
Who Takes the Most Revenge? Individual Differences in Negative Reciprocity Norm Endorsement

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The authors report that beliefs favoring the reciprocation of unfavorable treatment form a unitary factor that is distinct from beliefs favoring the reciprocation of favorable treatment. Individual differences in endorsement of this negative reciprocity norm were related to (a) beliefs that people are generally malevolent; (b) inclination toward anger in everyday life; (c) anger, disagreement, and ridicule directed toward a new acquaintance who treated participants unfavorably; and (d) reduced anxiety, positive emotional engagement, and encouragement of a new acquaintance who treated participants favorably. These findings suggest that individual differences in endorsement of the negative norm of reciprocity influence the extent of vengeance.

Keywords: *revenge; vengeance; reciprocity; retribution; anger*

Harming others invites anger and revenge. When partners in either normal or distressed marriages were asked to discuss ways to resolve their disputes, the annoyance and criticism expressed by one partner produced anger and criticism by the other (e.g., Cordova, Jacobson, Gottman, Rushe, & Cox, 1993; Krokoff, Gottman, & Roy, 1988; Sabourin, 1995; Zietlow & Sillars, 1988). When college students disagreed with the views of others on a discussion topic, the disagreement was returned on a subsequent discussion topic (Cialdini, Green, & Rusch, 1992).

According to Aristotle (384-323 B.C.), a conspicuous slight without justification produces anger and an impulse toward revenge, whose fulfillment produces pleasure (Aristotle, 1941, pp. 1380-1381; see Sabini & Silver, 1982). Harm returned for harm received is a venerable moral precept that provides social approbation for revenge and that serves the societal objective of discouraging mistreatment. The principle of retaliation (*lex talionis*) was stated some 3,000 years ago in the

Hammarabian code, later in Aristotle's writings, and in the Biblical injunction of "A life for life, eye for eye, tooth for tooth . . . bruise for bruise" (Exodus 21:23-25, New American Standard Version). In common usage, the term *retribution* emphasizes the return of unfavorable treatment as an appropriate response to a misdeed (*Webster's Universal College Dictionary*, 1997). The terms *revenge* and *vengeance* give recognition to the anger that generally accompanies an individual's return of unfavorable treatment. Beyond their subtle differences, these terms capture the general ethic that unfavorable treatment should be paid back in kind.

In addition to its role in interpersonal relationships, retribution is used to reaffirm and validate moral standards (Vidmar, 2002b). Carlsmith, Darley, and Robinson (2002) found that most college students endorse a just desserts model of criminal justice rather than a deterrence model. Most students believe that criminal punishment should be determined by the seriousness of the crime rather than by punishment's effectiveness in preventing similar crimes.

Justifications for interpersonal retribution have received considerable attention from philosophers, novelists, and playwrights (Henberg, 1990) but surprisingly little analysis by social scientists (see Vidmar, 2002a). Gouldner's (1960) seminal explication of the reciprocity norm dealt primarily with the obligation to repay favorable treatment. However, he did briefly discuss a possible

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negative reciprocity norm: incorporating a retaliation principle in which “the emphasis is placed not on the return of benefits but on the return of injuries” (p. 172). Other researchers have similarly argued that retribution for physical and symbolic mistreatment is encouraged by a negative reciprocity norm (e.g., Cialdini et al., 1992; Helm, Bonoma, & Tedeschi, 1972; Tedeschi, 1983; Youngs, 1986).

Based on Gouldner’s view, the negative norm of reciprocity would comprise a unitary set of beliefs favoring retribution as the correct and proper way to respond to unfavorable treatment. A person’s endorsement of the negative norm of reciprocity might be influenced by enculturation and by rewards or punishments received for retributive behaviors. In addition, individuals with a propensity toward anger might more strongly endorse the negative reciprocity norm as a justification for consummating their anger by punishing the instigator of mistreatment.

The present studies were initiated to obtain evidence concerning the existence of a negative reciprocity norm and the influence of the individual’s endorsement of the norm on the return of unfavorable treatment. The first study assessed whether people possess a distinctive set of beliefs concerning the appropriateness of returning unfavorable treatment. The second study examined the relationship of individual differences in the endorsement of the negative reciprocity norm with emotional and retributive reactions to unfavorable and favorable treatment.

STUDY 1: NEGATIVE RECIPROCITY BELIEFS

As an alternative to distinct positive and negative reciprocity norms, beliefs concerning the return of favorable and unfavorable treatment might comprise a single norm supporting the return of both favorable and unfavorable treatment. On the basis of such a general reciprocity norm, individuals strongly endorsing positive reciprocity also would tend to strongly endorse negative reciprocity. By contrast, based on our assumption of a distinct negative reciprocity norm, we predicted little relationship between negative and positive reciprocity beliefs.

To provide additional evidence on the distinctiveness of the negative and positive reciprocity norms, the first study considered the relationship of each to interpersonal trust. Several investigators have suggested that society promotes a generalized expectational trust in the benevolence and helpfulness of others (Cunha, 1985; Deutsch, 1958; Pruitt, 1981; Yamagishi & Yamagishi, 1984). According to Gouldner (1960), the positive reciprocity norm serves as a starting mechanism that encourages individuals to invest their resources in others who have the capacity to meet their needs (cf. Eisenberger,

Cotterell, & Marvel, 1987; Greenberg, 1980). People who are very trusting that others are benevolent should strongly support the positive reciprocity norm as an effective way to maximize long-term gains. In contrast, individuals who endorse vengeance as an important strategy to avoid being taken advantage of should have little trust in the benevolence of others. Therefore, expectational trust should be more closely related to endorsement of the positive reciprocity norm than to endorsement of the negative reciprocity norm.

We wished to distinguish the negative reciprocity norm from two personality traits that might foster revenge following unfavorable treatment. First, need for dominance involves the inclination to “control one’s environment, influence others, and express opinions forcefully” (Gray, Jackson, & McKinlay, 1991, PAGE?). People with a strong need for dominance might be inclined to interpret unfavorable treatment as an attempt to control their behavior through intimidation. A high need for dominance might encourage endorsement of the negative reciprocity norm as conducive to maintaining control. Therefore, we wished to show that the need for dominance and the negative reciprocity norm are distinct. Second, impulsivity has been understood as the tendency to act spontaneously, without deliberation, and to give free vent to one’s wishes, feelings, and emotions (Jackson, 1967). Impulsive individuals might endorse the negative reciprocity norm as a justification for spontaneous reciprocation of unfavorable treatment. Thus, we examined the distinctiveness of the negative reciprocity norm from impulsivity.

Individuals with a high proclivity toward anger would strongly favor the negative reciprocity norm as private and public justification for consummating their anger with retribution when they are mistreated (cf. Averill, 1982; Sabini, 1995; Sabini & Silver, 1982). We therefore predicted a positive relationship between endorsement of the negative reciprocity norm and the self-assessed tendency toward anger in everyday life (cf. Buss & Perry, 1992).

Method

PARTICIPANTS AND DESIGN

As part of a college course requirement, 564 introductory psychology students (193 men, 371 women) were given a questionnaire concerning (a) the advisability of returning unfavorable treatment (negative reciprocity norm), (b) the advisability of returning favorable treatment (positive reciprocity norm), (c) generalized trust in the beneficence of others (expectational trust), (d) the traits of dominance and impulsivity, and (e) the disposition toward anger in everyday life.

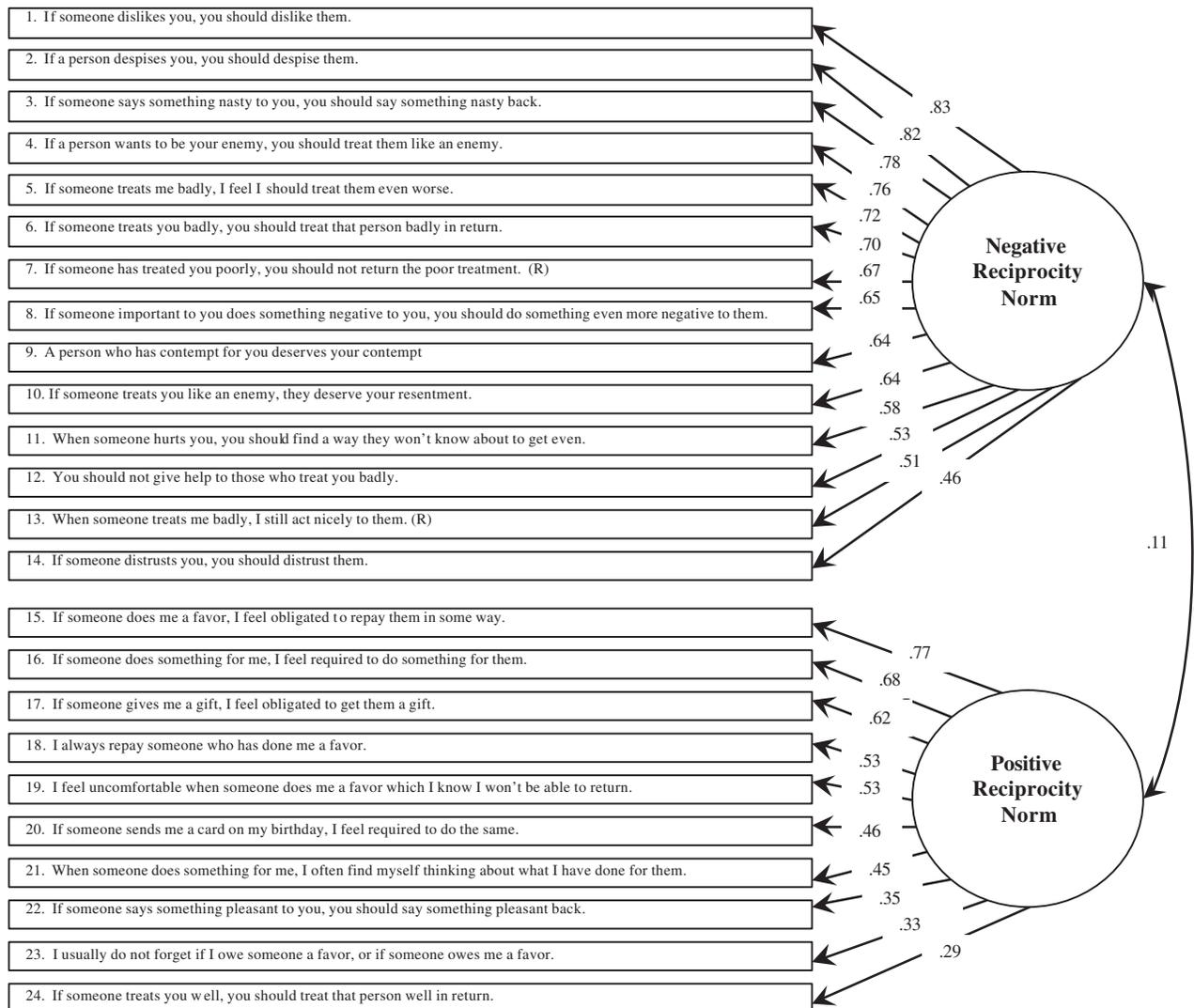


Figure 1 Confirmatory factor analysis with a two-factor solution for items assessing negative reciprocity norm and positive reciprocity norm. NOTE: Indicator loadings and factor correlations are standardized. (R) = reverse coded items.

MEASURES

Negative reciprocity norm. The authors developed 14 statements concerning the advisability of retribution for unfavorable treatment. These items are the first 14 listed in Figure 1. Participants responded to the statements by expressing their agreement on a 7-point Likert-type scale (1 = *strongly disagree*, 7 = *strongly agree*). Except where otherwise noted, participants responded to other sets of items on the same Likert-type scale.

Positive reciprocity norm. Existing scales that assess general beliefs about interpersonal relationships contain few items directly related to positive reciprocity. Three such items, obtained from the Exchange Orientation Scale (Murstein & Azar, 1986), were used in the present study together with eight that we designed specifically for this purpose. The positive reciprocity items are

numbered 15 to 24 in Figure 1, of which Items 18, 20, and 22 were taken from the Exchange Orientation Scale.

Expectational trust. We selected 15 items used by Cunha (1985) that appeared to most directly assess expectational trust.

Dominance and impulsivity. Dominance was assessed with the dominance subscale of the Jackson Personality Research Form (Jackson, 1984, Form E). Gray et al. (1991) reported a .84 alpha coefficient for the dominance subscale. Impulsivity was assessed with the impulsivity subscale of the Jackson Personality Research form. We used the 17 dominance items and the 9 impulsivity items about which, in our opinion, college students would have the most experience. Participants expressed agreement on a 5-point Likert-type scale (1 = *very slightly true of me*, 5 = *very highly true of me*).

TABLE 1: Study 1 Scale Reliabilities and Intercorrelations

Scale	M	SD	1	2	3	4	5	6	7
1. Negative reciprocity norm	2.41	1.06	(.92)						
2. Positive reciprocity norm	4.09	.75	.10**	(.77)					
3. Expectational malevolence	2.58	.89	.48**	.24**	(.79)				
4. Expectational benevolence	3.72	.92	-.25**	.23**	-.33**	(.72)			
5. Dominance	3.26	.66	.11**	.01	.07	.02	(.82)		
6. Impulsivity	2.70	.66	-.11**	.07	-.05	.12**	-.06	(.62)	
7. Dispositional anger	1.88	.86	.35**	.10*	.33**	-.24**	.28**	-.27**	(.82)

NOTE: $N = 564$. Cronbach's alpha is on the diagonal.

* $p < .05$. ** $p < .01$, two-tailed.

Dispositional anger. To obtain a measure of the dispositional tendency toward anger in everyday life, the seven items of the anger subscale of the Buss and Perry (1992) Aggression Questionnaire were used. Participants expressed agreement on a 5-point Likert-type scale (1 = *very slightly true of me*, 5 = *very highly true of me*). The source article reported acceptable internal reliability (coefficient alpha = .83), with scores positively related to peer nominations of quickness to anger.

Results and Discussion

Internal reliabilities and intercorrelations of all scales are given in Table 1.

NEGATIVE AND POSITIVE RECIPROCITY ITEMS

To assess the relationship between the negative and positive reciprocity items, a confirmatory factor analysis was carried out on the combined set using LISREL8 statistical software. The models were estimated from the covariance matrix produced by PRELIS2 and employed maximum likelihood estimation. Two models were compared: a model with all of the items loading on a global reciprocity latent variable (general reciprocity model) and a model with the negative and positive reciprocity items loading on two separate latent variables (two-factor reciprocity model). The indices of fit used to examine the two models were as follows: the comparative fit index (CFI), the Tucker-Lewis Index (TLI), the root mean square error of approximation (RMSEA), the goodness of fit (GFI), and the adjusted goodness of fit (AGFI). To assess whether the two-factor reciprocity model fit the data better than general reciprocity model, a χ^2 significance test for the difference between the two models was performed (James, Mulaik, & Brett, 1982).

The general reciprocity model showed a poor fit as indicated by a highly significant RMSEA (.098, $p < .0001$) and low values of CFI, TLI, GFI, and AGFI (.72, .70, .73, and .68, respectively). The model assessing the two-factor solution that assumed independent negative and positive reciprocity norms is pictured in Figure 1. The obtained values of CFI, TLI, GFI, and AGFI (.91, .91, .90, and .88, respectively) were favorable relative to the sug-

gested minimal cutoffs for satisfactory model fit (Marsh, Balla, & Hau, 1996; Schumacker & Lomax, 1996). The RMSEA value was nonsignificant (.045, $p = .70$), also indicating a close fit to the data. Comparing the two-factor and general reciprocity models directly, the two-factor model increased the CFI by .19, which is far greater than the amount of .01 designated by Widaman (1985) as indicating substantive model improvement. Furthermore, the χ^2 difference between the models was highly significant, $\chi^2(1) = 285.4$, $p < .01$, suggesting that the two-factor reciprocity model provided a better fit than the general reciprocity model. The far better fit of the two-factor reciprocity model than the general reciprocity model and the small size of the correlation between the two latent variables ($r = .11$) suggests that beliefs favoring negative and positive reciprocity norms are largely independent.

We also examined whether a two-factor reciprocity model was superior to the general reciprocity model among men and women separately. Comparing the two-factor reciprocity model with the one-factor model, the CFI increased .16 and .21 for the male and female participants, respectively, which exceeds the .01 cutoff for model improvement suggest by Widaman (1985). Statistically significant drops in the χ^2 value of model fit similarly indicated the superiority of the two-factor reciprocity model among men and women separately; respectively, $\chi^2(1) = 355.4$, $p < .01$, and $\chi^2(1) = 759.7$, $p < .01$.

Expectational trust, dominance, impulsivity, and dispositional anger. Separate exploratory factor analyses and examination of internal reliabilities carried out on the dominance, impulsivity, and dispositional anger scales indicated unitary constructs. By contrast, the scree plot for expectational trust indicated two factors; there were two substantial eigenvalues, accounting for 26.4% and 10.6% of the total variance, respectively. The first factor (expectational malevolence) involved the beliefs that people are likely to take advantage of others, to be untrustworthy, and to be cruel and spiteful. The second factor (expectational benevolence) involved the beliefs that people generally treat others well and are kind and

fair. Dropping a single item that loaded about equally on the two factors resulted in separate scales with acceptable internal reliabilities (see Table 1).

Relationships of the positive and negative reciprocity norms with expectational malevolence, expectational benevolence, dominance, impulsivity, and dispositional anger. As shown in Table 1, expectational malevolence was much more closely related to the negative reciprocity norm than to the positive reciprocity norm, $t(561) = 4.78, p < .01$. Expectational benevolence was directly associated with the positive reciprocity norm and was inversely associated with negative reciprocity norm, and this difference was statistically reliable, $t(561) = 9.05, p < .01$. Dispositional anger was more closely related to the negative reciprocity norm than to the positive reciprocity norm, $t(561) = 4.85, p < .01$. Dominance and impulsivity showed only weak relationships with the negative reciprocity norm. Thus, the negative reciprocity norm does not appear to be a byproduct of the dispositions to dominate others or to take impulsive action following mistreatment.

The first study's findings are consistent with a negative norm of reciprocity involving a belief in reciprocating unfavorable treatment in kind. Retributive beliefs formed a unitary factor, varying in strength among individuals, that was distinct from beliefs concerning the reciprocation of positive treatment. The negative and positive reciprocity norms were further distinguished by their relationships with interpersonal trust. Expectational malevolence was more closely associated with the negative reciprocity norm than with the positive norm of reciprocity. Expectational benevolence was positively related to the positive reciprocity norm and was negatively related to the negative reciprocity norm. Also, the self-reported disposition toward anger in everyday life was positively associated with endorsement of the negative reciprocity norm.

STUDY 2: RECIPROCATION OF UNFAVORABLE AND FAVORABLE TREATMENT

Our second study examined the relationship between endorsement of the negative reciprocity norm and behavioral reactions to experimentally manipulated unfavorable and favorable treatment. We predicted that people who strongly endorse the negative reciprocity norm would react with heightened anger and unfavorable treatment toward a new acquaintance who disagreed with them and belittled them. We also investigated how people who strongly endorse the negative reciprocity norm would respond to favorable treatment received from a new acquaintance. Because of low trust in the benevolence of others, those who strongly endorse the negative reciprocity norm might be suspi-

cious of those who treat them favorably and might therefore respond less favorably in return.

Alternatively, people endorsing the negative reciprocity norm may be pleasantly surprised and emotionally relieved by the receipt of favorable treatment. According to Aronson and Lindner (1965), when aversive treatment is expected from another person, the occurrence of favorable treatment reduces anxiety and thereby increases enjoyment of the treatment and liking for the instigator. The expectation of aversive treatment from a new acquaintance, whether established by mistreatment or an unfavorable initial description of the acquaintance, led recipients to respond more positively to subsequent favorable treatment from that individual (e.g., Aronson & Lindner, 1965; Berscheid, Brothen, & Graziano, 1976; Burgoon & Le Poire, 1993; Burgoon, Le Poire, & Rosenthal, 1995; Mettee, Taylor, & Friedman, 1973). Results from Study 1 suggest that people who strongly endorse the negative reciprocity norm show an increased tendency to expect mistreatment from others. Therefore, among people who endorse the negative reciprocity norm, the disconfirmation of expected mistreatment might lead to anxiety reduction and produce more favorable treatment of the instigator.

Method

PARTICIPANTS

One hundred and forty-five female introductory psychology students participated as part of a course requirement. In pilot testing, some participants displayed considerable anger toward the experimental confederates. In view of a presumably greater proclivity by men, on average, than women for physical violence following mistreatment, we chose to carry out the study entirely with female participants.

MATERIALS

Advertisements were affixed to the adjacent pages of a 23- × 28-cm notebook. The two advertisements, presented side by side, promoted similar consumer products. Nonverbal interaction between participant and confederate was recorded with a video camera through an 8-cm aperture in curtains covering a one-way mirror. A hidden microphone, attached to the wall behind the participants, was used to record conversation.

PROCEDURE

The students were administered the negative reciprocity norm scale, developed in Study 1, among a larger set of questions in their introductory psychology courses. One to 3 months later, pairs of students, one member of which was a confederate of the experimenter, were told they were to take part in a study of the

effectiveness of advertisements. The participant and confederate were told the experimenter was assessing student opinions concerning why some advertisements are more effective than others and that, following this procedure, they would be asked to fill out a questionnaire concerning the effectiveness of the advertisements. The four female confederates were kept uninformed of the participants' negative reciprocity norm scores and were randomly assigned in equal numbers across the three experimental conditions.

Students were randomly assigned to negative treatment, positive treatment, and control groups. They were given a notebook containing 20 pairs of ads (for the control group, 10 pairs), about which they were to comment. In the case of the positive and negative treatment groups, based on an apparently random draw, the participant was asked to give her opinions first on the initial 10 advertisements, concerning which of the two ads was more effective in selling the products and to briefly explain the reasons why. The confederate was asked to respond in turn with her own opinion and a brief explanation, which were standardized responses memorized by each confederate. In the unfavorable treatment condition, the confederate was trained to agree with the participant's first choice and then disagree and offer a plausible explanation for the remaining nine choices. On Pairs 3, 6, and 9, the confederate provided ridicule in addition to disagreement. On Pair 3, the confederate stated, "That's ridiculous [pause]. Obviously, this one [points to ad the participant did not choose] is more effective." On Pair 6, the confederate asked rhetorically "What's your problem?" before stating the reasoning behind her disagreement. On Pair 9, the confederate stated, "You're not very good at this [spoken slowly for emphasis]. The one on the left [right] is definitely better."

In the favorable treatment condition, the confederate was trained to disagree with the first choice and then agree with the remaining nine choices. On Pairs 4, 5, 7, and 8, the partner's explanations paralleled those used in the unfavorable treatment condition except that they favored the participant's choice (e.g., which of the two ads more effectively elicited attention). On Pairs 2 and 10, the partner paraphrased the participant's explanation. On Pairs 3, 6, and 9, the confederate provided praise in addition to agreement. On Pair 3, the partner stated, "That's a really good point. I never would have picked up on that." On Pair 6, the partner stated, "You have really good ideas," before stating an explanation of her choice. On Pair 9, the partner stated, "You're really good at this. That one is better."

On Pairs 11 through 20, the confederate was the first to give her opinions, making a series of predetermined choices and giving predetermined explanations of those

choices. This provided the participants an opportunity to reciprocate the favorable or unfavorable treatment received with the first 10 pairs. In the control condition, the first 10 pairs of advertisements were omitted and, based on an apparent random selection, the confederate gave her choices and explanations first. Thus, all participants were treated identically on the final 10 pairs of advertisements: The confederate stated which advertisement she preferred and her reasoning, after which the participant agreed or disagreed and gave her own reasoning.

Following this phase, participants answered an open-ended questionnaire concerning possible determinants of the effectiveness of advertisement. Participants were debriefed concerning the rationale of the study, including an explanation of why deception had been necessary.

Results and Discussion

Three undergraduates, who were unaware of the participants' strength of endorsement of the negative reciprocity norm or experimental group assignments, evaluated the participants' responses to the confederates' stated opinions regarding the final 10 pairs of advertisements. The judges counted the number of times, out of a total of 10 possible, that the participants explicitly disagreed with the confederate's choice of the most effective advertisement. Also, the judges used 5-point Likert-type scales (1 = *very low*, 5 = *very high*) with accompanying verbal descriptions to assess the following five behavioral dimensions: (a) anger, as indicated by such nonverbal behaviors as frowning, treating the experimental materials roughly, and giving emphatic negative head shakes (Hubbard et al., 2002); (b) ridicule in the form of derisive, insulting comments; (c) anxiety, as indicated by tenseness, unease, and discomfort (e.g., squirming and fidgeting) (Zeisset, 1968); (d) encouragement, as indicated by compliments and paraphrases of the partner's opinions; and (e) positive emotional engagement, as indicated by warm tone of voice, affirmative head nods, and eye contact (Perlman & Fehr, 1987). The judges were told that high scores should reflect greater intensity and frequency of occurrence of the behavior they were assessing.

Before beginning their ratings, the judges first viewed 30 test sessions to practice attending to the defining descriptions and observing the range of occurrence of these behaviors. The ratings of the three judges on each of the behavioral dimensions were averaged to obtain a score ranging from one to five. The effective interrater reliabilities (Rosenthal, 1984) on these six dependent variables (ranging from .91 to .97) were much higher than the intercorrelations among these variables (.10 to .67), suggesting a large degree of independence among the measures (Nunally, 1967).

Although our measure of anger was nonverbal and our measure of ridicule was verbal, the negative affectivity associated with both behavioral dimensions suggested they might covary to such a degree as to be best conceived as a single dimension. Therefore, we carried out a confirmatory factor analysis comparing two models: anger and ridicule as separate factors or anger and ridicule combined to form a single negative affect factor. The three judges' ratings served as the indicators of the latent variables in these analyses. Comparing the general negative affect model to the two-factor model, a .18 increase in the CFI (Widaman, 1985) and a significant drop in the chi square, $\chi^2(1) = 143.4, p < .01$, indicated that anger and ridicule are better represented as distinct dimensions than as a single dimension. Similarly, our measures of encouragement and positive emotional engagement could be argued to form a single behavioral dimension. We then carried out an analogous confirmatory factor analysis on encouragement and positive emotional regard. Comparing a single positive affect factor to the two-factor model, a .04 increase in the CFI (Widaman, 1985) and a significant drop in the chi square, $\chi^2(1) = 28.6, p < .01$, indicated that positive emotional engagement and encouragement are better represented as separate dimensions than as a single dimension. Therefore, we retained all five behavioral dimensions for subsequent analysis.

For each dependent variable, a simultaneous regression was used to assess the effects of the confederate's treatment of the participant (dummy coded as unfavorable, control, favorable), the participants' strength of endorsement of negative reciprocity norm, and the interaction between these two variables. As shown in Table 2, the favorableness of treatment had a reliable main effect on all the dependent variables. Simple-effects tests were carried out with each dependent variable comparing the control group to (a) the unfavorable treatment group and (b) the favorable treatment group (Aiken & West, 1991). Comparisons of the unfavorable treatment condition with the control condition were consistent with previous findings showing that unfavorable treatment produces anger and retaliation. The unfavorable treatment group ($M = 3.29$) disagreed significantly more frequently with the partner than did the control group ($M = 1.83$), $t(144) = 4.78, p < .0001$, and showed greater anger ($M_{\text{unfavorable}} = 1.67, M_{\text{control}} = 1.04$), $t(144) = 7.34, p < .0001$, greater ridicule ($M_{\text{unfavorable}} = 1.23, M_{\text{control}} = 1.02$), $t(144) = 3.88, p < .001$, less encouragement ($M_{\text{unfavorable}} = 1.60, M_{\text{control}} = 2.22$), $t(144) = 4.64, p < .001$, and less-positive emotional engagement ($M_{\text{unfavorable}} = 1.46, M_{\text{control}} = 2.24$), $t(144) = 4.85, p < .001$. The one unexpected finding was the absence of reliably greater anxiety by the unfavorable treatment group ($M = 3.09$) relative to the control group ($M = 3.05$), $t(144) = 0.28$.

Comparisons of the favorable treatment condition with the control condition were generally as predicted. As compared to the control group ($M = 3.05$), the favorable treatment group showed reduced anxiety ($M = 2.50$), $t(144) = 4.07, p < .001$), increased encouragement ($M_{\text{favorable}} = 2.50, M_{\text{control}} = 2.22$), $t(144) = 4.25, p < .001$, and a marginally significant increase in positive emotional engagement ($M_{\text{favorable}} = 2.53, M_{\text{control}} = 2.24$), $t(144) = 1.82, p < .07$. The favorable treatment group ($M = 1.43$) did not agree with their partner more frequently than did the control group ($M = 1.83$), although the results were in the predicted direction, $t(144) = 1.32$. As expected, the positive treatment group did not differ reliably from the control group's negligible levels of anger ($M_{\text{favorable}} = 1.01, M_{\text{control}} = 1.04$) and ridicule ($M_{\text{favorable}} = 1.01, M_{\text{control}} = 1.02$) (respective $ts = .33$ and $.19$).

The main predictions of interest concerned the interaction between endorsement of the negative norm of reciprocity and the treatment conditions. As shown in Table 3, the negative reciprocity norm moderated the effects of the experimental treatments on the number of disagreements, anger, ridicule, anxiety, encouragement, and positive emotional engagement. Simple slopes, reported in Table 3, were used to assess the effects of the negative reciprocity norm on each dependent variable separately for the unfavorable treatment condition, the favorable treatment condition, and the control condition. As shown in Figure 2, following unfavorable treatment, number of disagreements, anger, and ridicule were greater among individuals who strongly endorsed the negative reciprocity norm.

With favorable treatment, as shown in Figure 2, positive emotional engagement and encouragement were greater among people who strongly endorsed the negative reciprocity norm, and the reduction of anxiety among such individuals was marginally significant ($p < .10$). A mediational analysis, using Baron and Kenny's (1986) procedures, was carried out to investigate whether anxiety reduction mediated these enhanced positive responses to favorable treatment among individuals strongly endorsing the negative reciprocity norm. Bearing in mind that the evidence of the relationship between negative reciprocity norm endorsement and lowered anxiety is weak ($p < .10$), the remaining conditions for mediation were satisfied. The negative reciprocity norm was significantly related to both encouragement ($\beta = .34, p < .01$) and positive emotional engagement ($\beta = .29, p < .05$). Furthermore, when anxiety was added to the equation, the relationships between the NRN and the dependent variables, encouragement and positive emotional engagement, were no longer statistically significant ($\beta = .20, p = .07$; $\beta = .13, p = .19$, respectively).

TABLE 3: Simultaneous Regression Analyses and Simple Slope Tests

<i>Variable</i>	R^2	B	SE B	β	<i>Simple Slope t</i>
Dependent: Disagreements	.28				
Treatment		-.92	.14	-.47**	
Negative Reciprocity Norm (NRN)		.28	.11	.19**	
Treatment \times NRN interaction		-.25	.12	-.14*	
Favorable treatment simple slope					0.39
Control simple slope					0.81
Unfavorable treatment simple slope					3.17**
Dependent: Anger	.34				
Treatment		-.33	.04	-.54**	
NRN		.08	.03	.16**	
Treatment \times NRN interaction		-.07	.04	-.13*	
Favorable treatment simple slope					0.35
Control simple slope					0.51
Unfavorable treatment simple slope					3.22**
Dependent: Ridicule	.17				
Treatment		-.11	.02	-.33**	
NRN		.04	.02	.16*	
Treatment \times NRN interaction		-.05	.02	-.18*	
Favorable treatment simple slope					0.47
Control simple slope					0.49
Unfavorable treatment simple slope					3.34**
Dependent: Anxiety	.38				
Treatment		-.29	.06	-.36**	
NRN		.01	.05	.01	
Treatment \times NRN interaction		-.11	.05	-.35*	
Favorable treatment simple slope					-1.68
Control simple slope					1.51
Unfavorable treatment simple slope					0.39
Dependent: Encouragement	.42				
Treatment		.59	.06	.62**	
NRN		-.01	.05	-.01	
Treatment \times NRN interaction		.16	.05	.19**	
Favorable treatment simple slope					2.70*
Control simple slope					-1.31
Unfavorable treatment simple slope					-1.07
Dependent: Positive emotional engagement	.29				
Treatment		.53	.07	.51**	
NRN		.03	.06	.03	
Treatment \times NRN interaction		.16	.07	.18**	
Favorable treatment simple slope					2.20*
Control simple slope					.01
Unfavorable treatment simple slope					-1.34

NOTE: *B* indicates unstandardized regression coefficient. β indicates standardized regression coefficient. Treatment condition dummy code: -1 = unfavorable, 0 = control, 1 = favorable.

* $p < .05$. ** $p < .01$, two-tailed.

As predicted, endorsement of the negative reciprocity norm moderated the effects of unfavorable and favorable treatment on students' emotional reactions and reciprocation. When the confederate disagreed with participants' opinions concerning the effectiveness of advertisements and ridiculed their ability, participants who strongly endorsed the negative reciprocity norm showed heightened anger, disagreed with the confederate on more occasions, and expressed greater ridicule of the confederate's ability. Some of the participants in the unfavorable treatment condition expressed considerable anger toward the confederate. Because of the high

level of anger expressed by some of the participants in the unfavorable treatment condition, and the greater tendency found for men generally than women for physical violence, researchers extending the second study's findings to men may wish to implement a milder form of mistreatment than we used.

When the confederate agreed with the participants' opinions and praised their ability, individuals who strongly endorsed the negative reciprocity norm showed increased positive emotional engagement and increased encouragement of the confederate. Furthermore, there was partial support for the hypotheses that anxiety

TABLE 2: Factor Analysis of Expectational Trust Item

Item	Loading	
	Factor 1	Factor 2
1. In these competitive times one has to be alert or someone is likely to take advantage of you.	.74	-.17
2. It is safe to believe that in spite of what people say, most people are primarily interested in their own welfare.	.65	-.04
3. A surprising number of people are cruel and spiteful.	.64	.13
4. Some people just have it in for you.	.58	-.02
5. It is safest to assume that all people have a vicious streak and it will come out when they are given a chance.	.58	.15
6. Even people who appear friendly to you may be unreliable because they are mainly concerned with their own interests.	.58	-.08
7. Most people are self-centered and are not considerate of others.	.57	.19
8. There are some people who can't be trusted at all.	.51	-.03
9. Anyone who completely trusts anyone else is asking for trouble.	.45	.22
10. In dealing with strangers one is better off to be cautious.	.43	-.06
11. When I meet someone for the first time, I usually assume he will treat me well.	-.05	.69
12. If you act in a good faith with people, almost all of them will reciprocate with fairness toward you.	-.02	.68
13. I expect most people to behave in a manner which benefits others.	-.12	.64
14. Most people are basically good and kind.	.16	.64
15. Most repairmen will not overcharge even if they think you are ignorant of their specialty.	.17	.24

NOTE: $N = 564$. Factor 1 = expectational malevolence. Factor 2 = expectational benevolence.

reduction was responsible for the incremental relationship between negative reciprocity norm acceptance and positive reactions to favorable treatment.

GENERAL DISCUSSION

As suggested by a negative reciprocity norm, college students demonstrated a unitary set of beliefs supporting retribution as an appropriate response to mistreatment. Students' degree of endorsement of the negative reciprocity norm was related to (a) beliefs in people's general malevolence; (b) inclination toward anger in everyday life; (c) anger, disagreement, and ridicule directed toward a new acquaintance who treated them unfavorably; and (d) reduced anxiety, positive emotional engagement, and encouragement of a new acquaintance who treated them favorably. Endorsement of the negative reciprocity norm showed little relationship to endorsement of the positive reciprocity norm, need for dominance, or impulsivity.

In accord with Gouldner's (1960) distinction between the negative and positive reciprocity norms, individuals who strongly endorsed the return of unfavorable treatment were only slightly more likely than others to endorse the return of favorable treatment. A statistical model that assumed the distinctiveness of negative and positive reciprocity beliefs fit the students' beliefs better than a model that treated negative and positive reciprocity beliefs as a general norm encouraging the return of both favorable and unfavorable treatment.

Additional evidence for the distinction between the negative and positive reciprocity norms was obtained from their differential relationships with views concerning people's general benevolence and malevolence. Expectational trust, conceptualized as a generalized

belief in people's kindness and helpfulness (Cunha, 1985; Deutsch, 1958; Pruitt, 1981; Yamagishi & Yamagishi, 1984), was found to be composed of two inversely related views: People have goodwill and kindly intentions (expectational benevolence) and people are cruel and spiteful (expectational malevolence). Expectational malevolence was more closely associated with support of the negative reciprocity norm than with support of the positive reciprocity norm. Expectational benevolence was directly related to support of the positive reciprocity norm and was inversely related to support of the negative reciprocity norm. These findings suggest that a belief in people's general goodwill and kindness encourages endorsement of the positive reciprocity norm as a starting mechanism for the development and strengthening of interpersonal relationships (Eisenberger et al., 1987; Gouldner, 1960; Greenberg, 1980). In contrast, belief in people's general malevolence and cruelty encourages support of the negative norm of reciprocity as a strategy to prevent exploitation.

Endorsement of the negative reciprocity norm was distinct from two personality traits, need for dominance and impulsivity (Jackson, 1967), that might foster retribution following unfavorable treatment. Thus, endorsement of the negative reciprocity norm does not simply reflect a tendency by individuals with a strong need for dominance to resist control by others. In addition, endorsement of the negative reciprocity norm does not simply reflect an inclination by impulsive individuals to return mistreatment spontaneously.

We also obtained preliminary evidence that endorsement of the negative reciprocity norm is positively associated with anger in everyday life. This self-descriptive measure of anger was previously reported to be posi-

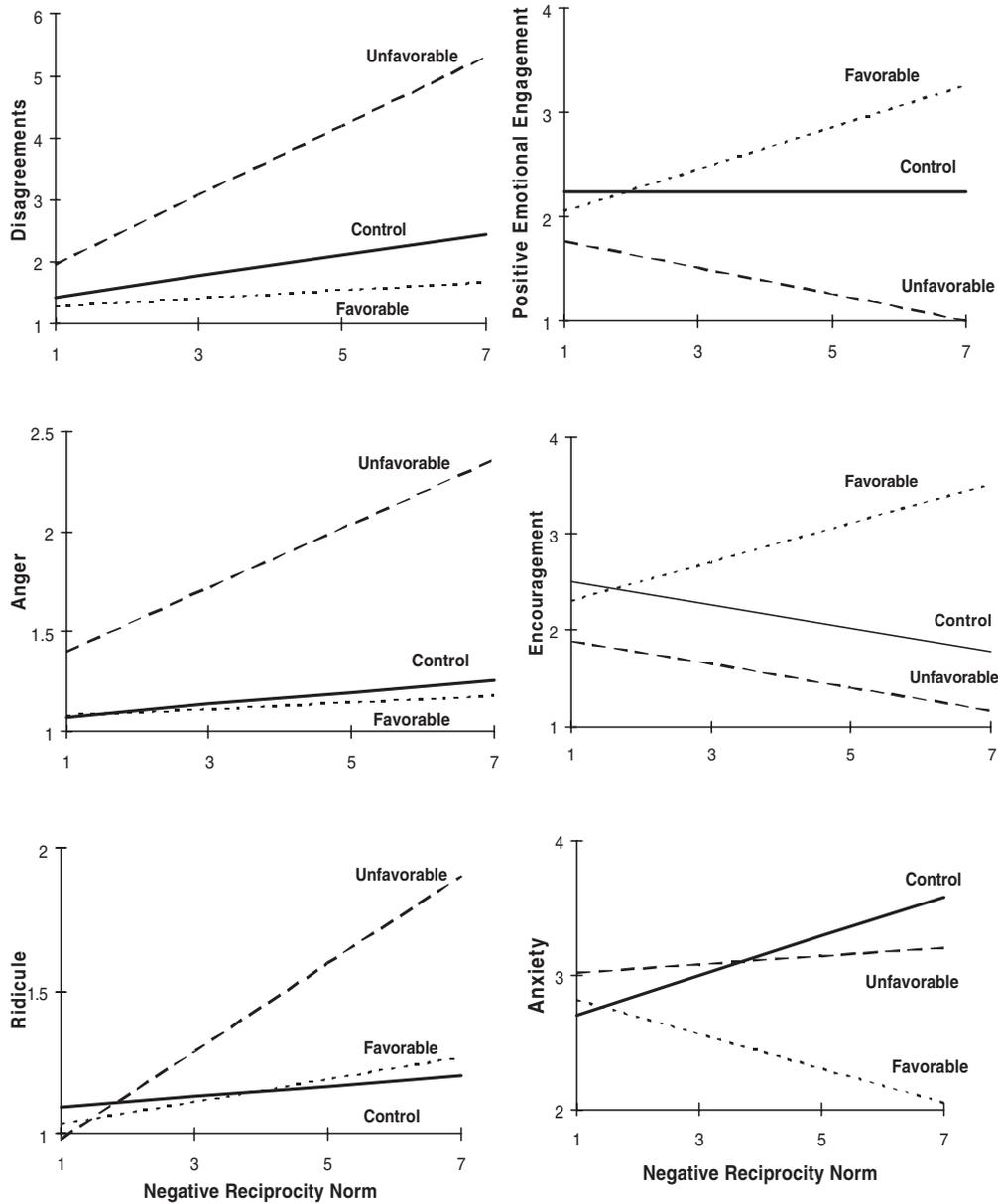


Figure 2 Relationships between strength of the negative reciprocity norm and number of disagreements, anger, ridicule, positive emotional engagement, encouragement, and anxiety following the receipt of unfavorable treatment, favorable treatment, and the absence of treatment (control condition).

tively related to peer nominations of quickness to anger (Buss & Perry, 1992). Using a behavioral measure, the second study showed that individuals endorsing the negative reciprocity norm become strongly angered following mistreatment by others. Specifically, individuals who strongly endorsed the negative reciprocity norm demonstrated a high level of anger following unfavorable treatment, as indicated by such nonverbal behaviors as frowns, treating the experimental materials roughly, and emphatic negative headshakes. These individuals disagreed with the instigator’s opinions more often follow-

ing unfavorable treatment than did people who endorsed the negative reciprocity norm only slightly, and they were more likely to ridicule the instigator with derisive, insulting comments. In our study, this tendency toward quickness to anger among individuals who strongly endorsed the negative reciprocity norm was restricted to the mistreatment condition. Future research might examine peer and teacher reports concerning the circumstances under which individuals who strongly support the negative reciprocity norm become angry in everyday life.

The positive relationship found in Study 1 between expectational malevolence and endorsement of the negative reciprocity norm suggested that individuals who strongly support the negative reciprocity norm could respond to favorable treatment in one of two ways. They might question the sincerity of those who treat them favorably and therefore show a lessened return of favorable treatment. An alternative possibility was based on previous findings that unexpected favorable treatment produced greater reciprocation and liking of the donor than did the same treatment when expected (e.g., Aronson & Lindner, 1965; Berscheid et al., 1976; Burgoon et al., 1995; Burgoon & Le Poire, 1993; Mettee et al., 1973). Among individuals who mistrust others and strongly endorse the negative reciprocity norm, unexpected favorable treatment might produce the return of more favorable treatment because of anxiety reduction (Aronson & Lindner, 1965).

We found in Study 2 that when individuals received favorable treatment from a new acquaintance, the relationship between endorsement of the negative reciprocity norm and anxiety was marginally significant. Moreover, there was partial evidence that anxiety reduction mediated the positive relationships of endorsement of the negative reciprocity norm with positive emotional engagement and encouragement of one's partner. These results suggest that individuals who strongly support the negative reciprocity norm feel threatened by the perceived malevolence of others and experience emotional relief when treated favorably. An alternative possible interpretation of the reactions to favorable treatment by those strongly endorsing the negative reciprocity norm is positive incentive contrast. Positive contrast refers to an increase in the value of favorable treatment when presented in the context of anticipated, less-favorable or aversive treatment (Dunham, 1968; Rafaeli & Sutton, 1991; Williams, 1983). Being treated well when one expects poor treatment should increase the perceived favorableness of that treatment. Future research is needed to provide more definitive evidence on whether the mechanism responsible for the positive reaction of favorable treatment among individuals with a strong negative reciprocity norm involves anxiety reduction or positive incentive contrast.

The extent to which individuals high in the negative reciprocity norm seek vengeance may be influenced by attributions concerning the causes of mistreatment. The amount of credit or blame that a recipient assigns to the instigator of favorable or unfavorable treatment depends on the apparent intent of the instigator (see, e.g., Altman & Taylor, 1973; Batson, 1993; Blau, 1964; Cotterell, Eisenberger, & Speicher, 1992; Eisenberger, Cummings, Armeli, & Lynch, 1997; Eisenberger et al., 1987; Foa & Foa, 1974; Homans, 1974; Levinger &

Huesmann, 1980; Taylor & Altman, 1987). The person who instigates mistreatment is held personally responsible to the extent that the intent was to harm the recipient and was a voluntary decision rather than being the result of external constraints. Unfavorable treatment that appeared intentional and voluntary produced greater anger and retribution as compared to unfavorable treatment that was unintended or dictated by external constraints (e.g., Dyck & Rule, 1978; Epstein & Taylor, 1967; Greenwell & Dangerink, 1973; Nickel, 1974; Pastore, 1952; see review by Ferguson & Rule, 1982).

The negative norm of reciprocity suggests that retribution will be directed more to the perpetrators of unfavorable mistreatment than to innocent bystanders. A catharsis approach to aggression, however, would suggest that retaliation against any target would be satisfying for individuals following mistreatment. For example, Konecni and Doob (1972) found that college students who had been mistreated by a confederate became less aggressive to the confederate after mistreating someone else. Although mistreatment often does result in generalized aggression, a recent meta-analysis on displaced aggression suggests that retribution is more severe against targets that are similar to the original transgressor (Marcus-Newhall, Pedersen, Carlson, & Miller, 2000).

Moreover, features of the perpetrator and the context in which mistreatment occurs may influence the extent of retribution. For example, Berkowitz and Geen (1966, 1967) found that individuals shocked by an experimental confederate retaliated with a greater number of shocks after watching a violent film with a star having a name similar to the confederate's name. According to Berkowitz and Geen (1966), the name cued a hostile response learned while watching the violent film. Individuals who endorse the negative reciprocity norm may respond with especially aggressive responses when the instigator of mistreatment is associated with violence. Therefore, depending on the target of the retributive response, the expression of the negative reciprocity may vary in hostility.

Nisbett and Cohen (1996) have argued that a culture of honor among White, U.S., Southern men encourages retributive responses to threats to one's masculinity and reputation. This suggests that most Southern men might strongly endorse the negative reciprocity norm. However, Cohen and Nisbett (1994) cited findings that the proportion of White, Southern men who agreed with general statements concerning retribution was no greater than that for Northerners. Therefore, culture may play a role in specifying situations in which enactment of the negative reciprocity norm is encouraged. Among White, Southern men, retribution based on the negative reciprocity norm may be more socially accept-

able when challenges to one's masculinity are experienced, as compared to other social slights.

Future research might consider how individual differences develop in the strength of endorsement of the negative reciprocity norm. Learning history may play a role. According to Hokanson's (1974) escape-avoidance model of aggression, individuals opt for behavioral strategies that are successful at reducing physiological discomfort arising from anger provoking stimuli. Endorsement of the negative norm of reciprocity would be influenced by the extent that an individual has found aggressive or nonaggressive responses successful for escaping mistreatment. Individuals who have repeatedly found aggressive responses to be successful for escaping mistreatment in the past would be more likely to adopt and act on the negative norm of reciprocity.

In summary, our findings suggest the existence of a negative norm of reciprocity that justifies retribution as the correct and proper way to respond to unfavorable treatment. We found that individual differences in endorsement of the negative reciprocity norm were positively related to anger and retribution following mistreatment and to anxiety reduction and positive social engagement following favorable treatment. Thus, people who strongly endorse the negative reciprocity norm and are likely to take strong revenge also are likely to respond very positively to favorable treatment.

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