Journal of Social and Clinical Psychology, Vol. 33, No. 9, 2014, pp. 831-846

DISGUSTED BY VENGEANCE: DISGUST SENSITIVITY PREDICTS LOWER VENGEANCE

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To forgive someone is to forsake vengeance. However, vengeful behavior could also be decreased by motivational states that promote avoiding aggression. Disgust sensitivity is one such state; elevated levels of disgust sensitivity are associated with less aggression. Heightened disgust sensitivity may therefore relate to low levels of vengeance. Using data from a longitudinal study (N = 186), we applied Structural Equation Modeling (SEM) techniques to examine the cross-lagged effects of disgust sensitivity on vengeance toward a close friend. Controlling for initial levels of vengeance, disgust sensitivity predicted lower vengeance one month later. This research highlights the potential positive role of disgust sensitivity in promoting relationship well-being through its association with vengeance.

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Transgressions occur commonly in social life. Motorists drive aggressively, friends embarrass close others, bosses berate employees, and romantic partners behave in hurtful ways, to name just a few. Most transgressions, however, do not escalate into serious acts of aggression. Decreased vengeance helps make this possible.

Most societies incorporate forgiveness into their norms for desirable responding to transgressions, whereas vengeance is frowned upon (McCullough, 2008). Forgiveness is conceptualized as a lack of both vengeance and withdrawal (e.g., Fincham, Beach, & Davila, 2004). Indeed, many forgiveness researchers recognize that a lack of vengeance is a key feature in the definition of forgiveness and is what distinguishes it from similar constructs such as condoning and reconciliation (e.g., Enright & Coyle, 1998; Fincham et al., 2004; Finkel, Rusbult, Kumashiro, & Hannon, 2002; Kaminer, Stein, Mbanga, & Zungu-Dirwayi, 2000; North, 1998). Based on this conceptualization of forgiveness, lower vengeance necessarily implies increased forgiveness. Social scientists have sought to identify factors that predict whether people will respond with vengeance or forgiveness toward transgressors. These factors include empathic concern toward the transgressor, personality traits such as narcissism and agreeableness, perceived severity of the offense, displays of remorse or repentance from the transgressor, and how much the victim trusts the transgressor (see Fehr, Gelfand, & Nag, 2010).

What is missing, however, is research that examines whether negative emotional states may lower vengeance. There is evidence that negative affectivity is associated with decreased forgiveness (e.g., Brown, 2003; Maltby, Macaskill, & Day, 2001), but there is no data on their potential role in promoting forgiveness. Emerging evidence suggests that the motivational direction (i.e., approach or avoidance) of an emotion can trump its valence when predicting behavioral outcomes like aggression (Carver & Harmon-Jones, 2009). That is, when the response produced by the valence directly conflicts with the response produced by the motivational direction of an emotion, the motivational direction will take precedence. For example, while a negatively-valenced emotion may typically lead to increased aggression, the motivational direction of that emotion (e.g., avoidance) will take precedence, leading instead to decreased aggression. The current study provided the first test of the hypothesis that a trait associated with negative affect and avoidance—dis-

gust sensitivity—relates to lower vengeance toward a close friend over time.

DISGUST AND AVOIDANCE

Disgust is hypothesized to be a fundamental emotion necessary for our survival because it cues people to potentially harmful diseases (Ekman, 1992). The proposed defense system that incites disgust is known as the Behavioral Immune System (Schaller, 2006; Schaller & Duncan, 2007). It is thought to have developed out of selectively advantageous behaviors for avoiding food toxins (Rozin & Fallon, 1987). Since then, research in evolutionary psychology suggests that disgust has evolved to protect people against possible disease-carrying others (Kurzban & Leary, 2001). People experience disgust as a reaction to abnormal appearance or behavior—signals of disease (Schaller & Duncan, 2007).

Recent work shows that disgust has adapted to elicit avoidance. For example, exposure to a disease prime facilitated repulsive arm movements among participants looking at faces (Mortensen, Becker, Ackerman, Neuberg, & Kenrick, 2010). This also led participants to give more avoidant self-ratings (e.g., less extraverted) compared to participants not primed with disgust (Mortensen et al., 2010). Additionally, disgust increases visual avoidance; the more disgusting the video participants watched, the more they looked away (Olatunji, Sawchuk, Lohr, & de Jong, 2004). Hence, there is theoretical precedent that disgust is associated with behavioral avoidance. Given that vengeance is an approach-related behavior, disgust sensitivity may decrease vengeance.

VENGEANCE

Trait avoidance motivation is inversely related to aggression (Harmon-Jones, 2003; Smits & Kuppens, 2005), which is a behavior associated with approach-related emotion and motivation. Disgust is an avoidance-related emotion and thus should be inversely related to aggression. Recent evidence suggests that this is the case. Across a variety of domains, disgust sensitivity predicts less aggression (Pond et al., 2012). Emotions like disgust that are strongly associated with avoidance motivate people to refrain from aggression.

This effect should generalize to vengeance. Vengeance is a blend of instrumental and hostile aggression (Schmid, 2005). That is, when people behave vengefully, they seek both to make the transgressor understand that his or her actions were wrong and to make the transgressor suffer. In both cases, vengeance involves causing intentional harm to the transgressor. Given the relationship between vengeance and aggression, we predict that disgust sensitivity would be associated with lower vengeance.

FRIENDSHIPS

Our study focuses specifically on friendship relationships among college students. Forgiveness and vengeance have been well studied in romantic relationships, but less is known about them in close relationships that are not romantic in nature—namely, friendships. Forgiveness is different across different types of relationships (Maio, Thomas, Fincham, & Carnelley, 2008), likely because of the differing nature of transgressions across these types. Vengeance in friendship relationships is particularly interesting because of the lower degree of commitment typically found in friendship compared to romantic relationships (e.g., Hatfield & Rapson, 1987; Sternberg, 1987). Commitment is a key factor in determining whether people will respond with vengeance or with forgiveness in a relationship (e.g., Finkel et al., 2002). Specifically, people who are less committed are more likely to respond with vengeance instead of with forgiveness. Because friends are generally less committed to each other than romantic partners, we would expect them to be more vengeful towards one another than romantic partners are.

Transgressions occur and are considered in the context of the wider relationship. Thus, forgiveness and vengeance are often measured longitudinally, as patterns may develop over time. These patterns are based on such factors as the partner's and one's own levels of forgiveness or vengeance, commitment, and satisfaction (e.g., Rusbult, 1983; Tsang, McCullough, & Fincham, 2006; Ysseldyk & Wohl, 2011). Our study also focused on a longitudinal model of vengeance to consider the transgressions in the context of the wider relationship rather than a single instance.

PRESENT RESEARCH

Previous studies show that increased disgust sensitivity triggers avoidant tendencies and lower aggression (Mortensen et al., 2010; Olatunji et al., 2004; Pond et al., 2012). This pattern suggests that disgust sensitivity may relate to decreased vengeance. Our study seeks to confirm these relationships in a longitudinal study of young adults who reported their levels of disgust sensitivity and levels of vengeance toward a close friend. We predict that, controlling for initial vengeance, relationship satisfaction, commitment, and neuroticism, disgust sensitivity will significantly predict decreased vengeance four weeks later.

METHOD

PARTICIPANTS

Participants were 186 undergraduates (77% women) who participated for partial course credit. On average, participants were 19.07 years old (SD = 2.09). Participants' relationship length with their friend was reported as: 2 years or more (42%), between 19 and 24 months (9%), between 13 and 18 months (10%), between 7 and 12 months (4%), between 4 and 6 months (11%), between 2 and 3 months (18%), and less than 2 months (6%).

MEASURES

Disgust Sensitivity. To assess disgust sensitivity, participants completed the 21-item Three Domains of Disgust Scale (Tybur, Lieberman, & Griskevicius, 2009). Participants rated how disgusting they found a series of situations within the domains of pathogen (e.g., "Accidentally touching a person's bloody cut," Time 1 α = .87; Time 2 α = .85), sexual (e.g., "performing oral sex," Time 1 α = .88; Time 2 α = .85), and moral disgust (e.g., "stealing from a neighbor," Time 1 α = .86; Time 2 α = .88).

Relationship Satisfaction. Given the documented association between relationship satisfaction and forgiveness, we measured relationship satisfaction to ensure that there was something unique about the relationship between forgiveness and disgust beyond sat-

isfaction. Participants answered the four-item version of the Couple Satisfaction Inventory (Funk & Rogge, 2007) about a close friend. Each of the satisfaction items (e.g., "In general, how satisfied are you with your relationship?"; see Appendix 1) was measured on a 7-point scale and showed good internal consistency (Time 1 $\alpha = .91$).

Commitment. In a similar vein, commitment is related to forgiveness, and hence we measured commitment to ensure that there was something unique about the relationship between forgiveness and disgust beyond commitment. Participants answered four items assessing how committed they were to their friendships (e.g., "My relationship with my partner is more important to me than almost anything else in my life"; see Appendix 1). Each item was measured on a 7-point scale and showed good internal consistency (Stanley & Markman, 1992; Time 1 $\alpha = .75$).

Neuroticism. In light of the documented inverse relationship between neuroticism and forgiveness (Fehr et al., 2010), we measured neuroticism to ensure that there was something unique about the relationship between forgiveness and disgust beyond neuroticism. To assess neuroticism, participants completed the emotional stability subscale of the Ten-Item Personality Inventory (TIPI; Gosling, Rentfrow, & Swann, 2003; Time 1 $r = .45$).

Vengeance. To assess vengeance, participants completed the vengeance subscale (e.g., "I retaliate or do something to get my own back"; see Appendix 1; Time 1 $\alpha = .85$, Time 2 $\alpha = .92$) of the Marital Forgiveness Scale—Event (Fincham et al., 2004), which was modified for friendships.

PROCEDURE

Data for the present study comes from a larger project about relationship well-being. The goal of the larger project was to understand overall well-being in romantic relationships, whereas our study focused on a more specific aim; namely investigating the relationships between disgust and vengeance in friendships. Participants came to the lab to complete trait-level measures (including all scales listed above) at their initial visit. Participants then returned to the lab four weeks later and completed the disgust and vengeance measures a second time.

RESULTS

We predicted that disgust sensitivity would relate to less vengeance towards friends over time, controlling for friendship satisfaction and commitment and trait neuroticism. Specifically, we examined whether Time 1 disgust sensitivity predicted lower Time 2 vengeance, controlling for Time 1 vengeance, Time 1 friendship satisfaction, Time 1 commitment, and Time 1 neuroticism. To appropriately test our hypothesis, we examined the cross-lagged effects of disgust sensitivity on vengeance. Our cross-lagged model was evaluated using AMOS 18.0 (Arbuckle, 2009). Because a nonsignificant χ^2 is dependent on sample size, several additional fit indices were used to assess model fit, including the comparative fit index (CFI), the normed fit index (NFI), and the root mean square error of approximation (RMSEA; Hoyle, 1995). Because there were missing data among 36 cases between Time 1 and 2, full-information maximum likelihood (FIML) estimation was applied. Bivariate correlations among all variables are presented in Table 1.

We specified a latent variable for Time 1 disgust sensitivity using composite scores from each subscale (i.e., moral, sexual, and pathogen). This latent variable was specified to predict a corresponding latent variable for Time 2 disgust sensitivity and Time 2 vengeance (specified using the three Time 2 vengeance items as indicators). We then modeled the direct effects of Time 1 vengeance (specified using the three Time 1 vengeance items as indicators) onto its corresponding Time 2 measure, as well as the latent variable for Time 2 disgust sensitivity. Last, latent variables for Time 1 friendship satisfaction, commitment, and neuroticism were specified, each with their individual items as indicators, to predict Time 2 disgust sensitivity and Time 2 vengeance.[1] All Time 1 variables were permitted to covary, as well as each of the Time 2 variables. Error terms on each of the indicators of Time 1 disgust sensitivity and Time 1 vengeance were permitted to covary with the error term of its corresponding Time 2 indicator. The estimates of the correlations between these terms can be found in Appendix 2.

The fit indices for the resulting cross-lagged model (see Figure 1) indicated good fit, $\chi^2(183, N = 186) = 252.84$, $p < .001$, $\chi^2/df =$

1. Due to the estimation of a negative variance on the error term of the first neuroticism indicator, the variance of this error term was constrained to be 0.

TABLE 1. Part 1. Bivariate Correlations Among the Three Domains of Disgust Subscales, and the Indicators of Trait Vengeance, Friendship Satisfaction, Commitment, and Neuroticism Across Times 1 and 2

Variable	1	2	3	4	5	6	7	8	9	10	11
1 Satis1	1										
2 Satis2	.80***	1									
3 Satis3	.76***	.79***	1								
4 Satis4	.68***	.66***	.61***	1							
5 Commit1	.41***	.47***	.40***	.32***	1						
6 Commit2	.36***	.36***	.35***	.34***	.22**	1					
7 Commit3	.25***	.31***	.24***	.17*	.52***	0.09	1				
8 Commit4	.50***	.56***	.56***	.36***	.52***	.33***	.38***	1			
9 Neuro1	–0.08	–0.1	–0.005	–0.12	0.05	–0.07	–0.09	–0.12	1		
10 Neuro2	–0.07	–0.12	–0.07	–0.17*	0.03	–0.25***	-.05	–.17*	.46***	1	
11 T1 sexual ds	.12	.18*	.22**	.15*	.11	.11	.13	.21**	.06	–.17*	1
12 T1 moral ds	.14	.09	.18*	.10	.06	.10	.10	.18*	.08	–.20**	.53***
13 T1 path ds	.11	.13	.18*	.07	.13	.17*	.19**	.19**	.10	–.10	.56***
14 T1 veng1	–.22**	–.27***	–.27***	–.27***	–.01	–.17*	.06	–.16*	.29***	.25	–.09
15 T1 veng 2	–.25***	–.27***	–.29***	–.21**	–.03	–.20***	.02	–.18**	.19*	.23**	–.12
16 T1 veng3	–.33***	–.27***	–.31***	–.20**	–.05	–.23**	.04	–.15*	.18*	.04	.10
17 T2 sexual ds	.17*	.15*	.13	.13	.08	.13	.02	.10	.10	–.11	.72***
18 T2 moral ds	.14	.07	.06	.06	.07	.08	-.001	.11	.03	–.15*	.27***
19 T2 path ds	.15*	.08	.11	.001	.09	.19*	.03	.10	.15*	–.04	.32***
20 T2 veng1	–.14	–.07	–.13	–.07	–.13	–.06	–.06	–.18*	.02	.12	–.19*
21 T2 veng2	–.21*	–.13	–.21*	–.09	–.12	–.06	–.06	–.20*	.004	.08	–.21**
22 T2 veng3	–.21*	–.12	–.17*	–.09	–.13	–.10	–.09	–.20*	.07	.12	–.20**
M	5.45	5.27	5.57	4.86	3.44	5.26	2.90	4.97	3.44	2.72	32.88
SD	1.27	1.34	1.38	1.00	1.73	1.81	1.85	1.91	1.60	1.30	10.84

Note. Satis = Friendship satisfaction; Commit = Commitment; Neuro = Neuroticism; T1 = Time 1; T2 = Time 2; DS = Disgust sensitivity; Path = Pathogen; and Veng = Vengeance. *p <.05; **p < .01; ***- < .001

1.38, CFI = .97, NFI = .89, RMSEA = .05 (90% CI = .03 to .06). As predicted, the cross-lagged effect from disgust sensitivity at Time 1 to vengeance at Time 2 was significant, β = -0.23, p < .02, which suggests that participants who were more sensitive to disgust at Time 1 reported being less vengeful towards a friend (controlling for intial trait vengeance, friendship satisfaction, commitment, and neuroticism.) There was not a significant cross-lagged effect for vengeance at Time 1 on disgust sensitivity at Time 2, β = 0.04, p = .72. Thus, our results more strongly suggested that higher disgust sensitivity preceded changes in vengeance than the opposite.

TABLE 1. Part 2. Bivariate Correlations Among the Three Domains of Disgust Subscales, and the Indicators of Trait Vengeance, Friendship Satisfaction, Commitment, and Neuroticism Across Times 1 and 2

Variable	12	13	14	15	16	17	18	19	20	21	22
1 Satis1											
2 Satis2											
3 Satis3											
4 Satis4											
5 Commit1											
6 Commit2											
7 Commit3											
8 Commit4											
9 Neuro1											
10 Neuro2											
11 T1 sexual ds											
12 T1 moral ds	1										
13 T1 path ds	.48***	1									
14 T1 veng1	–.20**	–.10	1								
15 T1 veng 2	–.29***	–.11	.76**	1							
16 T1 veng3	.28***	–.12	.53***	.67***	1						
17 T2 sexual ds	.27***	.31***	–.006	–.06	–.03	1					
18 T2 moral ds	.57---	.14	–.07	–.17*	–.12	.48***	1				
19 T2 path ds	.23**	.63***	.03	–.02	.02	.50***	.45***	1			
20 T2 veng1	–.41***	–.16*	.26***	.37***	.28***	–.12	–.29***	–.15	1		
21 T2 veng2	–.38***	–.14	.26**	.36***	.32***	–.14	–.28**	–.09	.82***	1	
22 T2 veng3	–.37***	–.15*	.27***	.44***	.39***	–.13	–.30***	–.15	.80***	.78***	1
M	34.76	36.76	1.95	1.83	1.88	32.75	33.20	35.49	1.93	2.04	2.02
SD	9.23	8.70	1.43	1.30	1.40	10.73	9.64	8.89	1.54	1.64	1.54

Note. Satis = Friendship satisfaction; Commit = Commitment; Neuro = Neuroticism; T1 = Time 1; T2 = Time 2; DS = Disgust sensitivity; Path = Pathogen; and Veng = Vengeance. *$p < .05$; **$p < .01$; ***$p < .001$

DISCUSSION

Forgiveness typically helps people resolve conflicts with others. When it does, it keeps these relationships strong and can prevent conflicts from escalating to aggression. A variety of emotional and behavioral factors can help determine whether or not people will respond with decreased vengeance toward transgressors. Little research, however, has examined whether chronic negative emotional states associated with behavioral avoidance predispose people to-

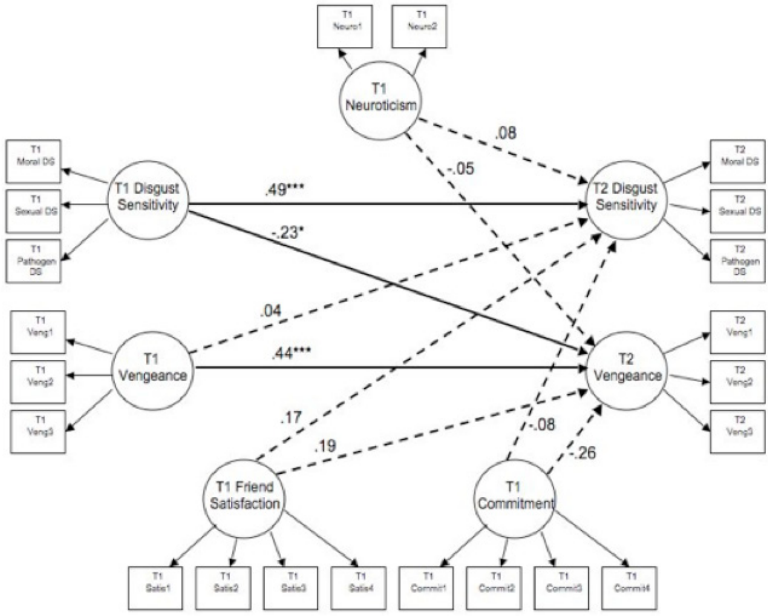

FIGURE 1. Cross-lagged model with disgust sensitivity and vengeance measured at two time-points, controlling for initial friendship satisfaction, commitment, and neuroticism. Standarized coefficients are reported, and dashed lines indicate nonsignificant paths.
*$p < .05$;2 **$p < .01$; ***$p < .001$

ward vengeance within the context of ongoing close relationships. The current study provided initial evidence that one such factor, individual differences in disgust sensitivity, is associated with lower vengeance toward a close friend over time.

Controlling for initial levels of vengeance, friendship satisfaction, commitment, and neuroticism, initial levels of disgust sensitivity predicted decreased vengeance one month later. These findings offer the first evidence that increased disgust sensitivity predicts decreased vengeance. The current findings demonstrate the utility of considering not only the valence of emotional states in predicting forgiveness, but also the motivational direction. Previous research provides evidence that negative affectivity is associated with decreased forgiveness (e.g., Brown, 2003; Maltby et al., 2001). However, no research has yet documented the role of negative affectivity in facilitating forgiveness. Prior work regarding the evolutionary

origins of disgust and the behavioral immune system (Schaller, 2006; Schaller & Duncan, 2007) show that disgust is associated with avoidant behavior. In this case, we suspect that the avoidant motivation brought about by increased disgust sensitivity trumped its negative valence to induce decreased vengeance.

LIMITATIONS AND FUTURE DIRECTIONS

Although the current findings provide support consistent with our hypotheses, there are several limitations to the study that point to new avenues for future research. For example, our research did not investigate the types of situations that produced the transgressions. These situations may be of interest, as they might be related to the three different domains of disgust: sexual, pathogenic, and moral (Tybur et al., 2009). We unfortunately could not investigate these potential differences, as we did not know the types of transgressions that were being forgiven. Future research would benefit from priming participants with each of the domains of disgust and examining potential differences in forgiveness.

Another limitation is that we did not identify a mechanism underlying the cross-lagged relationship between disgust sensitivity and lower vengeance. Multiple mechanisms may account for this relationship. First, we predict that behavioral avoidance is one such mechanism. Previous research suggests that disgust leads to behavioral avoidance (e.g., Mortensen et al., 2010; Olatunji et al., 2004) and that behavioral avoidance leads to decreased aggression (e.g., Pond et al., 2012). Unfortunately, our study did not measure behavioral avoidance so we could not test this mechanism directly. Future research would benefit from doing so.

Another possibility is that self-control, defined as the ability to override impulses in order to remain in line with personal or social standards for appropriate responding (Baumeister, 1998), is a mechanism. Self-control may partially account for the relationship between disgust sensitivity and lower vengeance. To avoid disgust-eliciting situations, disgust-sensitive people need to override their impulses to engage in activities that may blend pleasure (e.g., being around friends) with disgust (e.g., being with sweaty friends at

the gym). Effective self-control is associated with lower vengeance (DeWall, Baumeister, Stillman, & Gaillot, 2007; Finkel & Campbell, 2001; Finkel & DeWall, 2009). Future research may explore this possibility.

Finally, the clinical implications of these findings may also inspire additional research. For example, disgust has been shown to predict general obsessive-compulsive disorder symptoms above and beyond the effect of anxiety (e.g., Olatunji et al., 2007). This may suggest that people who have OCD or have more OCD symptoms may be less likely to be vengeful in their close relationships, similar to those high in disgust sensitivity. Our results may also help inform therapeutic treatments that encourage forgiveness among people with anxiety disorders (Enright & Fitzgibbons, 2000). Such treatments may prove more effective among people who have an anxiety disorder marked by higher levels of aggression (e.g., posttraumatic stress disorder), compared with those who have an anxiety disorder that drives them to avoid, rather than approach, others (e.g., OCD, social phobia). Future research could investigate these possibilities. Additionally, people high in Machiavellianism, narcissism, and psychopathy are more likely to engage in revenge against a romantic partner than people low on these traits (Rasmussen & Boon, 2014). Interventions targeting the disgust sensitivity of these individuals may decrease their likelihood of responding vengefully to a transgression.

CONCLUDING REMARKS

When people think about factors that affect the likelihood of vengeance after a transgression, it is usually in the context of emotional or behavioral factors such as empathy or agreeableness. Although it may not be intuitive that disgust sensitivity is related to vengeance—particularly that it decreases it—our research suggests that this is the case. We often do not consider how the motivational direction of emotions may trump their valence and how that affects behavioral inclinations. Although disgust sensitivity evolved to protect against the threat of disease, our findings suggest that it is also associated with lower vengeance toward friends. Considering the effects of other motivational states on vengeance may provide a fruitful direction for future research.

APPENDIX 1. LIST OF ALL ITEMS FOR EACH MEASURE

Relationship Satisfaction Measure (Funk & Rogge, 2007)
1. In general, how satisfied are you with your relationship?
2. How rewarding is your relationship with your partner?
3. I have a warm and comfortable relationship with my partner?
4. The choices on the following scale represent different degrees of happiness in your relationship. The middle point, "Happy" represents the degree of happiness of most relationships. Please select the answer which best describes the degree of happiness, all things considered, of your relationship.

Commitment Measure (Stanley & Markman, 1992)
1. My relationship with my partner is more important to me than almost anything else in my life
2. I may not want to be with my partner a few years from now
3. I like to think of my partner and me more in terms of us and we than me and him/her.
4. I want this relationship to stay strong no matter what rough times we may encounter.

Vengeance Measure (Fincham et al., 2004)
1. I find a way to make him/her regret it.
2. I tend to do something to even the score.
3. I retaliate or do something to get my own back.

As stated in the Results section, we specified our model such that all Time 1 latent variables were permitted to covary with each other, as well as all Time 2 latent variables, and the error terms between each Time 1 indicator and its corresponding Time 2 indicator. These estimates were omitted from Figure 1, in order to present the direct paths of main concern in a clear manner. The omitted estimates are as follows:

APPENDIX 2. OMITTED ESTIMATES

1. Correlation between Time 1 disgust sensitivity and Time 1 vengeance (r = -.27, p = .004)
2. Correlation between Time 1 disgust sensitivity and friendship satisfaction (r = .22, p < .02)
3. Correlation between Time 1 disgust sensitivity and friendship commitment (r = .32, p = .003)
4. Correlation between Time 1 disgust sensitivity and neuroticism (r = .11, p = .20)
5. Correlation between Time 1 vengeance and friendship satisfaction (r = -.35, p < .001)

6. Correlation between Time 1 vengeance and friendship commitment (r = -.17, p = .06)
7. Correlation between Time 1 vengeance and neuroticism (r = .23, p = .004)
8. Correlation between friendship satisfaction and commitment (r = .74, p < .001)
9. Correlation between friendship satisfaction and neuroticism (r = -.09, p = .26)
10. Correlation between friendship commitment and neuroticism (r = -.09, p = .31)
11. Correlation between Time 2 disgust sensitivity and Time 2 vengeance (r = -.20, p = .06)
12. Correlation between the errors terms for Times 1 and 2 moral disgust sensitivity (r = .69, p < .001)
13. Correlation between the error terms for Times 1 and 2 sexual disgust sensitivity (r = .87, p < .001)
14. Correlation between the error terms for Times 1 and 2 pathogen disgust sensitivity (r = .79, p < .001)
15. Correlation between error terms for Times 1 and 2 vengeance indicator 1 (r = .10, p = .37)
16. Correlation between the error terms for Times 1 and 2 vengeance indicator 2 (r = -.39, p = .03)
17. Correlation between the error terms for Times 1 and 2 vengeance indicator 3 (r = .19, p = .07)

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