (a) the perceived helpfulness of the help and, (b) the belief they can claim responsibility for their success. In two studies, we explore the possibility that when individuals acknowledge that they have been helped *and* feel responsible for their achievements, they will be more likely to feel grateful to their helper. However, individuals who do not feel responsible for their outcomes will not be grateful for help, even if they acknowledge that the help was useful. In

Study 2, we also investigate the possibility that this effect is driven by changes in perceived supportiveness of the help.

Study 1

In Study 1, we examined gratitude towards an experimenter after the experimenter provided participants with help on an achievement test.

Methods

Participants

A total of 52 participants (32 women, 20 men) ranging in age from 18 to 56 ($M = 31.33$, $SD = 8.82$) visited a website containing study materials. Participants were recruited from an email list maintained by a private California university of individuals interested in receiving online survey announcements. As payment, participants were emailed a \$5 gift certificate from an online retailer, and one participant won an additional \$5 gift certificate from a drawing. None of the participants reported suspicion about the purposes or the procedures of the experiment.

Procedures

After indicating consent, participants were told that the study was a two session study about personality and test performance. In the first session, they completed a personality test. After completing the personality test, participants exited the online session and were told that they would be emailed information on how to access their personality scores. After a day, the experimenter emailed participants a “personal code” to access their personality feedback. In reality, the code gave them access to the experiment website, where they were all given the same personality feedback.

After reading their personality feedback, participants completed an achievement test. To encourage participants to care about the outcome of the test and to make the test feedback believable, participants were told that the test was very difficult. Given the difficulty of the test, participants who scored above the 90th percentile would be entered into a drawing for an additional \$5 gift card. Before completing the test, participants were told that the experimenter had the discretion to give some participants a hint. All participants were then shown a hint, which they were led to believe was given due to the experimenter's familiarity with their personality profile. Thus, participants were led to believe that the experimenter had chosen to help them in particular. After reading the hint, participants completed the test.

All participants were then told that they had scored in the 93rd percentile, a “high” score, and would therefore be entered into the additional drawing. They then completed several questionnaires about their experience, including measures of perceived responsibility, helpfulness of the hint, and gratitude. Satisfaction with their test performance and positive affect were also measured to control for positive affect. After completing the questionnaires, all participants were fully debriefed, and emailed their gift certificates.

Materials and measures

Personality test. Items on the personality test were taken from the revised Minnesota Multiphasic Personality Inventory (MMPI-2, Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989). Participants indicated the extent to which they thought 30 statements reflected who they were as a person. Sample items include, “I put others first” and “I seek out patterns in the universe” (1 = Very inaccurate, 7 = Very accurate).

Personality feedback. All participants received the same personality feedback, which was based on Forer's personality analysis (also

called the Barnum effect; Dickson & Kelly, 1985; Forer, 1949). The feedback is supposedly tailored to individuals, but is in fact vague and general enough to apply to a large number of people. Some sample statements from the feedback include: “You have a need for other people to like and admire you, and yet you tend to be critical of yourself. While you have some personality weaknesses you are generally able to compensate for them” and “Disciplined and self-controlled on the outside, you tend to be worrisome and insecure on the inside.”

After reading their feedback, participants were asked to rate the accuracy of the feedback (1 = extremely inaccurate, 4 = neither accurate nor inaccurate, 7 = extremely accurate). Participants perceived the feedback to be fairly accurate, $M = 5.21$, $SD = 1.27$.

Achievement test. After receiving their personality feedback, participants were asked to complete a 12 item test of “integrative orientation.” Integrative orientation was described as being “related to one’s ability to see solutions to problems and to solve problems creatively.” In reality, the test was the Remotes Associates Task (RAT, Mednick, 1962). Each RAT item consists of three stimulus words that are related to a fourth unreported word, which is generated by the participant. For example, an item might consist of the stimulus words: “falling”, “actor”, and “dust.” A correct response would be the fourth word “star.”¹

Help. All participants were told that the experimenter wanted to give them a hint for the test, based on their personality test results. Specifically, participants read a note from the experimenter, which stated, “Based on your personality profile, I want to give you a hint for the test – all of the solutions to the following problems are either colors or involve nature (plants, animals, etc.)” Items on the test were chosen to have answers that corresponded only to colors or plants and animals. Thus, the hint narrowed the number categories that participants had to consider, but still allowed participants to feel that they had generated the answer on their own.

Responsibility. To measure how responsible participants felt for their performance on the test, participants were asked “How responsible do you feel for your performance on this test?” (1 = Not at all responsible, 5 = extremely responsible).

Perceived helpfulness. To measure how helpful participants thought the experimenter had been, they were asked “How helpful was the experimenter?” (1 = Not at all, 5 = extremely).

Gratitude. Participants were asked how grateful they felt towards the experimenter (1 = Not at all, 5 = extremely).

Satisfaction with outcome. Participants were asked to rate how satisfied they were with their test performance (1 = extremely unsatisfied, 4 = neutral, 7 = extremely satisfied).

Positive affect. Participants were asked to rate the extent to which they felt ten positive emotions (e.g., proud, strong, and excited; 1 = not at all, 5 = extremely, $\alpha = .94$). Emotion terms were those used in the Positive and Negative Affect Scale (PANAS, Watson, Clark, & Tellegen, 1988).

Results

Means, standard deviations, and correlations are shown in Table 1.

¹ Participants averaged 7.90 correct answers ($SD = 2.77$) out of 12, suggesting they should have found the high test performance feedback believable.

Table 1

Means, standard deviations, and correlations for variables in Study 1.

Variable	<i>M</i>	<i>SD</i>	1	2	3	4
Responsibility for performance	4.31	.87				
Perceived helpfulness	4.14	.98	-.05			
Gratitude	3.64	1.12	.39*	.36*		
Satisfaction	5.74	1.58	.47**	.09	.25	
Positive affect	3.17	.90	.10	.11	.26	.25

* $p < .05$.

** $p < .01$.

We predicted that the more helpful participants thought the experimenter had been, the more grateful they would feel, but only if they also felt responsible for their test performance. To test this hypothesis, we mean centered participants’ ratings of perceived responsibility and helpfulness of the experimenter, and then multiplied them to create an interaction term (cf. Aiken & West, 1991). We then regressed participants’ feelings of gratitude on how responsible they felt for their test performance, how helpful they thought the experimenter had been, and the interaction term. Satisfaction and positive affect were entered as control variables.²

The more helpful participants perceived the hint to be, the more gratitude they reported, $B = .39$, $SE B = .15$, $\beta = .36$, $t(46) = 2.55$, $p < .05$. Perceived responsibility for test performance did not affect gratitude, $B = .01$, $SE B = .12$, $\beta = .01$, $t(46) = .06$, $p = .95$. Importantly, we observed the predicted Perceived responsibility \times Helpfulness interaction on gratitude, $B = .34$, $SE B = .14$, $\beta = .31$, $t(46) = 2.36$, $p < .05$, see Fig. 1. This effect was not moderated by participant gender.

Simple slopes analyses (Aiken & West, 1991) revealed that, as predicted, among individuals who felt responsible for their outcomes (+1 *SD*), the more they thought the experimenter had helped them, the more grateful they reported feeling, $B = .75$, $SE B = .22$, $\beta = .69$, $t(46) = 3.43$, $p = .001$. In contrast, among individuals who felt less responsible (–1 *SD*), increases in the acknowledged helpfulness of the hint was not associated with greater gratitude, $B = .03$, $SE B = .21$, $\beta = .02$, $t(46) = 2.36$, $p = .90$.

Discussion

Study 1 provided evidence for the hypothesis that how grateful individuals feel for help depends not only on how much help they think they have received, but also on whether they feel responsible for their outcome. Increases in perceived helpfulness were only associated with more gratitude when individuals felt responsible for their outcomes. Individuals who did not feel responsible for their outcomes were not more grateful to the experimenter, even if they acknowledged the helpfulness of the hint.

Although the results of Study 1 support our hypotheses, the study relied on measured variables, and thus cannot establish causality. Study 2 was designed to address this issue and to explore the possibility that the effect is mediated by the perceived supportiveness of the help.

Study 2

Method

Participants

A total of 60 participants (37 women, 23 men) ranging in age from 18 to 55 ($M = 31.93$, $SD = 9.99$) visited a website containing

² Removal of satisfaction and positive affect as covariates did not reduce the significance of the Perceived responsibility \times Perceived helpfulness interaction on gratitude, $B = .33$, $SE B = .14$, $\beta = .31$, $p < .05$.

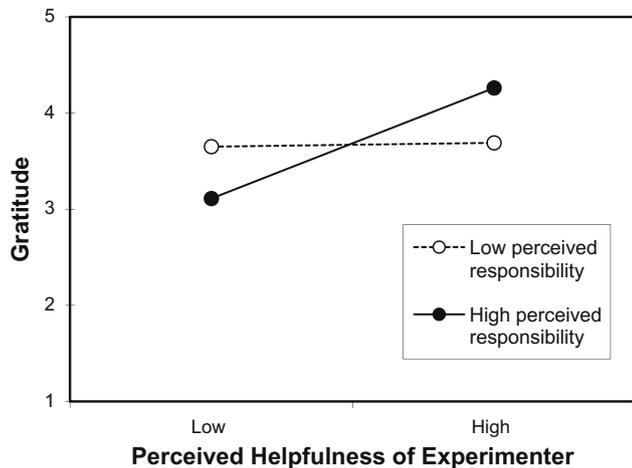


Fig. 1. Gratitude as a function of perceived responsibility for test performance and perceived helpfulness of experimenter hint (Study 1).

study materials. Participants were recruited from an email list maintained by a private California university of individuals interested in receiving online survey announcements. As payment, participants were emailed a \$7 gift certificate from an online retailer. None of the participants reported suspicion about the purposes or the procedures of the experiment.

Procedure

The procedures were similar to those used in Study 1. Participants were given a personality test, and were given bogus feedback on their personality.³ Participants were then told that the next part of the study was designed to simulate the experience of a manager, and that the test was designed to measure individuals' managerial capability. To ensure that high performance on the test was perceived to be a positive outcome, participants were told that they would have the opportunity to earn an extra \$2 (in addition to an advertised \$5 payment) based on their performance on the test. Before participants completed the test, they were provided with the same hint used in Study 1, ostensibly due to the experimenter's familiarity with their personality profile.

Participants then took the integrative orientation test used in Study 1, and all were told that they had scored well enough to receive the additional payment. Participants also received feedback on their performance that indicated that they either were or were not responsible for this outcome. After receiving their scores and feedback, participants completed a series of questionnaires on their experience, and then were debriefed and emailed their gift certificates.

Materials and manipulations

Task description. All participants were told that in addition to the managerial capability test, the study would also include three factors that would simulate different managerial environments: a bonus, having a mentor, and the element of chance. To simulate the experience of "pay for performance," all participants could "earn a bonus" of \$2 if they scored above 90% in the simulation. In addition, to simulate advice giving from mentors, participants were told that the experimenter could choose to give some participants a hint (in reality, all participants were given a hint). Finally, the task also included a simulation of chance, in that participants' final scores (on which their bonus depended) would be affected by ran-

dom chance. Participants were told that after taking the test, the computer would generate a percentage from -10% to 10% that would be added to the participants' test score in order to determine their final score. For example, if a participant scored 88% correct on the test, and the computer chose +5%, the participants' final score would be 93%, resulting in the bonus.

Help. All participants received the same hint as in Study 1.

Responsibility manipulation. After completing their test, participants were given their test scores.⁴ Participants in the *Responsible* condition were shown:

Your managerial simulation results:

- Percentage answers correct on the Integrative Orientation Task: 97%.
- Percentage chosen by computer: -5%.
- Final managerial performance score: 92%.

You will get a bonus. Based on your performance, if you were a manager, you would be directly responsible for the success of your project or team.

Participants in the *Not responsible* condition were shown:

Your managerial simulation results:

- Percentage answers correct on the Integrative Orientation Task: 87%.
- Percentage chosen by computer: +5%.
- Final managerial performance score: 92%.

You will get a bonus. Based on your performance, if you were a manager, you would not be directly responsible for the success of your project or team.⁵

Manipulation check. To ensure our manipulation of responsibility worked as intended, we asked participants, "How responsible do you feel you were for your bonus?" (1 = Not at all responsible, 5 = extremely responsible).

Perceived helpfulness. This measure was identical to the one used in Study 1.

Gratitude. Because our manipulation of responsibility involved an element of chance, we wanted to ensure that our measure of gratitude referred specifically to the experimenter and the hint. Therefore, we asked: "To what extent did getting the hint make you feel grateful?" (1 = Not at all, 5 = extremely) and "To what extent do you feel grateful to the experimenter for helping you?" (1 = Not at all grateful, 5 = extremely grateful, $\alpha = .89$).

⁴ Participants averaged 7.60 correct answers (SD = 3.18).

⁵ It is possible that the effect of our responsibility manipulation on gratitude was driven by either participants' perceptions of their performance or the importance they placed on receiving the bonus. To test these possibilities, we replicated Study 2 with 41 participants (24 women, 17 men) and added measures of perceived performance and the importance of the bonus. Perceived performance was measured by the item, "I performed well on the Integrative Orientation Task," (1 = strongly disagree, 7 = strongly agree) and importance of the bonus was measured by the item, "How important was receiving a bonus to you?" (1 = Not at all important, 5 = extremely important). Perceived performance did not differ across the Not responsible, $M = 4.94$, $SD = 1.35$, and Responsible conditions, $M = 5.38$, $SD = 1.53$, $t(39) = .94$, $p = .35$, which is inconsistent with the possibility that participants' decreased levels of gratitude were driven by their perceptions of their performance. Moreover, participants in the Not responsible condition did not rate receiving the bonus as less important, $M = 3.29$, $SD = 1.16$, than participants in the Responsible condition, $M = 3.75$, $SD = .90$, $t(39) = 1.42$, $p = .16$, suggesting that participants did not defensively downplay the importance of the bonus in response to not being responsible for the bonus.

³ On average, the feedback was perceived to be accurate (1 = extremely inaccurate, 4 = neither accurate nor inaccurate, 7 = extremely accurate), $M = 5.41$, $SD = 1.28$.

Table 2
Means, standard deviations, and correlations for variables in Study 2.

Variable	M	SD	1	2	3	4
Perceived helpfulness	3.97	.95				
Experienced support	4.19	.91	.36**			
Gratitude	4.09	.90	.48**	.73**		
Satisfaction	5.60	1.51	.31*	.34**	.28*	
Positive affect	3.27	.92	.25*	.28*	.29*	.55**

* $p < .05$.

** $p < .01$.

Experienced support. To measure participants' perceptions of support, they rated the extent to which they thought the experimenter had been encouraging, supportive, condescending, dismissive, and patronizing (the last three items were reverse scored, 1 = Not at all, 5 = extremely, $\alpha = .77$).

Satisfaction with outcome and positive affect. Measures of satisfaction and positive affect were identical to those used in Study 1.

Results and discussion

Preliminary analyses

Means, standard deviations, and correlations are shown in Table 2.

To ensure our manipulation of responsibility worked as intended, we ran an independent samples t -test on participants' feelings of responsibility across the Responsible and Not responsible conditions. Participants in the Not responsible condition felt less responsible for their bonus than participants in the Responsible condition. Moreover, a one-sample t -test indicated that perceived responsibility was significantly higher than the mid-point of three among participants in the Responsible condition, $t(32) = 2.88$, $p < .01$.

It is possible that participants would perceive the experimenter to be less helpful, and therefore be less grateful, in the Not Responsible condition than in the Responsible condition, since their "success" was due to chance, and not due to the experimenter's help. To test this possibility, we also conducted an independent samples t -test on perceived helpfulness. Participants did not differ in their ratings of the helpfulness of the hint and experimenter across responsibility conditions, suggesting that differences in gratitude were not due to participants' perceptions of the help. Independent sample t -test results for all study variables across Responsibility conditions are shown in Table 3.

Main analyses

Gratitude. We hypothesized that the more helpful participants thought the experimenter had been, the more grateful they would feel, but only if they were led to believe they were responsible for their success. To test this interactive hypothesis, we dummy coded the Responsibility manipulation ($-1 =$ Not responsible, $1 =$ Responsible), mean-centered perceived helpfulness, and computed their interaction term. We then regressed participants' levels of gratitude on Responsibility condition, perceived helpfulness, and their interaction term. Satisfaction and positive affect were entered as control variables.⁶

The more helpful participants thought the experimenter had been, the more grateful they reported feeling, $B = .35$, $SE B = .11$, $\beta = .37$, $t(54) = 3.09$, $p < .005$. Levels of gratitude were not affected

⁶ Removal of satisfaction and positive affect as covariates did not reduce the significance of the Perceived responsibility \times Perceived helpfulness interaction on gratitude, $B = .25$, $SE B = .11$, $\beta = .26$, $p < .05$, or experienced support, $B = .29$, $SE B = .11$, $\beta = .34$, $p < .01$.

Table 3
Independent sample t -tests across responsibility conditions for variables in Study 2.

Variable	Condition		
	Not responsible Mean (SD)	Responsible Mean (SD)	$t(df)$
Responsibility for performance	2.56 (1.22)	3.64 (1.27)	3.34 (61)**
Perceived helpfulness	4.07 (.90)	3.89 (.99)	.77 (61)
Gratitude	4.09 (.81)	4.09 (.98)	.02 (61)
Experienced support	3.32 (.88)	3.61 (.76)	1.42 (61)
Satisfaction	5.11 (1.70)	6.00 (1.23)	2.36 (61)*
Positive affect	3.27 (1.01)	3.30 (.86)	.13 (61)

* $p < .05$.

** $p < .01$.

by the Responsibility manipulation, $B = -.03$, $SE B = .11$, $\beta = -.03$, $t(54) = -.24$, $p = .80$. Importantly, replicating the results of Study 1, there was a significant interaction between responsibility and perceived helpfulness on gratitude, $B = .27$, $SE B = .11$, $\beta = .28$, $t(54) = 2.52$, $p < .05$, see Fig. 2. This effect was not moderated by participant gender.

Closer examination of the interaction revealed that among individuals in the Responsible condition, the more participants thought the experimenter had been helpful, the more grateful they felt, $B = .62$, $SE B = .14$, $\beta = .66$, $t(54) = 4.53$, $p < .001$. In contrast, individuals in the Not responsible condition were not more grateful for help, even as the perceived helpfulness of the experimenter increased, $B = .08$, $SE B = .17$, $\beta = .09$, $t(54) = .48$, $p = .63$.

Experienced support. To test the possibility that help is experienced as more supportive when individuals feel responsible for their outcomes than when they do not, we reran the above analyses, replacing gratitude with participants' experience of support. Participant ratings of experimenter supportiveness were not affected by how helpful the hint had been, $B = .11$, $SE B = .10$, $\beta = .15$, $t(54) = 1.11$, $p = .27$. However, participants in the Responsible condition tended to rate the experimenter as more supportive than participants in the Not Responsible condition, $B = .16$, $SE B = .09$, $\beta = .23$, $t(54) = 1.79$, $p = .08$. Importantly, there was a significant Responsibility manipulation \times Perceived helpfulness interaction on the experience of experimenter support, $B = .21$, $SE B = .09$, $\beta = .28$, $t(54) = 2.31$, $p < .05$, see Fig. 3.

Inspection of the interaction revealed that among participants in the Responsible condition, the more helpful the experimenter

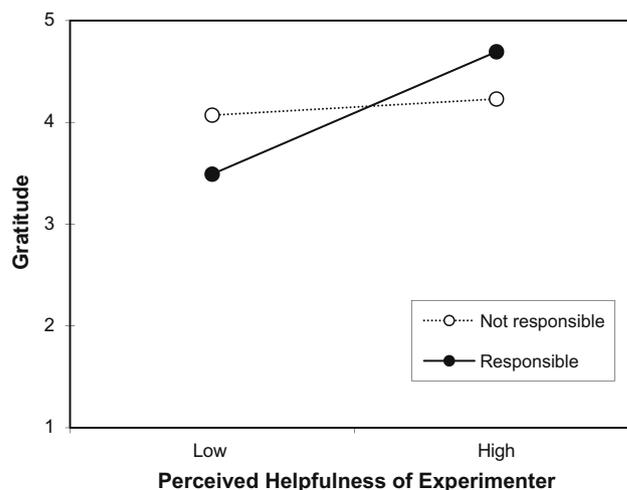


Fig. 2. Gratitude as a function of Responsibility condition and perceived helpfulness of experimenter (Study 2).

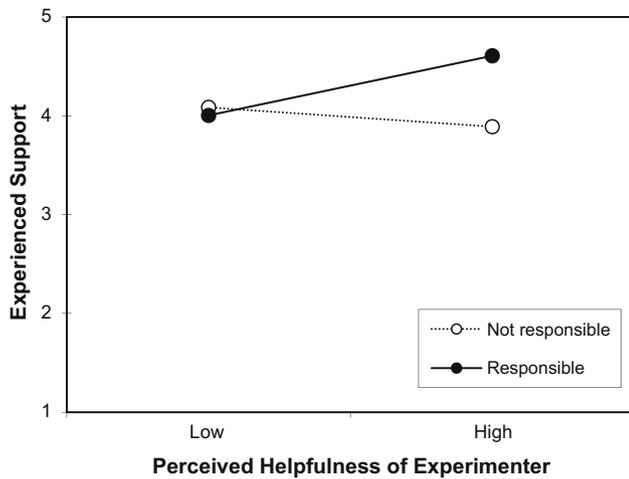


Fig. 3. Experienced support as a function of Responsibility condition and perceived helpfulness of experimenter (Study 2).

was perceived to have been, the more participants thought the experimenter had been supportive, $B = .31$, $SE B = .12$, $\beta = .43$, $t(54) = 2.72$, $p < .01$. In contrast, participants in the Not responsible condition did not differ in how they rated the experience of the help, even as they acknowledged the helpfulness of the experimenter, $B = -.10$, $SE B = .15$, $\beta = -.14$, $t(54) = -.69$, $p = .49$.

Mediational analyses. To explore the possibility that supportiveness mediates the interactive effect of help and responsibility, we conducted a moderated mediation model (cf. Preacher, Rucker, & Hayes, 2007). This model tests the hypothesis that perceived supportiveness mediates the effect of help in the responsible condition, but not in the Not responsible condition, and consists of three regression analyses. The first two regressions were identical to those described above; the finding that the Responsibility condition \times Perceived helpfulness interaction predicts both gratitude and the experience of support is consistent with our mediational hypothesis.

To test the final step of the mediation, we regressed gratitude on Responsibility condition, perceived helpfulness, the Responsibility manipulation \times perceived helpfulness interaction, controlling for the effects of experienced supportiveness. The analysis revealed that controlling for the experience of support reduced the effect of the Responsibility condition \times perceived helpfulness interaction on gratitude to nonsignificance, $B = .07$, $SE B = .09$, $\beta = .08$, $p = .44$. We also examined the conditional indirect effects among participants in the Responsible and Not responsible conditions. These effects indicated that experienced support mediated the relationship between perceived helpfulness and gratitude among participants in the Responsible condition, $z = 2.83$, $p < .005$, but not among participants in the Not responsible condition, $z = .86$, $p = .39$.

Although existing theory suggests that perceived supportiveness drives gratitude, it is possible that the experience of supportiveness is driven by individuals' gratitude. To test this possibility, we reran the mediational analyses, reversing the positions of gratitude and experienced support. Examination of the conditional indirect effects revealed that, among participants in the Responsible condition, levels of gratitude mediated the relationship between perceived help and experienced support, $z = 3.79$, $p < .001$, but this was not true among participants in the Not responsible condition, $z = 1.02$, $p = .31$. Thus, our data do not provide unambiguous evidence that supportiveness mediates the interactive effect of help and responsibility on gratitude. We

encourage future research to determine whether emotional responses to help are driven by the experience of help, or if the experience of help is influenced by individuals' emotional responses to help.

General discussion

Current theories of emotion assume that individuals must believe others to be responsible for a desired outcome in order to feel grateful (Weiner, 1985; Weiner, Russell, & Lerman, 1978, 1979). However, this leaves open the question of whether individuals must also believe that they are not personally responsible for their outcomes in order to feel gratitude. These studies suggest that when outcomes are self-relevant, as in achievement situations, feelings of personal responsibility for outcomes can enhance individuals' gratitude towards others when they also acknowledge the receipt of help.

Two studies demonstrated that acknowledgement of help, combined with feelings of personal responsibility for outcomes, increases individuals' propensity to feel gratitude in achievement situations. The more helpful participants thought an experimenter had been, the more grateful they felt towards the experimenter, but only if they felt responsible for their test performance (Study 1) or were led to believe they were responsible for their test performance (Study 2). In Study 2, participants' levels of gratitude were linked to experienced support, suggesting that when individuals do not feel responsible for their outcomes, they are less likely to experience help as supportive – even though they acknowledge the value of the help received. However, we were unable to determine whether the belief that a helper is supportive increases gratitude or if increased gratitude leads to perceptions of greater supportiveness. Further research is necessary to more clearly establish the direction of this relationship.

The experience of responsibility

Our findings suggest that the acknowledgement of help need not preclude the experience of personal responsibility (and vice versa). It is possible for individuals to continue to claim responsibility for an outcome while acknowledging that others have helped them. Consistent with this possibility, measured perceptions of personal responsibility were not correlated with perceptions of helpfulness (Study 1) and manipulated perceptions of personal responsibility did not affect individuals' assessment of helpfulness (Study 2). These findings dovetail with theory that suggests that internal and external attributions can be independent (McClure, 1991, 1998). The present results are also consistent with the hypothesis that grateful individuals can have an expanded circle of attributions, such that they attribute their success to others' actions, but also take into account how they themselves have contributed to their own success (McCullough, Emmons, & Tsang, 2002).

One question that arises from this research is why our results differed from those typically found by emotion researchers (e.g., Weiner, 1979; Weiner et al., 1978). We believe that previous research methods, which directly manipulated participants' appraisals for events or used bipolar attribution scales, constrained researchers' abilities to detect the independence of personal and others' responsibility for an event. These approaches force internal and external attributions to be mutually exclusive. In our studies, however, we measured internal and external attributions separately.

Interestingly, individuals' experience of help seems to be less influenced by *why* they are or are not responsible for an outcome than by whether or not they are responsible. For example, in Study

2, participants were told that although they would receive the positive outcome, they were not responsible for their outcomes because it was attained through chance. Thus, it was not the help that deprived them of responsibility for their outcome; indeed, all participants received the same amount of help. Reflecting this, participants did not rate the experimenter's helpfulness differently across conditions. Yet the lack of responsibility led them to experience the experimenter as less supportive, even though the experimenter was perceived to be equally helpful. Thus, our results suggest that simply feeling responsible for an outcome is sufficient to change the experience of help.

The experience of help

Research on when individuals will feel gratitude has often focused on what characteristics of the help or of the helper elicit gratitude. For example, the experience of gratitude is influenced by whether the help is perceived to be valuable, costly to the benefactor, given with good intentions, and given gratuitously (Bar-Tal, Bar-Zohar, Greenberg, & Hermon, 1977; Graham, 1988; Lane & Anderson, 1976; Tesser, Gatewood, & Driver, 1968). In contrast, our findings suggest that the experience of help is not simply a function of the help or the helper, but instead also depends on how individuals experience the self. For example, participants' experience of the helper's supportiveness was jointly determined by the actual amount of help given by the experimenter and their perception of their responsibility for an outcome.

We believe that this difference may stem from previous gratitude researchers' tendency to study gratitude within non-achievement contexts, where the outcomes are less self-relevant. In contrast, our findings align with literature that emphasizes that factors other than help itself can play a role in the way individuals experience help (see Fisher et al., 1982 for a review). This line of research was largely conducted within the achievement domain. Thus, the present research suggests two possibilities: (1) that to gain a fuller understanding of individuals' experience of gratitude, we must not only consider helper and help characteristics, but also how the experience of the self influences individuals' propensity to feel grateful, and (2) that one fruitful way to study the effects of others and the self is to study gratitude in both achievement and non-achievement contexts.

Acknowledgments

The authors would like to thank Caitlin Hogan, Lara Kamrath, Dale Miller, Elizabeth Mullen, and Larissa Tiedens for constructive comments on drafts of this manuscript.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Bar-Tal, D., Bar-Zohar, Y., Greenberg, M. S., & Hermon, M. (1977). Reciprocity behavior in the relationship between donor and recipient and between harm-doer and victim. *Sociometry*, *40*, 293–298.
- Bartlett, M. Y., & DeSteno, D. (2006). Gratitude and prosocial behavior: Helping when it costs you. *Psychological Science*, *17*, 319–325.
- Broll, L., Gross, A. E., & Piliavin, I. (1974). Effects of offered and requested help on help-seeking and reactions to being helped. *Journal of Applied Social Psychology*, *4*, 244–258.
- Butcher, J. N., Dahlstrom, W. G., Graham, J. R., Tellegen, A., & Kaemmer, B. (1989). *Manual for the restandardized Minnesota Multiphasic Personality Inventory: MMPI-2: An administrative and interpretive guide*. Minneapolis: University of Minnesota Press.
- Dickson, D. H., & Kelly, I. W. (1985). The Barnum effect in personality assessment: A review of the literature. *Psychological Reports*, *57*, 367–382.
- Fisher, J. D., DePaulo, B. M., & Nadler, A. (1981). Extending altruism beyond the altruistic act: The mixed effects of aid on the help recipient. In A. Nadler, J. D. Fisher, & B. M. DePaulo (Eds.), *New directions in helping* (Vol. 3, pp. 163–185). New York: Academic Press.
- Fisher, J. D., Nadler, A., & Whitcher-Alagna, S. (1982). Recipient reactions to aid. *Psychological Bulletin*, *91*, 27–54.
- Forer, B. R. (1949). The fallacy of personal validation: A classroom demonstration of gullibility. *Journal of Abnormal Psychology*, *44*, 118–121.
- Graham, S. (1988). Children's developing understanding of the motivational role of affect: An attributional analysis. *Cognitive Development*, *3*, 71–88.
- Gross, A. E., Wallson, B. S., & Piliavin, I. (1979). Reactance, attributions, equity, and the help recipient. *Journal of Applied Social Psychology*, *9*, 297–313.
- Lane, J., & Anderson, N. H. (1976). Integration of intention and outcome in moral judgment. *Memory and Cognition*, *4*, 1–5.
- Lazarus, R. S., & Lazarus, B. N. (1994). *Passion and reason: Making sense of our emotions*. New York: Oxford University Press.
- McClure, J. L. (1991). *Explanations, accounts, and illusions: A critical analysis*. Cambridge: Cambridge University Press.
- McClure, J. L. (1998). Discounting causes of behavior: Are two reasons better than one? *Journal of Personality and Social Psychology*, *74*, 7–20.
- McCullough, M. E., Emmons, R. A., & Tsang, J. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology*, *82*, 112–127.
- McCullough, M. E., Kilpatrick, S. D., Emmons, R. A., & Larson, D. B. (2001). Is gratitude a moral affect? *Psychological Bulletin*, *127*, 249–266.
- McCullough, M. E., Tsang, J., & Emmons, R. A. (2004). Gratitude in "intermediate affective terrain": Grateful moods and their links to personality and daily life events. *Journal of Personality and Social Psychology*, *86*, 295–309.
- Mednick, S. A. (1962). The associative basis of the creative process. *Psychological Review*, *69*, 220–232.
- Nadler, A., Fisher, J. D., & Streufert, S. (1974). The donor's dilemma: Recipient's reactions to aid from friend or foe. *Journal of Applied Social Psychology*, *4*, 275–285.
- Preacher, K., Rucker, D., & Hayes, A. (2007). Assessing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research*, *42*, 185–227.
- Roseman, I. J. (1984). Cognitive determinants of emotion: A structural theory. In P. Shaver (Ed.), *Review of personality and social psychology: Emotions, relationships, and health* (Vol. 5, pp. 11–36). Beverly Hills, CA: Sage.
- Roseman, I. J. (1991). Appraisal determinants of discrete emotions. *Cognition and Emotion*, *25*, 745–751.
- Solomon, R. C. (1977). *The passions*. Garden City, NY: Anchor Books.
- Tesser, A., Gatewood, R., & Driver, M. (1968). Some determinants of gratitude. *Journal of Personality and Social Psychology*, *9*, 233–236.
- Tsang, J. (2006a). Gratitude and prosocial behavior: An experimental test of gratitude. *Cognition and Emotion*, *20*, 138–148.
- Tsang, J. (2006b). The effects of helper intention on gratitude and indebtedness. *Motivation and Emotion*, *30*, 199–205.
- Watkins, P. C., Scheer, J., Ovnicek, M., & Kolts, R. (2006). The debt of gratitude: Dissociating gratitude and indebtedness. *Cognition and Emotion*, *20*, 217–241.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*, 1063–1070.
- Weiner, B. (1979). A theory of motivation for some classroom experiences. *Journal of Educational Psychology*, *71*, 3–25.
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, *92*, 548–573.
- Weiner, B., Russell, D., & Lerman, D. (1978). Affective consequences of causal ascriptions. In J. H. Harvey, W. J. Ickes, & R. F. Kidd (Eds.), *New directions in attribution research* (Vol. 2). Hillsdale, NJ: Erlbaum.
- Weiner, B., Russell, D., & Lerman, D. (1979). The cognition–emotion process in achievement related contexts. *Journal of Personality and Social Psychology*, *37*, 1211–1220.