Attributing autonomous versus introjected motivation to helpers and the recipient experience: Effects on gratitude, attitudes, and well-being

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Attributing autonomous versus introjected motivation to helpers and the recipient experience: Effects on gratitude, attitudes, and well-being

Netta Weinstein · Cody R. DeHaan ·
Richard M. Ryan

Abstract Three studies examined the effects of motivation attributed to helpers on recipient reactions. Participants read and responded to scenarios depicting various helping events, in which indicators of helpers having autonomous or controlled (introjected) motivations were embedded. Results showed that recipients experienced more gratitude toward autonomous helpers than those helping for controlled motivations. Helping interactions involving more autonomous attributions were also predictive of positive attitudes toward helpers, positive affect, and felt closeness. Gratitude mediated the effects of autonomous versus controlled helping on recipient positive attitude, well-being, and closeness to helpers. Study 3 confirmed that helper autonomous motivation independently predicted gratitude and other positive reactions to receiving help even when controlling for other important attributions, namely, perceived helper empathy, cost to helper, valuing of help, and perceived similarity.

Keywords Motivation · Self-determination theory · Prosocial behavior · Recipients · Attributions

People help one another in a wide variety of contexts, providing time, money, effort, or other resources. Such behaviors, broadly called *prosocial behaviors*, share the characteristic of protecting or enhancing the welfare of others (Schwartz and Bilsky 1990), though they may vary

N. Weinstein (✉)
University of Essex, Essex, UK
e-mail: netta.weinstein@gmail.com

C. R. DeHaan · R. M. Ryan
University of Rochester, Rochester, NY, USA

in motivation, context, behavior, and the helper's relationship with the recipient.

Attribution theories suggest that recipients of help within prosocial interactions are also active agents attempting to make sense of their own and their helpers' roles (Jones and Davis 1965; Jones and McGillis 1976). In doing so, recipients ask of themselves a fundamentally important question: "Why did [my helper] help me?" (Fisher et al. 1982, p. 35). Their answer may be expected to influence their reactions in a number of ways, shaping perceptions of helpers, experiences of being in need, and well-being responses (Gergen 1974; Nadler and Fisher 1986; Weinstein and Ryan 2010). In the current studies, we propose that a recipient's attributions regarding a helper's autonomy or volition are important in shaping recipient responses to being helped, especially feelings of *gratitude*.

According to previous research, gratitude is an important outcome of effective helping. Gratitude is felt when one's needs are met and yet the help does not feel imposed (e.g., McCullough et al. 2008; Overwalle et al. 1995). In this study, we explore gratitude and other recipient outcomes that follow from perceptions of helpers' relative autonomous or controlled motivations for helping.

Motivation to help

To examine the role of attributed motivation, we applied self-determination theory (SDT; Deci and Ryan 1985). Building off of the earlier work of deCharms (1968), SDT has long been focused on the *perceived locus of causality* (PLOC) of actions (Deci and Ryan 1985), or the attributions concerning the causes of behavior. Specifically, SDT describes actions as falling along a continuum from a highly external PLOC in which behaviors are experienced

by the actor as heteronomous or *controlled*, to a highly internal PLOC in which behaviors are experienced as *autonomous* (Ryan and Connell 1989). Autonomous motivation is characterized as volitional or as emanating from or congruent with one's self, and reflects one's personal values and interests (Deci and Ryan 2000). Specifically within SDT there are two major subtypes of autonomous motives: *intrinsic motivation* (doing something because it is inherently enjoyable or satisfying) and *identification* (doing something because it reflects a personal value). A large body of studies has demonstrated that to the extent actors are autonomous, or have an internal PLOC for behaviors, the higher their quality of behavior and well-being (see Ryan and Deci 2000).

In contrast, controlled motivation is driven by internal or external pressures and contingencies. The two major subtypes of controlled motivation are *external regulation* (actions are done because of externally applied reward or punishment contingencies), and *introjection* (in which a person acts to live up to internalized "shoulds" or poorly integrated societal expectations, and/or to avoid feelings of guilt or shame) (Ryan and Connell 1989).

Like all intentional acts, prosocial behaviors can vary with respect to how autonomous, or self-motivated and volitional they are. To the extent that autonomy is present, interpersonal interactions are likely to be more positive for those engaging them, and more strongly associated with feelings of closeness and well-being (e.g., Deci et al. 2006; Knee et al. 2002; Patrick et al. 2007; Weinstein et al. 2010). In the prosocial domain, research within SDT on actors' PLOC or relative autonomy suggests that greater autonomy is associated with better outcomes for helpers (e.g., Gagné 2003; Weinstein and Ryan 2010). This research largely focuses on how the helper's self-reported or manipulated motivation influences outcomes.

In contrast, in this paper we focus on the *recipient's attributions* regarding *helper motivations*. We specifically explore the extent to which perceiving a helper as autonomous or controlled impacts recipient reactions such as gratitude and wellness-related outcomes. To explore controlled motives, we focus on introjection (as opposed to external regulation). Introjection is likely to be an especially important motive in everyday helping behaviors, few of which are externally mandated, but many of which can be prompted by internalized "shoulds" and self-esteem pressures to feel like a good person (Weinstein and Ryan 2010). That is, whereas some studies have focused on prosocial behavior driven by rewards or mandates (e.g., Gagné 2003; Wild et al. 1997), we focus herein on recipient attributions that the helper is acting to avoid feeling guilty, or out of a sense of obligation rather than volition.

Recipients' experiences of helping

Attribution theories are based on the idea that it is not just the helper's motivation, as it exists objectively, but also, importantly, the perception or attribution of motivation that impacts recipients (Jones and Davis 1965). That is, recipients vary in their perceptions or evaluations of their helpers (Fisher et al. 1982), and helpers can be more or less devalued or idealized as a result (Murray and Holmes 1993). Broad examples are provided by studies showing that attributions made by recipients differentially predict acceptance of aid (Rosen 1971), attraction to donors (Gergen and Gergen 1974), perceived supportiveness of aid (Fisher and Nadler 1976), and reciprocation of help (Lerner and Lichtman 1968). In addition, studies show those who perceive greater inequity or status differences between themselves and helpers experience help as threatening more than beneficial (e.g., Greenberg 1980; Nadler and Halabi 2006). Help that is perceived as supportive or encouraging also has a powerful impact on recipients' perceptions (Murray et al. 2002), as does help that is supportive of the recipient's freedom (Brehm 1966; Nadler and Fisher 1986).

Less widely studied have been recipient attributions of the helper's relative autonomy for helping. An exception is research by Wild et al. (1997). In their studies, participants were taught a skill by a helper who was identified as either externally motivated (paid to help the participant) or internally motivated (volunteered to help the participant). Those who were helped by the supposed externally motivated helper experienced lower interest in learning the skill and enjoyed the task less than those who were helped by partners to which they attributed intrinsic motivation. Wild and colleagues thus demonstrated that cues received about a helper's motivation could alter expectancies about the quality of the relationship and impact the recipient's motivation.

We extend this prior work in two ways. First we focus on introjected motives, as opposed to external rewards, as a controlled motive to contrast with autonomous motives. Introjection is probably a much more common motivational basis for prosocial acts than direct rewards, as many people may feel they should help others when confronted by someone in apparent need, feel guilty or ashamed of themselves when they don't ("I'm a bad, uncaring person"), or act for the sense of pride accompanying their provision of help ("Look at me—I am a star citizen"). Second, Wild et al. (1997) focused on recipient responses centering on the helping task. The present paper explores intrapersonal, interpersonal, and well-being outcomes, orienting to the dynamic, relational nature that characterizes prosocial interactions.

To this end, we explore three important outcomes of effective helping interactions: positive attitudes toward helpers, well-being after receiving help, and relationship closeness (Study 3). We suggest that more autonomous helping relationships may yield greater feelings of closeness between partners. *Closeness* between partners is important for a wide array of healthy relationship characteristics, including openness to self-disclosure (Hornstein 1985), trust (Anderson et al. 2002), the ability of one partner to influence the other (Nielson 1998), and well-being after interacting (Cross and Morris 2003).

Gratitude and motivation attribution

As the particular relationship of interest concerns the reception of help, gratitude on the part of recipients may be a key process responsible for their broad, positive responses to the helping interaction. *Gratitude* toward helpers is produced when recipients feel that a need they have has been met by their helper (Overwalle et al. 1995; Weiner 1985). Though 'good' feelings may arise after any enjoyable interaction, gratitude reflects admiration and joy in the relationship (Ortony et al. 1988) that is distinct from a general sense of positive affect (McCullough et al. 2008) and from any feelings of obligation toward the helper (McCullough et al. 2001). In addition, gratitude is particularly well suited for study in relation to attribution, as grateful feelings are strongly influenced by the personal meaning that people attach to the experience of giving (Lazarus and Lazarus 1994).

We thus expect that attributing autonomous as opposed to controlled motivation would lead to more recipient gratitude. Gratitude, in turn, can elicit a range of positive outcomes. For example, the experience of gratitude has been shown to foster more subjective well-being, especially positive affect (Emmons and McCullough 2003). Gratitude can also foster more positive relationships (Algoe et al. 2008; Bartlett and DeSteno 2006; McCullough et al. 2001), positive views on helper accomplishments (Jackson et al. 2001), feelings of trust (Dunn and Schweitzer 2005), and a desire to be near the benefactor (Watkins et al. 2006). Such experiences facilitate positive outcomes both in and out of the helping relationship; in particular, promoting a general sense of happiness (McCullough et al. 2002; Walker and Pitts 1998) and life satisfaction (McCullough et al. 2002; Wood et al. 2008), as well as short-term experiences of physical and psychological well-being (Emmons and McCullough 2003). These outcomes may be separated into three types of experiences: first, gratitude may be thought to influence recipient attitudes toward helpers (e.g., by eliciting positive views); second, gratitude appears to elicit a sense of well-being in

recipients; and third, gratitude appears to promote closeness in the relationship.

Related motivations and evaluative characteristics

Though motivational qualities of helpers are thought to play a role in the experience of gratitude (McCullough et al. 2008) and other benefits to recipients, relatively few studies have directly examined this expectation. Those that have together point to several factors that increase recipient receptivity to helping. Two are attributions of motivational characteristics: attributed helper altruism (other-oriented versus self-oriented motive to help, Swap 1991), and attributed helper empathy (helper care or concern for the recipient, Betancourt 1990); two are evaluative attributions: cost incurred by the helper, and perceived value to recipient.

Motivational attributions are particularly predictive of recipient responses. Early studies by Lane and Anderson (1976) to this end established that scenarios depicting the intention of a benefactor, as well as the value of the action to the recipient, could affect expected values of the help. More recent work by Tsang (2006) provides additional evidence that helper motivation plays a role in shaping recipient gratitude. Using hypothetical helping scenarios, Tsang showed that feelings of gratitude result when helpers are seen as altruistic as opposed to selfish.

Perceived helper empathy also facilitates recipient responses (Betancourt 1990) and even a slight touch perceived as empathic facilitates the well-being of recipients (Fisher et al. 1976). Helpers to whom empathy is attributed are viewed as more helpful and likable (Peterson and Gelfand 1984). These positive reactions extend from individuals to groups in conflict (Nadler and Liviatan 2006). Indeed, expression of empathy can lead to more positive attitudes towards rival outgroups and willingness to reconcile differences (Nadler and Liviatan 2006). Thus, as well as facilitating a sense of recipient gratitude (Tsang 2006), attributing empathy to helpers appears to be an important aspect of recipient wellness and positive reactions in helping contexts.

Recipient evaluations of the helping context have a similar impact. Two such contributors to recipient responses are perceived cost to the benefactor, and value to recipient. Watkins et al. (2006) used cost to benefactor to manipulate recipients' feelings of gratitude and indebtedness. Similarly, Wood et al. (2008) presented three studies, two using vignettes and another involving self-reflection, and found that both cost and value are independent predictors of recipient gratitude. A study presented by Lane and Anderson (1976) showed that participants presented with scenarios judged that recipients would feel more gratitude if the help provided held more value to them. These researchers found that

appraisals of cost and value to recipients were strongly associated with benefit perceptions and gratitude.

Explanatory power is increased when simultaneously accounting for both motivational attributions and other recipient evaluations of the help. To make this point, Wood et al. (2008) linked benefit appraisals with state gratitude manipulated by vignettes, where benefit appraisals were made up of cost to benefactor, the value of the help, and the altruism of the benefactor. Together, these three factors made up 83% of the variance in state gratitude. Similarly, Tesser et al. (1968) presented participants with vignettes that manipulated perceptions of the value of help, cost to benefactor, and benefactor's helpfulness. Participants rated the vignettes on the same three factors and reported on their own feelings of gratitude. As was the case in Wood et al. (2008), the manipulation of value, cost, and helpfulness jointly accounted for substantial variance (52%) in recipient gratitude.

Altruism and autonomy motivations

The previously reviewed studies highlight some of the important implications of attributing altruistic motives to helpers. The present research will explore a separate process—one of autonomy for helping versus internal pressure and felt obligation to help. As previously stated, autonomous actions are experienced as volitional and as emanating from one's self, whereas controlled actions based in introjects are experienced as emanating from self-imposed pressures and contingencies of worth (Deci and Ryan 2000). In contrast, altruistic behavior is defined in terms of whether helpers have ulterior motives or the opportunity to profit from their actions, including feeling good about themselves (Quigley et al. 1989; Swap 1991). One can question the issues of ulterior motives in most all behaviors, as well as the notion of gains and losses, and this is one reason why the question of altruism remains controversial. Our distinction herein is not dependent on the issue of gains or loses, but instead is between a willingness to help that is either fully volitional or stems from introjection and its accompanying self-esteem pressures and incentives.

The present research

The present research examined effects of attributed motivation, i.e., whether the helper was autonomous or controlled, on recipients' gratitude and resulting experience. We focused on the distinction between autonomous (intrinsic and identified motives) and controlled (introjected) motivation because both would be a common reasons for helping, and yet they represent differences in

perceived locus of causality (deCharms 1968; Ryan and Connell 1989). We further hypothesized that gratitude, which has been shown to be an important affect following helping, is influenced by the perceived autonomy of the helper. That is, do people feel most thankful to those they see as willingly helping, rather than those they see as pressured or obligated to do so. In turn, gratitude was expected to be predictive of anticipated relational and well-being outcomes for the recipient.

Three studies utilized hypothetical helping scenarios to study these hypotheses. We employed a within-person approach to assess responses to helpers with autonomous or controlled motivations embedded in multiple helping scenarios. Coded narratives and self-reports explored expected responses, including gratitude, perceptions of helpers, perceptions of the relationship, perceptions of self in relation to helpers, and expected consequent well-being. We hypothesized that attributing autonomous, as compared to controlled, motivation to helpers would elicit positive perceptions of helpers and well-being, and that feelings of gratitude would mediate these effects. The final study examined whether these relations would hold when accounting for a number of likely confounds, including perceived altruism and empathy, perceived cost to helper, value to recipient, and similarity. This study also includes a neutral comparison group to distinguish the potential thwarting effects of control from the positive effects of autonomy attributions, and explores effects on closeness. We expect that attributing autonomous motivation would also facilitate closeness in the helper-recipient relationship, possibly because of higher experience of gratitude.

Study 1

Study 1 explored the direct effects of attributed motivation (autonomous versus introjected) on helper perceptions, and the potential mediation of these effects by gratitude. After reading hypothetical helping situations participants provided open-ended responses that were coded for positive characteristics attributed to helpers, the quality and effectiveness of helper-recipient relationships, and for well-being consequences of receiving help. A randomized within-subjects design was used to reduce error variance due to individual differences between individuals (thus increasing power; Greenwald 1976; Tanguma 1999).

Method

Participants and procedure

Eighty University of Rochester students aged 18–32 ($M = 21$) participated for extra credit (45 women; 35

men). Of these, 78 spoke English as a first language. Sixty-seven percent identified as Caucasian, 14% Asian-American, 9% African-American, 3% Hispanic, and 7% as another ethnicity. Participants read each of four scenarios and answered an open-ended question regarding their anticipated reactions and attributions as the recipient of help during each event.

Materials

Scenarios Participants read four scenarios. Each scenario outlined in detail an event in which the participant is in need of help. Detailed descriptions were used to help participants feel as much as possible immersed in the scenario. For example, the first scenario described the protagonist as being lost in a new city, searching for help:

> Your have just arrived to a new city during a quiet early evening hour. You are tired, and looking for the hotel where you have reserved a room. The city is large and the street names confusing – you're having a difficult time navigating and are getting increasingly frustrated trying to find your hotel. As you keep wandering, trying to make sense of addresses and your fuzzy memory of the directions provided to you, you start worrying about how you'll find your way, and longing for the warmth and comfort of the room waiting for you. Your wandering leads you to a quiet street downtown. You spot a stranger walking by you, who by the confidence of her gait and look on her face seems to know the area, and finally build up courage to ask her for directions to the hotel. She stops in response to your inquiry, thinks for a moment, and then outlines a set of directions to get you to your hotel.

Participants read three other detailed scenarios similar to the one presented above, namely describing the reception of: assistance in carrying heavy books, help preparing for a difficult exam, and support in changing a flat tire.

In each scenario a sentence was embedded describing the helper's motivation. Motivation was described using a number of words indicative of either autonomous or controlled motivation. For example, in the first scenario described above, the resident was described in two ways reflecting autonomous motivation: "She sees the concern on your face and understands your unease. She therefore helps because she feels care for you, and a strong desire to help you get to your hotel" and, "She believes it's very important to help you when you are lost and uneasy. She therefore helps because helping you is important to her, and she appreciates that her help can be useful to get you to the hotel." In the *controlled motivation* scenarios: "She has

been taught that she should help you because you are lost and uneasy. She therefore helps because she likes to think of herself as helpful, and would feel that she is a bad person if she didn't help you get to the hotel" and, "She hears, as you're asking, that you would be very disappointed if she did not help, seeing that you are lost and uneasy. She therefore helps because she feels he has no choice but to help, and would be letting you down if she did not help you get to the hotel."

These sentences (2 autonomous; 2 controlled) identifying unique motivations were embedded in each of the four scenarios in random and changing order to avoid confounding condition with the nature of the help context or order of presentation.

Open-ended responses Participants were asked a single open-ended question asking them to "Describe your experiences while in this situation, including any impressions that form, feelings, thoughts, or other reactions you may have during this event." Two trained coders blind to hypotheses and to condition counted each individual statement identifying each of six themes that emerged from the written responses. First, coders recorded the number of *positive characteristics* attributed to the helper (responses ranged from 0–6, $M = 2.25$; $K = .95$), and the number of *negative characteristics* (0–6, $M = 2.00$; $K = .90$). Second, the number of statements reflecting recipients' *gratitude* to the helper was assessed (0–5, $M = 1.92$; $K = .91$). Coders were given examples of words and phrases that may reflect grateful feelings, such as "I would feel thankful," and "she would deserve my gratitude." Any such statements were treated as equally reflecting a grateful reaction. Finally, coders counted the number of emotional reactions during and after the event, distinguishing between *positive emotions* (0–8, $M = 2.95$; $K = .97$), and *negative emotions* (0–4, $M = 1.13$; $K = .98$). When sentences involved several relevant components, counting was based on the number of components. For example, "She is a kind, gentle, and honorable person and I was grateful for her help" would be coded with three positive characteristics and one statement of being grateful.

Composites From coded open-ended responses two composites were constructed to maintain brevity when presenting analyses. First, negative helper characteristics were subtracted from positive helper characteristics (average r across the four time-points $= .68$) to create an overall *positive perception* composite. Second, negative emotions were subtracted from positive emotions (average $r = -.57$) to create an *emotion* composite. All variables were centered prior to creating composites.

Results

Data analytic strategy

Each outcome was assessed four times: twice after participants read scenarios in which autonomous helper motivation was embedded, and twice after reading scenarios with controlled helpers. Correlations between major study outcomes and mediators were averaged across this and future studies and are presented in Table 1. Hierarchical linear modeling (HLM; Bryk and Raudenbush 1992) was used to accommodate the nested nature of the data (in the present studies, condition was nested within persons). Unconditional models were first conducted to determine whether sufficient variance existed to test between- and within-participant effects on each outcome. Intraclass correlations (ICC) were computed for each outcome to determine whether sufficient variation was present at level 1 to justify testing outcomes in HLM (Table 2).

The full main effects models included gender, length of essays (as a control variable), and condition. Gender was defined as a level 2 (person-level) effect because robust gender differences are known to influence perceptions of relationships (Cross and Madson 1997; Horgan and Smith 2006). At level 1, motivation condition was included as a predictor, and the length of the essay included as a covariate. Autonomous helper motivations were coded "1," while controlled motivations were coded "0". Outcome variables were log-transformed before including them in HLM analyses to account for non-normal distributions of frequency counts.

Table 2 Study 3 means for positive attitudes and well-being outcomes

	Autonomy	Neutral	Control
Main outcomes			
Gratitude	4.43 (.78)	4.12 (.85)	3.80 (.81)
Emotions (Pos–Neg)	1.06 (.98)	.73 (.73)	.14 (.62)
Positive perceptions	3.25 (.77)	3.02 (.85)	1.80 (.83)
Closeness	3.54 (.56)	3.26 (.48)	2.51 (.63)
Covariates			
Value	2.41 (.89)	2.18 (.90)	1.19 (.93)
Cost	1.50 (.80)	1.42 (.85)	1.39 (.87)
Empathy	3.38 (.61)	3.36 (.64)	2.63 (.61)
Altruism	2.21 (.61)	2.13 (.58)	1.53 (.68)
Similarity	1.83 (.98)	1.91 (.97)	.95 (.91)

Means are reflective of participants who were not dropped in the full models

Lower level mediation analyses included the condition-varying covariate, the mediator, at level 1. Mediation analyses were conducted with a series of three models as recommended by procedures outlined by Kenny et al. (2003) for lower level mediations in HLM, which are based on Baron and Kenny (1986) recommendations. As for main effects, we controlled for gender by including it in the second level.

Across analyses, the mediated level 1 equation was as follows:

$$OV_{ij} = \beta_{oj} + \beta_1 X_{1ij} + \beta_2 X_{2ij} + \beta_3 X_{3ij} + e_{ij}$$

where β_{oj} reflects the intercept or the average recipient outcome; β_1 reflects the estimated population slope of

Table 1 Preliminary bivariate correlations averaged across studies for major study variables

	1	2	3	4[a]	5[a]	6[a]	7[a]	8[a]
Cond (Con:0 vs. Aut:1)[b]	.57**	.67**	.49**	.59**	.46**	.07	.47**	.42**
1. Gratitude	–	–	–	–	–	–	–	–
2. Positive perceptions	.40**	–	–	–	–	–	–	–
3. Emotions	.46**	.49**	–	–	–	–	–	–
4. Closeness[a]	.22*	.57**	.53**	–	–	–	–	–
5. Value[a]	.10	.51**	.24*	.46**	–	–	–	–
6. Cost[a]	−.28**	.23*	−.14	.23*	.49**	–	–	–
7. Empathy[a]	.30**	.68**	.40**	.60**	.64**	.37**	–	–
8. Altruism[a]	.21*	.60**	.26*	.46**	.55**	.53**	.66**	–
9. Similarity[a]	.13	.42**	.10	.47**	.59**	.56**	.59**	.53**

Correlation coefficients reflect sampling across time-points, and do not account for within- and between-person variability distributions. Variables are not centered in preliminary correlations but are centered by person in full HLM models

Significance values based on averaged $n = 105$ (averaged across three studies)

[a] Correlations reflect data from Study 3 only. Significance values are based on $n = 120$

[b] All correlations compare Control (Con) condition, coded 0, to Autonomy condition, coded 1

* $p < .05$; ** $p < .01$

condition (coded 1, 0), β_2 represents the length of essays, β_3 reflects the mediator (gratitude), and e_{ij} represents level 1 error. As Bryk and Raudenbush (1992) recommended, level 1 variables were centered on individual rather than sample means, and level 2 variables were sample-mean centered.

Primary analyses

Gratitude The ICC indicated that 63% of the variance in gratitude was within person, justifying assessment of the full model. At level 2, women were more likely to report gratitude toward helpers, $t(78) = 3.21$, $p < .01$, $pr = .34$, though there was no relation between essay length and expressed gratitude, $t(317) = 1.00$, $p > .05$, $pr = .06$. As predicted, HLM analyses showed an effect of condition (level 1) on gratitude, $t(317) = 4.75$, $p < .01$, $pr = .26$, indicating that participants experienced a stronger sense of gratitude with autonomous as compared to controlled helpers.

Emotions The unconditional model showed substantial variance within-person in anticipated positive emotions (64%). The full model showed no effect of gender or essay length on positive emotions anticipated after the interaction, $t(78) = 1.61$, $p > .10$, $pr = .18$, and $t(317) = .57$, $p > .05$, $pr = .03$, respectively. At level 1, recipients expected to experience more positive (and less negative) emotions when attributing to their helper autonomous as compared to controlled motivation, $t(317) = 2.69$, $p < .01$, $pr = .15$.

Positive perception Fifty-five percent of the variance in positive perception was within-person. Results of the full model showed no effect of gender or essay length on positive perception, $t(78) = 1.28$, $p > .05$, $pr = .14$, and, $t(317) = 1.31$, $p > .05$, $pr = .07$, respectively, although the predicted effect was found for condition on the number of statements describing positively the helper, $t(317) = 4.17$, $p < .01$, $pr = .23$, such that autonomously framed helpers were seen substantially more positively than those to which controlled motivation was attributed.

Mediation analyses

Mediation for emotions Note that analyses presented above indicated a main effect of condition on the dependent variable, emotions (path c; see Fig. 1), and a relation

of condition and the proposed mediator, gratitude (path a). A third model was tested predicting emotions by both condition and gratitude. Results showed that recipients anticipated relatively positive emotions when grateful, $t(316) = 3.60$, $p < .01$ (b′), $pr = .20$. Furthermore, when this relation was controlled for, the effect of condition on emotions (c′) dropped to non-significance, $t(316) = 1.68$, $p > .05$, $pr = .09$; reflecting a 40% drop in the effect of motivation attributions. The Sobel (1982) test showed a significant indirect effect, $z = 2.87$, $p < .01$.

Mediation for positive perception Similarly, analyses demonstrated an effect of condition on positive perception (path c), and as stated above, a relation of condition and the proposed mediator, gratitude (path a). A third model predicted positive perception by both condition and gratitude. Results showed that recipients anticipated positive perception as a function of gratitude, $t(316) = 2.43$, $p < .05$ (b′), $pr = .14$. When this relation was controlled for, the effect of condition on positive perception (c′) dropped, but remained significant, $t(316) = 2.09$, $p < .05$, $pr = .12$, indicating partial mediation with a 48% drop in effect size ($z = 2.15$, $p < .05$).

Summary

Helpers that were described as more autonomous in scenarios were perceived more positively and were expected to facilitate positive emotional reactions. Mediation analyses showed that enhanced gratitude toward autonomous helpers accounted for anticipated positive emotions, and partially for the effects on positive perception. Study 2 was designed to replicate the impact of helper motivation conditions on outcomes, using surveys instead of coded open-ended responses to identify specific attitude and well-being outcomes.
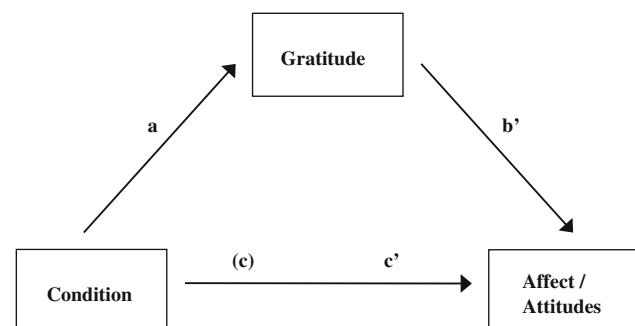
Fig. 1 Study 1 mediation model by gratitude for the effect of condition on affect or positive attitudes

Study 2

Method

Participants and procedure

One-hundred and fifteen students (82 women; 33 men) participated for extra credit. Ages ranged from 18 to 54 ($M = 20$). Of this sample, 100 spoke English as a first language, 15 did not; the two groups did not differ on relevant outcomes ($ps > .05$). Seventy-one percent were Caucasian, 15% Asian-American, 6% African-American, 4% Hispanic, and 4% other ethnicities. As in Study 1, participants read each of four scenarios, though in the present study they then responded to surveys asking about their attributions and anticipated responses for each scenario (rather than providing open-ended descriptions).

Materials

Gratitude Six items assessed feelings of gratitude, including "I would feel grateful for the help," and "I would appreciate the help." Participants reported how true each would be using a scale of 1–5 (*not at all true* to *very true*; $\alpha = .79$). These items were adapted from the gratitude questionnaire (McCullough et al. 2002) for use as a state measure.

Recipient admiration Admiration of helper (MacIntyre 1981) was assessed using five items including "the helper is an admirable person," and "the helper has honorable characteristics." Participants responded on a Likert-type scale ranging from 1 (*not at all*) to 5 (*very much*). Internal reliability (α) was .71.

Perceived kindness Five items assessed the helper's kindness as perceived by recipients, modified from the recognition-kindness scale used by Otake et al. (2006). Sample items are "The helper is a kind person," and "The helper tends to be charitable to others" rated on a 1 (*not at all*) to 5 (*very much*) point scale, $\alpha = .75$.

Positive and Negative Affect Schedule (*PANAS*; Watson et al. 1988). Participants reported how much they feel each of 20 adjectives reflecting positive affect (e.g., alert, proud, strong) and negative affect (e.g., scared, nervous, distressed) on 7-point scales (1 = *very slightly or not at all*; 7 = *extremely*). Past internal reliabilities have been acceptable, $\alpha s = .76–.85$ (Watson et al. 1988), as was present reliability, $\alpha = .82$.

Composites Surveys were centered and averaged based on empirical and theoretical ground. *Positive attitude* was composed of the average of admiration of helper and perceived helper kindness (average $r = .47$), and *emotions* reflected centered positive affect minus centered negative affect (average $r = -.32$).

Results

Data analytic strategy

Data analytic strategy was similar to that of the previous study, using HLM to test main and mediating effects.

Primary analyses

Gratitude The unconditional model demonstrated sufficient variance within-person (64% was within-person). Women anticipated feeling more grateful to their helpers, $t(114) = 2.21$, $p < .05$, $pr = .20$. Consistent with the prior study, participants anticipated feeling more grateful when they attributed their helpers' actions to autonomous motivation, $t(458) = 4.29$, $p < .01$, $pr = .20$.

Emotions The unconditional model showed substantial variance (65%) within-person in anticipated well-being. No effect of gender was found predicting emotions, $t(114) = 1.38$, $p > .05$, $pr = .13$. On the other hand, consistent with Study 1, recipients expected to experience more positive (and less negative) emotions when attributing autonomous as compared to controlled motivation to their helpers, $t(458) = 4.07$, $p < .01$, $pr = .19$.

Positive attitudes Forty-nine percent of the variance in positive attitudes was within-person. Results of the full model showed no effect of gender on positive attitudes, $t(114) = .92$, $p > .05$, $pr = .09$. As expected, recipients reported more positive attitudes to helpers portrayed as having autonomous rather than controlled motivation, $t(458) = 3.66$, $p < .01$, $pr = .17$.

Mediations

Mediation for emotions Analyses presented above indicated a main effect of condition on the dependent variable (positive emotions). Further, an effect was found for condition on gratitude. An additional model was tested that predicted emotions from condition and gratitude. Results showed that gratitude mediated the effects of condition on anticipated positive emotions. Gratitude predicted more positive emotions, $t(456) = 3.42$, $p < .01$, $pr = .16$, and when included in the model, the direct effects of condition on emotions dropped to non-significance, $t(456) = .84$, $p > .05$, $pr = .04$ (79% drop in effect size). The Sobel test indicated a significant mediating effect, $z = 2.68$, $p < .01$.

Mediation for positive attitudes Similarly, a direct effect was presented above predicting positive attitudes to helper. As noted, robust effects were also found predicting gratitude. To assess mediation, positive attitudes were predicted from condition and gratitude using one model. As for positive emotions, gratitude predicted more positive attitudes, $t(456) = 3.05$, $p < .01$ (d'), $pr = .14$. When included in the model, the direct effects of condition on positive attitudes (c') dropped to non-significance, $t(456) = 1.27$, $p > .05$ ($z = 2.49$, $p < .05$), $pr = .06$, (a 75% drop in effect size), indicating that gratitude mediated this relation.

Summary

Study 2 results were consistent with those of Study 1, showing that scenarios depicting autonomous as compared to controlled motivations of helpers were associated with more gratitude. Study 2 also showed that autonomous motivation facilitated more positive attitudes toward helpers, as indicated by recipients' admiration, perceptions of helper kindness, and more positive emotions when receiving help. Mediation analyses showed that gratitude uniquely predicted both positive emotions and positive attitudes toward helpers. Further, it was in large part because participants experienced gratitude that they saw their helpers in a positive light and expected that positive emotions would follow from the interaction.

Study 3

Though studies 1 and 2 implied that autonomous attributions predict more gratitude and other positive recipient outcomes compared to controlled motivation, the previous studies do not specify which of the two qualities of motivation is primarily responsible for the effect. In other words, we cannot conclude from the previous studies whether autonomy facilitates positive recipient reactions or whether control thwarts them, or both. Study 3 therefore compares both types of attributed motives to a neutral comparison group. An additional goal of the study was to directly explore relational outcomes of motivational attributions. As an indicator of relationship quality between helper and recipient, we assessed felt interpersonal closeness and explored mediation for this outcome.

A final goal of Study 3 was to assess the role of autonomous and controlled motivation attributions within the context of the existing attribution literature. Past predictors of recipient reactions include perceived altruism (Lane and Anderson 1976; Tsang 2006), empathy (e.g., Betancourt 1990), cost to helpers (Watkins et al. 2006), and value to recipients (Lane and Anderson 1976). Thus, we explored the role of autonomous motivation as an independent predictor of recipient gratitude, perceptions of helpers, well-being, and closeness when accounting for these effects. In addition, perceived similarity to others has been shown to influence the quality of relationships, as well as perceptions of interpersonal partners (e.g., Aron et al. 1991). It is plausible that autonomous helpers are viewed as more similar to oneself than controlled helpers, thus we also control for this variable.

Method

Participants and procedure

Participants were 120 students (63 women; 57 men). Ages ranged from 18 to 26 ($M = 20$); 115 spoke English as a first language (language did not influence study outcomes, $ps > .05$). Sixty-nine percent were Caucasian, 15% Asian-American, 8% African-American, 4% Hispanic, and 4% another ethnicity. Participants read each of three scenarios (one depicting an autonomously motivated helper, a second depicting a control motivated helper, and a final one depicting a helper with neutral (unspecified) motivation), and responded to surveys assessing gratitude, relationship constructs, attitudes to helpers, and anticipated well-being. As well, participants were asked to guess the helper's motivation, empathy, value placed on helping, and the cost of helping to the helper.

Materials

Admiration ($\alpha = .72$), kindness ($\alpha = .78$), positive affect ($\alpha = .84$), negative affect ($\alpha = .86$), and gratitude ($\alpha = .78$) were assessed as in previous studies.

Altruism Altruism was measured using seven items, which described the expected motives of the helper. They were "unselfish, altruistic, self-focused (r), interested mostly in my welfare, selfish (r), selfless, interested in her own welfare (r)." Participants responded to what degree each described the helper, using a scale from 1 (*not at all*) to 5 (*very much*). Reliability was acceptable ($\alpha = .88$).

Empathy Empathy was measured using seven items adapted from the Balanced Emotional Empathy Scale (BEES; Mehrabian 1996). Items including "the helper is quite touched by things she sees happen to me" and "the helper is a pretty soft hearted person" were rated on a 1 (*doesn't describe the helper*) to 5 (*describes the helper well*) point scale ($\alpha = .79$).

Cost Cost was measured using three items: "the helping was a cost to the helper," "there was a cost to helping," and "the helper sacrificed to help" ($\alpha = .83$). Participants

responded on 5-point scales from 1 (*not at all*) to 5 (*very much*).

Value Two items assessed perceived value to recipients: "the helping would be valuable to me," and "I would view the help as valuable" ($r = .69$). These items were included among the cost items and used the same scale (described above).

Similarity Similarity was measured with three items: "the helper is similar to me," "The helper and I share similar characteristics," and "The helper and I are of the same kind." These items, as well, were included among the cost and value items and used the same scale ($\alpha = .95$).

Closeness Feelings of closeness are strongly indicative of healthy relationships (Hornstein 1985). Participants responded to the eight-item relatedness subscale of the Intrinsic Motivation Inventory (IMI; McAuley et al. 1989; Ryan 1982), considering how they would feel in the described situation. Items included "I would feel really distant from this person" (r), and "I would like a chance to interact with this person more often." Items were paired with Likert-type scales ranging from 1 (*not at all true*) to 5 (*very true*). Internal reliability was high ($\alpha = .82$) as it had been in previous studies (e.g., McAuley et al. 1989).

Composites For brevity, surveys were centered and compiled into composites. *Positive attitudes* was composed of the average of admiration of helper and perceived helper kindness as in Study 2 (both constructs were centered), average $r = .83$. As before, *emotions* reflected centered positive affect minus centered negative affect (average $r = -.34$).

Results

Data analytic strategy

Analyses utilized HLM as before. At level 1, condition was tested with two dummy codes comparing autonomy (1) to neutral (0) helper motivation, and control (1) to neutral (0) helper motivation. All analyses controlled for value and cost at level 1 and gender at level 2. Mediations in the present study examined three potential mediators: gratitude, similarity, and perceived empathy of the helper.

Primary analyses

Closeness Fifty-eight percent of the variance in closeness was within-person. The six potential predictors were tested in a single model. Results showed that as participants viewed the help as valuable, they felt more close, $t(109) = 2.55$, $p < .05$, $pr = .24$, with more perceived cost they felt less close, $t(109) = 1.97$, $p < .05$, $pr = .19$; and with more similarity they felt more close, $t(109) = 3.36$, $p < .01$, $pr = .31$. Moreover, empathy attributed to helpers was highly predictive of felt closeness on the part of recipients, $t(109) = 2.29$, $p < .05$, $pr = .21$, as were altruistic motives attributed to the helper, $t(109) = 3.96$, $p < .01$, $pr = .35$. Controlling for these, recipients experienced a stronger sense of closeness when receiving autonomous help as compared to neutral help, $t(109) = 4.98$, $p < .01$, $pr = .43$; and less closeness when receiving controlled help as compared to neutral help, $t(109) = -3.56$, $p < .01$, $pr = .32$.

Positive attitudes ICC analyses indicated 57% of the variance in positive helper perceptions was within-person. Gender did not predict positive attitudes, $t(109) = .72$, $p > .05$, $pr = .07$. Results demonstrated results similar to those for closeness. Participants held more positive attitudes toward their supposed helpers if they believed the help was valuable, $t(109) = 3.59$, $p < .01$, $pr = .33$, marginally if they perceived themselves similar to the helper, $t(109) = 1.81$, $p < .08$, $pr = .17$, if they viewed the helper as empathic, $t(109) = 5.42$, $p < .01$, $pr = .46$, or as holding altruistic motives, $t(109) = 6.17$, $p < .01$, $pr = .51$. Controlling for this, participants reported more positive attitudes to helpers who were thought to be autonomously motivated (as compared to neutral in motivation), $t(109) = 6.46$, $p < .01$, $pr = .53$; and less positive attitudes to control motivated helpers, $t(109) = -4.47$, $p < .01$, $pr = .39$.

Emotions The unconditional model showed substantial variance (65%) within-person in anticipated well-being (no effect of gender, $t(109) = .92$, $p > .05$, $pr = .09$). Participants experienced more positive affect as the help was perceived more valuable to helpers, $t(109) = 3.99$, $p < .01$, $pr = .36$, less positive affect as they expected more cost to helpers, $t(109) = -3.09$, $p < .01$, $pr = .28$ and marginally more with more similarity, $t(109) = 1.79$, $p < .08$, $pr = .17$. As was expected based on the altruism/egoism literature, participants expected more positive affect after receiving help from altruistic helpers, $t(109) = 3.11$, $p < .01$, $pr = .29$; and after receiving help from empathic helpers, $t(109) = 1.92$, $p = .05$, $pr = .18$. Consistent with previous results, recipients expected to experience more positive (and less negative) emotions when attributing autonomous motivation to their helpers, $t(109) = 3.19$, $p < .01$, $pr = .29$; and less when attributing controlled motivation, $t(109) = -2.56$, $p < .01$, $pr = .24$.

Mediation models

Gratitude The unconditional model demonstrated sufficient variance within-person (51% was within-person) in gratitude. As in previous studies, women reported feeling more grateful to their helpers, $t(109) = 2.10$, $p < .05$, $pr = .20$. Neither value, $t(109) = 1.16$, $p > .05$, $pr = .11$, similarity, $t(109) = -1.12$, $p < .05$, $pr = .11$, or altruism, $t(109) = .87$, $p > .05$, $pr = .08$, related to gratitude. Unintuitively, higher perceived helper cost related to lower gratitude, $t(109) = -2.83$, $p < .05$, $pr = .26$; though as expected empathic helpers elicited more gratitude, $t(109) = 2.61$, $p = .01$, $pr = .24$. Controlling for this, autonomous helpers, as compared to neutral helpers, elicited more gratitude, $t(109) = 2.78$, $p < .05$, $pr = .26$. Inconsistent with our expectations, attributing controlled motivation did not influence gratitude as compared to neutral attributions of helping, $t(109) = -.70$, $p < .05$, $pr = .07$. Since gratitude did not relate to the control/neutral attributed motivation contrast, we could not test mediation by gratitude for this contrast. Therefore, follow-up models only tested mediation for the autonomy/neutral contrast.

Mediation for closeness Main effects presented above showed that the attributed autonomy condition facilitated an experience of closeness in the helping relationship, and encouraged gratitude. The final model indicated that closeness was reported as a function of gratitude, $t(108) = 5.00$, $p < .01$, $pr = .43$. Moreover, when including the mediator in the model, the effect of condition dropped to non-significance, $t(108) = .56$, $p > .05$, $pr = .05$, indicating an 88% drop in significance as a function gratitude (Sobel $z = 2.43$, $p < .05$).

Mediation for positive attitudes Expected gratitude after receiving help was related to more expected positive emotion after help, $t(108) = 4.46$, $p > .05$, $pr = .39$. When controlling for this, an initially significant effect of attributed autonomous motivation (compared to neutral) was no longer significant, though a non-significant trend remained present, $t(108) = 1.75$, $p < .08$, $pr = .17$, reflecting a 68% drop in effect size (Sobel $z = 2.36$, $p < .05$).

Mediation for emotions A final mediation model demonstrated similar results to those found for closeness and positive attitudes. Positive emotions were predicted by gratitude, $t(108) = 2.03$, $p < .05$, $pr = .19$. When controlling for gratitude, an initially significant effect of autonomous motivation attributed to helpers dropped to non-significance, $t(108) = 1.27$, $p > .05$, $pr = .12$ (77% drop in effect size; Sobel $z = 1.64$, $p = 1.00$).

Summary

Results replicated and extended those of previous studies. Relative to a neutral condition the autonomy attribution condition increased recipient gratitude, and encouraged positive attitudes toward helpers and higher expected recipient well-being. New to this study, it was found that perceived closeness with helpers was enhanced by attributing autonomous motivation to them, whereas perceived controlled motivation was associated with less closeness. Consistent with previous studies, meditational analyses showed that recipient gratitude was an important underlying contributor to holding positive helper perceptions, feeling close to helpers, and reporting well-being after attributing autonomy to helpers. The present study also showed independent effects of empathy, altruism, value, and similarity; however, controlling for these predictors did not diminish the unique importance of autonomous motivation.

General discussion

Past research has shown that attributing autonomous motivation to one's helper facilitates recipients' task engagement (Wild et al. 1997), and that supportive helping environments positively impact a wider set of recipient experiences (Brehm 1966; Fisher et al. 1983; Nadler and Fisher 1986). The present studies further explored the impact of recipients attributing to their helpers either autonomous or controlled motivations on a number of relational dimensions, and examined whether feelings of gratitude would be responsible for any found effects.

Across three sets of results, more gratitude was felt toward helpers who were seen as autonomously motivated. They were also perceived more positively: as more generous, admirable, and as exhibiting a larger number of positive and a smaller number of negative personality characteristics. Given that no actual helper characteristics (other than motivation) were described, positive evaluations may have reflected expressions of underlying positive feelings, or general positive regard for helpers seen as volitionally coming to the recipients' aid. In addition, results showed that attributing autonomous motivation to helpers led to expectations that one would have positive emotions after interactions with them. Results for well-being relate to previous studies showing that recipients of autonomously motivated helpers experience higher well-being after receiving help (Weinstein and Ryan 2010), but expand on past findings by suggesting that some well-being benefits may be derived distinctly as a function of attributions concerning volition and the gratitude that is related to them.

In fact, across the three studies, effects of attribution on positive attitudes, well-being, and closeness (Study 3) were mediated by recipients' feelings of gratitude toward helpers. There appeared to be some discrepant findings for these mediation results. Whereas gratitude mediated the relation between condition and outcomes in HLM analyses, correlation analyses demonstrated relatively low bivariate correlations between gratitude and outcomes ($rs \approx .20$–.30). This may be due to the fact that coefficients reflect sampling across time-points, failing to account for within- and between-person variability distributions. In addition, person-level centering may be a factor in increasing the effects of gratitude. However, future research should be conducted to confirm mediating effects of gratitude in prosocial contexts. These initial results for gratitude indicated that receiving aid because of another's concern or personal valuing, as opposed to their sense of internal pressure, led to feeling that the helping act was more meaningful, effective, or otherwise worthy of appreciation.

Perhaps because only autonomous helpers elicited significant gratitude, it is important that helpers are viewed as autonomous for their actions to encourage continuing prosocial acts from the recipients. As found in previous studies, these include prosocial behaviors aimed at returning the favor to the helper (McCullough et al. 2001), or behavior aimed at helping others in the community (Bartlett and DeSteno 2006; Tsang 2006).

In Study 3, attributing autonomous motivation to helpers was shown to elicit feelings of closeness. These results are consistent with literature showing that autonomous partners (La Guardia et al. 2000), and, specifically, autonomous helpers (Weinstein and Ryan 2010), facilitate a sense of intimacy in relationships. These results also implied that some closeness elicited in such relationships might be specifically a function of partners' attributions of motivation.

Study 3 also showed that the effects of autonomous and controlled motivation attributions on gratitude and indirectly on perceptions of helpers, closeness, and expected well-being were independent of the effects of attributions concerning altruism and empathy, both of which showed remarkable explanatory power and potential operational overlap with autonomy attributions. Conceptually, these constructs are distinct: whereas autonomy attributions reflect the participant's understanding of the helper acting volitionally and free of societal or self-imposed pressures, empathy and altruism attributions are reflective of the helper's goal focus toward self-fulfillment or other-fulfillment and care or concern for recipients (e.g., Thomas and Batson 1981). Study 3 showed that these constructs were also, empirically speaking, distinct predictors; autonomy

attributions demonstrated relatively small correlations with empathy ($r = .30$) and altruism ($r = .21$), and all three demonstrated unique contributions to positive recipient reactions to help.

In addition, we tested whether perceived cost to helpers and value of the help to recipients might be responsible for the effects of autonomy and control conditions, and showed that neither of these constructs accounted for the effects of motivational attributions. Finally, because similarity is an indicator of closeness, and reflects viewing one's partner as sharing personal traits (e.g., Aron et al. 1991; Holmes and Rempel 1989), the concern was that it confounded effects on recipient reactions. Results showed that perceived similarity was not, however, responsible for the positive impact that autonomy attributions had on relational outcomes (or the negative impact of control attributions). These findings have implications broader than the present research on attributions because they support a general assumption that autonomy, altruism, and empathy may be empirically as well as conceptually distinguished from one another, and suggest that autonomy has additional explanatory power above and beyond its relation to altruistic motives, empathy, and cost, value, and similarity perceptions.

There were several limitations to these studies that could be addressed in future research efforts. First and foremost, these results were based on hypothetical situations in which participants imagined themselves in the role of the recipient. This line of research would benefit from future studies placing participants in actual prosocial interactions to determine effects of their attributions on recipient responses. In addition we relied on self-reported relational measures. Behavioral indicators of positive reaction, such as recipient reciprocation (e.g., Bar-Tal et al. 1977), or physiological indicators of positive challenge (Blascovich and Tomaka 1996; Cacioppo et al. 2000), would be interesting to explore. We also used students as participants, and more varied samples should be examined for these attribution-based patterns.

Despite these limitations, this research represents an initial exploration into the role of attributions concerning autonomy on recipients experience of gratitude, and their effects on various personal and relational aspects of recipients' experiences. The findings emphasize the importance of perceived helper motivation in defining the experience of the recipient, and show that more the more helpers are seen as willingly or autonomously helping, the more their assistance enhances recipients' admiration, sense of closeness, and well-being. The studies also highlight the role of gratitude in mediating the effects of perceived helper autonomy, and in creating a general sense of wellness after receiving help.

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