

Running head: SATISFACTION OF FEELINGS OF REVENGE

Does Perpetrator Punishment Satisfy Victims' Feelings of Revenge?

Ulrich Orth

University of Berne, Switzerland

This article has been accepted for publication but has not been through the copyediting, typesetting, pagination, and proofreading process. This article may not exactly replicate the final, authoritative version published in the journal. It is not the copy of record. Please cite this article as follows:

Orth, U. (2004). Does perpetrator punishment satisfy victims' feelings of revenge? *Aggressive Behavior*, 30, 62-70. <http://dx.doi.org/10.1002/ab.20003>

Key Words: crime victims--retaliation--punishment--justice--criminal justice--emotional states

Author Note

Ulrich Orth, Department of Psychology, University of Berne, Switzerland.

The author would like to thank the German victim assistance association *Weisser Ring* for their financial and organizational support of the data collection.

Correspondence concerning this article should be addressed to Ulrich Orth, Department of Psychology, University of Berne, Muesmattstrasse 45, 3000 Berne 9, Switzerland. E-mail: ulrich.orth@psy.unibe.ch.

Does Perpetrator Punishment Satisfy Victims' Feelings of Revenge?

Abstract

Criminal victimization often provokes strong feelings of revenge. Two studies were conducted to investigate whether legal punishment of the perpetrator reduces victims' feelings of revenge. A cross-sectional study of 174 crime victims revealed that punishment severity does not predict feelings of revenge at a time several years after the trial. A longitudinal study of 31 crime victims revealed that, for the time interval from a few weeks before the trial to a few weeks after the trial, punishment severity significantly predicts decrease in feelings of revenge; nevertheless intraindividual and interindividual stability of these feelings was high. Results of the two studies taken together suggest that perpetrator punishment only partially and moreover only transitorily satisfies victims' feelings of revenge. Therefore, satisfaction of victims' feelings of revenge cannot be taken as empirical justification for tightening of sentencing norms.

Does Perpetrator Punishment Satisfy Victims' Feelings of Revenge?

Victimization by violent crime is an experience of severe injustice. Suffering injustice provokes coping reactions [Montada, 1994]. Examples of cognitive reactions that reduce subjective injustice are minimizing harm and loss, as well as excusing and justifying the perpetrator's behavior. Behavioral reactions that are intended to more objectively counter-balance injustice include reporting the crime to the police, demanding the perpetrator's punishment, claiming compensation for damages and compensation for pain and suffering, or engaging in self-administered justice and revenge.

It is unknown how many crime victims put revenge into practice. Furthermore, hardly any empirical study has been conducted to investigate feelings of revenge among crime victims. In a study of 100 victims of violent and severe property crimes, 17% agreed and 77% denied that they would retaliate against the perpetrator if they had the opportunity [Smale & Spickenheuer, 1979]. However, it has to be taken into account that this item measures willingness to commit acts of revenge, which are unlawful and generally assessed as morally wrong; therefore, willingness to commit acts of revenge has to be distinguished from feelings of revenge.

Feelings of revenge shall be defined here by the following four cognitive constituents [cf. Montada, 1993; Vidmar, 2000]: (a) The individual (ego) perceives itself to be severely harmed by another person (alter). (b) Alter is held responsible for the harm by ego (no excuses are recognized). (c) Ego assesses the harm as morally wrong (no justifications are recognized). (d) Ego perceives the desire to retaliate (motivational constituent).

Thus, if the retaliation motive implied in feelings of revenge is accomplished the feeling itself no longer exists. This raises the question as to whether objective realization of retaliation actually reduces the subjective retaliation motive and whether legal punishment of the perpetrator is an appropriate and sufficient substitute for retaliation.

Several authors state the opinion that perpetrator punishment does not satisfy crime victims' feelings of revenge [Frijda, 1994; Reemtsma, 1999; Smale & Spickenheuer, 1979; Streng, 1980]. However, there is virtually no empirical evidence to support it: only one study tentatively reports that feelings of revenge do not covary with whether the perpetrator was sentenced or not, but no statistics are documented [Smale & Spickenheuer, 1979]. In a recent review on retribution and revenge it is emphasized that satisfaction of feelings of revenge by perpetrator punishment remains a question to be addressed by empirical investigation, and it is even thought plausible that legal perpetrator punishment could increase victims' feelings of revenge by validating the wrongfulness of the perpetrator's action [Vidmar, 2000].

To analyze satisfaction of feelings of revenge it might be useful to consider the goals potentially underlying revenge motivation. Several of these goals have been distinguished [Frijda, 1994; McCullough, Bellah, Kilpatrick, & Johnson, 2001; Vidmar, 2000]: First, revenge is intended to re-equilibrate gains and losses caused by the assault. The perpetrator should not profit from his wrong-doing and should not come out better than the victim. This goal is linked to the norm of reciprocity expressed by the *lex talionis*, which demands equal harm for the perpetrator. Second, revenge is intended to re-equilibrate power. Power inequality has been established by the perpetrator's action against the victim's will. Third, revenge is intended to restore the victim's self-esteem, which may have been shattered by the victimization. Through revenge one can present oneself as a strong person who does not tolerate unjust treatment by others [Miller, 2001]. Fourth, it has been suggested that revenge allows escape from psychological pain [Frijda, 1994]. However, relief by means of revenge is assumed to be only temporary, as the determining pain generally persists. In fact it is doubtful whether legal punishment of the perpetrator is a suitable means to achieve the goals of revenge cited above.

Besides perpetrator punishment, feelings of revenge may be reduced by further factors related to objective justice, particularly the perpetrator's behavior following the victimization

[Miller, 2001; Montada, 1993]. First, convincing excuses and justifications can reduce the attributed responsibility and wrongfulness of the perpetrator's behavior; however, in the domain of severe harm caused by violent crimes, the impact of these accounts is presumably rather low. Second, sincere apologies, remorse and the acknowledgment of wrong-doing might reduce feelings of revenge [McCullough et al., 1998; Ohbuchi, 1989; Weiner, Graham, Peter, & Zmuidinas, 1991]. Through these reactions the perpetrator expresses respect, affirms the status of the victim, and therefore may strengthen the victim's self-esteem shattered by the victimization. In addition, sincere apologies re-equilibrate power, as the perpetrator subjects himself to the victim's moral judgment. Third, compensation for damages and compensation for pain and suffering might re-equilibrate the gains and losses caused by the victimization and therefore reduce feelings of revenge [Smith & Hillenbrand, 1997].

Study 1 is a cross-sectional analysis of the long-term effects of punishment severity, compensation and acknowledgment of wrong-doing (justice variables) on feelings of revenge among crime victims. Hierarchical regression analysis is used to compare the effects of justice variables with the influence of age, gender, victim-perpetrator relationship, and time since victimization (control variables). It has been shown that age, female gender and close victim-perpetrator relationships covary with low situational and dispositional measures of revenge motivation [Cota-McKinley, Woody, & Bell, 2001; Stuckless & Goranson, 1992].

Study 2 is a longitudinal analysis of the short-term effects of the identical justice variables on feelings of revenge among crime victims. The data are gathered at two time points: a few weeks before the sentencing decision in criminal proceedings and a few weeks after the decision. The analysis tests whether justice variables predict change in feelings of revenge.

Study 1

Method

Participants

Participants were contacted with the help of the German victim assistance association *Weisser Ring*. The individuals surveyed were chosen at random, and were sent a questionnaire with a request to take part in the study. Participant anonymity was protected. The response rate was 32%. The sample consisted of 174 adult victims of violent crimes, including 84 victims of rape and 90 victims of non-sexual assault (bodily harm, robbery, deprivation of liberty). Eighty-four percent of the participants were women. The mean age at the time of the study was 37.5 years ($SD = 12.2$, range 17-65 years). Ninety-five percent of the participants had German nationality. Forty-three percent of the participants were victimized by a stranger (coded as no victim-perpetrator relationship); 57% knew the perpetrator before the victimization (coded as victim-perpetrator relationship).

Ninety-four percent of the victims reported the crime to the police themselves or agreed to having it reported, and in all cases criminal proceedings had taken place. In 70% of the cases the criminal proceedings resulted in sentencing of the perpetrator, in 5% there was an acquittal of the accused, in 21% the trial was stopped without a sentence, and in 4% the proceedings were still pending. In 9% the state prosecution department had appealed against the court decision. Mean time since the end of the criminal proceedings was 3.0 years ($SD = 1.9$ years); mean time since victimization was 4.1 years ($SD = 2.2$ years).

The sample was drawn from the population of victims who had received financial support by the *Weisser Ring* within the last five years (i.e., the fees of the victim's attorney were paid). Some characteristics of the population of victims that receive help from this victim assistance association are documented for comparison purposes. In the year 2001, the association gave support to about 10,000 victims. Of these, 35% were victims of sexual assault, 43% were victims of physical assault, robbery, or theft, and 22% were victims of other crimes. In 22% of the cases the victim age was 20 years or less, in 42% between 21 and 40 years, in 22% between 41 and 60 years, and in 13% 60 years or more. 73% of the victims were women and 27% were men.

Measures

Feelings of revenge. Feelings of revenge were assessed by three items: „How often did thoughts come to mind, without your wanting them to, about doing something to the perpetrator?“ (intrusive cognitions); “How often did you fantasize about getting back at the perpetrator for what he or she did to you?“ (voluntary cognitions); „Did you experience feelings of revenge?“ (emotional intensity). Answers were measured on a 6-point scale (0 = *not at all*, 5 = *very often* and *very strong* respectively). Each item had to be assessed twice: in relation to the first four weeks after the victimization (initial feelings of revenge, retrospectively assessed; Cronbach’s alpha = .93) and in relation to the last four weeks (current feelings of revenge; Cronbach’s alpha = .92).

Justice variables. The subjective punishment severity was assessed with a single item, which was applicable both to cases that resulted in sentencing of the perpetrator and to cases without sentencing: “How lenient/severe is the outcome of the criminal proceedings for the perpetrator, according to your own sense of justice?”. Answers were measured on a 7-point scale (-3 = *very lenient*, 3 = *very severe*). Satisfaction with compensation was assessed by two items (Cronbach’s alpha = .78). The items were: “Do you think that you received sufficient compensation for damages?” and “Do you think that you received sufficient compensation for pain and suffering?” Answers were measured on a 7-point scale (-3 = *not at all sufficient*, 3 = *sufficient*). The acknowledgment of wrong-doing by the perpetrator was assessed with a single item: “The perpetrator acknowledged the wrongfulness of his action.” Answers were measured on a 6-point scale (0 = *not at all right*, 5 = *completely right*).

Results

Table I shows means and standard deviations of the measures used, the intercorrelation of feelings of revenge, and correlations of feelings of revenge with justice variables and control variables. Mean initial feelings of revenge were substantially higher than mean current feelings of revenge; the difference corresponds to a medium effect size with $d =$

-0.60 [cf. Cohen, 1988]. The intercorrelation amounts to $r = .61$. The directions of all significant correlations are as expected except correlations with gender. Justice variables are correlated with both initial and current feelings of revenge at a low level with values at about $r = .20$. Control variables are partly correlated at a low level (age, gender, assault type) and partly uncorrelated (victim-perpetrator relationship, time since victimization). Correlations with initial feelings of revenge are predominantly higher than those with current feelings of revenge.

Table II shows the summary of hierarchical regression analysis predicting current feelings of revenge. In step 1 control variables are entered into the regression equation, resulting in 4% variance explained (not significant). In step 2 justice variables are entered, increasing the variance explained by 8% ($p < .01$). The regression coefficient of punishment severity is virtually zero; in contrast the regression coefficient of compensation amounts to $\beta = -.23$ ($p < .01$). Regression analysis predicting initial feelings of revenge is not appropriate, as the initial feelings are antecedent to justice variables. If the hierarchical regression analysis is restricted to the subsample of those victims whose trials resulted in sentencing of the perpetrator ($n = 122$), the size of the regression coefficients do not significantly change.

Study 2

Method

Participants

As in study 1, crime victims who had received financial support from the German victim assistance association *Weisser Ring* were asked to participate in the study, which required them to fill out a questionnaire once before the trial (t1) and once after the trial (t2). The individuals surveyed were chosen at random. Participant anonymity was protected. The sample consists of 31 individuals. About 100 individuals were contacted by the *Weisser Ring* (unfortunately, the exact number was not documented). Thus, the estimated response rate amounts to 31%.

Twelve individuals were victims of rape, nineteen individuals were victims of non-sexual assaults (bodily harm, robbery, deprivation of liberty). Twenty-five of the participants were women. The mean age at t1 was 36.6 years ($SD = 12.8$, range 18-62 years). Thirty individuals had German nationality. Seven individuals were victimized by a stranger; 24 participants knew the perpetrator before the victimization.

Twenty-eight individuals reported the crime to the police themselves or agreed to having it reported, and in all cases a trial had taken place. In twenty-six cases the trial resulted in sentencing of the perpetrator and in four cases the trial was stopped without a sentence (in one case data are missing for this variable). In no case had the state prosecution department appealed against the court decision. Measurement at t1 was conducted on average 4.2 months ($SD = 3.4$ months) before the court decision, measurement at t2 on average 1.2 months ($SD = 1.3$ months) after the court decision. Thus, the mean time interval between t1 and t2 was 5.4 months. Mean time since victimization at t1 was 0.7 years ($SD = 0.8$ years).

Measures

Current feelings of revenge were assessed twice at t1 and t2 with items identical to Study 1; the assessment of initial feelings of revenge was not essential in Study 2. Justice variables identical to the variables used in study 1 were assessed at t2 for purposes of correlation analysis.

Results

Table III shows means and standard deviations of the measures used and correlations of justice variables with change in feelings of revenge between t1 and t2. The difference between feelings of revenge at t1 and at t2 corresponds to a very small effect size with $d = -0.12$ [cf. Cohen, 1988] and is an indicator of high intraindividual stability in the time interval investigated. The test-retest correlation of feelings of revenge amounts to $r_{tt} = .71$ and is an indicator of high interindividual stability in the time interval investigated. Punishment severity correlates with change in feelings of revenge with $r = -.37$. The directions of

correlations of punishment severity and compensation are as expected; however, acknowledgment of wrong-doing correlates positively with an increase in feelings of revenge between t1 and t2. If the correlation analysis is restricted to the subsample of those victims whose trials resulted in sentencing of the perpetrator ($n = 26$), the size of the correlation coefficients do not significantly change, with the exception of acknowledgment of wrong-doing ($r = .37$).

General Discussion

The results of the two studies taken together suggest that perpetrator punishment only partially and moreover only transitorily satisfies feelings of revenge among victims of violent crimes, and that in the long run feelings of revenge are not influenced by severity of perpetrator punishment.

Results of study 1 show that victims of violent crimes experience significant feelings of revenge even several years after the victimization. The subjective punishment severity virtually did not predict feelings of revenge in multiple regression analysis. Among the justice variables assessed, satisfaction with compensation for damages, pain and suffering qualified as best predictor of feelings of revenge. Length of time since victimization had no influence on the intensity of feelings of revenge. This fact is supported by the high intercorrelation between initial feelings of revenge (in the first four weeks after the victimization) and current feelings of revenge. It should be taken into account that initial feelings of revenge were retrospectively assessed; however, the indicated interindividual stability related to a mean time interval of about 4 years is still worth emphasizing. The results of control variables show that current feelings of revenge are mostly independent of age, gender and the victim-perpetrator relationship.

Results of study 2 show that punishment severity significantly predicts change in feelings of revenge, based on the five-month interval between assessments at t1 and t2. However, as in study 1, interindividual stability for feelings of revenge is high, measured as

test-retest correlation; if there had been extraordinary situational influences in the time between t1 and t2, the test-retest correlation would have been considerably lower.

Intraindividual stability for feelings of revenge is high as well: participants rated the intensity of feelings of revenge by about medium means both at t1 and t2.

The psychometric properties of the scale measuring feelings of revenge are good: high internal consistency and high test-retest correlation can be taken as indicators of reliability. Validity was corroborated in another study: the scale is substantially correlated with the victims' punishment goal of retaliation and is uncorrelated with other punishment goals such as security for victim, security for society, reassertion of social values and recognition of victim status [Orth, submitted].

Sample characteristics is a crucial issue in this type of study. Admittedly, the data collection was not designed to ensure sample representativeness. However, the generality of the results may be assessed optimistically, for the following reasons:

First, the response rate, which was only 32% (study 1) and 31% (study 2), might restrict the generality of the study, though it is generally difficult to obtain high response rates in surveys with crime victims. Non-responders might differ in some unknown way from the sample with respect to their experiences in the trials. However, the sample did not substantially differ from the population from which the sample was drawn (age, gender, assault type), as can be seen from the data in the method section of study 1.

Second, age, gender, assault type, victim-perpetrator-relationship, and time since victimization, which were included in the multiple regression analysis as control variables, did not contribute to the prediction of current feelings of revenge.

Third, there is no evidence that the sample studied had experienced particularly unfavorable or legally problematic criminal proceedings, which could have inhibited the satisfaction of feelings of revenge: on the contrary, in most cases the perpetrator was sentenced and in a very few cases had the state prosecution department appealed against the

court decision. Thus, the study is a rather conservative test of the hypothesis that perpetrator punishment is no suitable means to satisfy feelings of revenge among crime victims, at least if the punishment severity stays within the usual legal range and is not draconian in mode or length.

Fourth, there might be further methodological problems with including victims whose trials did not result in sentencing of the perpetrator. Confounding factors might be whether the victims accepted the reasons for acquitting the perpetrator or not, or whether the victims accepted the reasons for stopping the criminal proceedings or not. However, even if the analyses were restricted to the subsamples of those victims whose trials resulted in sentencing, the relations between the variables did not change.

Therefore, satisfaction of the victims' feelings of revenge cannot be taken as empirical justification for the tightening of sentencing norms, apart from associated normative justification problems. Results of the present studies indicate that financial compensation for damages, pain, and suffering might have a higher mitigating impact on feelings of revenge than perpetrator punishment. Nevertheless it is conceivable that legal punishment of perpetrators reduces the frequency of acts of revenge among crime victims by showing that society does not tolerate the offense [cf. Tyler & Smith, 1998]. Further studies in revenge could investigate the link between feelings of revenge and willingness to commit acts of revenge. Another open question is whether perpetrator punishment, especially capital punishment, may reduce feelings of revenge among indirect victims, e.g. the family and friends of homicide victims.

Regarding the low variance explained by justice variables and control variables assessed in this study, the results raise the question of what are important determinants of persisting feelings of revenge after victimization. Recent studies suggest that a crucial factor are psychological difficulties caused by the victimization, for instance rumination and other posttraumatic stress reactions [Goenjian et al., 2001; McCullough et al., 1998; McCullough et

al., 2001]. Even if victims' feelings of revenge should be considered as a comprehensible emotional reaction to the injustice suffered, and not as immoral or antisocial reaction, feelings of revenge might be problematic from a clinical psychological perspective.

References

- Cohen J. 1988. *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Erlbaum.
- Cota-McKinley AL, Woody WD, Bell PA. 2001. Vengeance: Effects of gender, age, and religious background. *Aggressive Behavior* 27:343-350.
- Frijda NH. 1994. The lex talionis: On vengeance. In: van Goozen SHM, Van de Poll NE, Sergeant JA, editors. *Emotions: Essays on emotion theory*. Hillsdale, NJ: Erlbaum. p. 263-289.
- Goenjian AK, Molina L, Steinberg AM, Fairbanks LA, Alvarez ML, Goenjian HA, Pynoos RS. 2001. Posttraumatic stress and depressive reactions among Nicaraguan adolescents after hurricane Mitch. *American Journal of Psychiatry* 158:788-794.
- McCullough ME, Bellah CG, Kilpatrick SD, Johnson JL. 2001. Vengefulness: Relationships with forgiveness, rumination, well-being, and the Big Five. *Personality and Social Psychology Bulletin* 27:601-610.
- McCullough ME, Rachal KC, Sandage SJ, Worthington EL, Brown SW, Hight TL. 1998. Interpersonal forgiving in close relationships: II. Theoretical elaboration and measurement. *Journal of Personality and Social Psychology* 75:1586-1603.
- Miller DT. 2001. Disrespect and the experience of injustice. *Annual Review of Psychology* 52:527-553.
- Montada L. 1993. Understanding oughts by assessing moral reasoning or moral emotions. In: Noam GG, Wren TE, editors. *The moral self*. Cambridge, MA: MIT Press. p. 263-289.
- Montada L. 1994. Injustice in harm and loss. *Social Justice Research* 7:5-28.
- Ohbuchi KI. 1989. Apology as aggression control: Its role in mediating appraisal of and response to harm. *Journal of Personality and Social Psychology* 56:219-227.
- Orth U. submitted. Punishment goals of crime victims.

- Reemtsma JP. 1999. Das Recht des Opfers auf die Bestrafung des Täters--als Problem [The victim's right to the perpetrator's punishment--as a problem]. München, Germany: Beck.
- Smale GJA, Spickenheuer HLP. 1979. Feelings of guilt and need for retaliation in victims of serious crimes against property and persons. *Victimology: An International Journal* 4:75-85.
- Smith BE, Hillenbrand SW. 1997. Making victims whole again: Restitution, victim-offender reconciliation programs, and compensation. In: Davis RC, Lurigio AJ, Skogan WG, editors. *Victims of crime*. Thousand Oaks, CA: Sage. p. 245-256.
- Streng F. 1980. Schuld, Vergeltung, Generalprävention: Eine tiefenpsychologische Rekonstruktion strafrechtlicher Zentralbegriffe [Guilt, retribution, general prevention: a depth psychological reconstruction of key penal concepts]. *Zeitschrift für die gesamte Strafrechtswissenschaft* 92:637-681.
- Stuckless N, Goranson R. 1992. The vengeance scale: Development of a measure of attitudes toward revenge. *Journal of Social Behavior and Personality* 7:25-42.
- Tyler TR, Smith HJ. 1998. Social justice and social movements. In: Gilbert DT, Fiske ST, Lindzey G, editors. *The handbook of social psychology*, vol 2. New York: McGraw-Hill. p. 595-629.
- Vidmar N. 2000. Retribution and revenge. In: Sanders J, Hamilton VL, editors. *Handbook of justice research in law*. New York: Kluwer. p. 31-63.
- Weiner B, Graham S, Peter O, Zmuidinas M. 1991. Public confession and forgiveness. *Journal of Personality* 59:281-312.

Table I

Study 1: Means and Standard Deviations of Feelings of Revenge and Justice Variables, and Correlations of Feelings of Revenge (161 ≤ N ≤ 174)

Variables	<i>M</i>	<i>SD</i>	<i>r</i> with feelings of revenge	
			initial	current
Feelings of revenge				
Initial feelings of revenge	2.80	1.91	--	
Current feelings of revenge	1.69	1.82	.61**	--
Justice variables				
Punishment severity	-1.80	1.78	-.24**	-.16*
Compensation	-2.08	1.48	-.21**	-.24**
Acknowledgment of wrong-doing	1.41	1.95	-.22**	-.17*
Control variables				
Age	--	--	-.32**	-.16*
Gender ^a	--	--	.17*	.07
Assault type ^b	--	--	.25**	.12
Victim-perpetrator relationship ^c	--	--	-.02	-.05
Time since victimization	--	--	.05	-.04

Note. ^a0 = male, 1 = female. ^b0 = non-sexual assault, 1 = rape. ^c0 = no, 1 = yes.

* $p < .05$. ** $p < .01$. (1-tailed).

Table II

Study 1: Summary of Hierarchical Regression Analysis for Control Variables and Justice Variables Predicting Current Feelings of Revenge (N = 153)

Predictors	R^2	ΔR^2	B^a	$SE B^a$	β^a
Step 1: Control variables	.04	--			
Age			-.01	.01	-.09
Gender ^b			.21	.44	.04
Assault type ^c			.27	.33	.07
Victim-perpetrator relationship ^d			-.44	.30	-.12
Time since victimization			-.05	.07	-.06
Step 2: Justice variables	.12*	.08**			
Punishment severity			-.06	.09	-.06
Compensation			-.28	.10	-.23**
Acknowledgment of wrong-doing			-.12	.08	-.13

Note. ^aFinal results. ^b0 = male, 1 = female. ^c0 = non-sexual assault, 1 = rape. ^d0 = no, 1 = yes.

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

Table III

Study 2: Means and Standard Deviations of Feelings of Revenge and Justice Variables, and Correlations of Justice Variables with Change in Feelings of Revenge (N = 31)

Variables	<i>M</i>	<i>SD</i>	<i>r</i> with change in feelings of revenge
Feelings of revenge ($r_{tt} = .71^{**}$)			
t1	2.40	1.84	--
t2	2.17	1.87	--
Justice variables			
Punishment severity	-1.42	1.67	-.37*
Compensation	-1.97	1.62	-.24
Acknowledgment of wrong-doing	1.16	1.75	.17

Note. A negative correlation means that the justice variable covaries with a decrease in feelings of revenge between t1 and t2.

* $p < .05$. ** $p < .01$. (1-tailed).