

Brief Report

Personality predictors of levels of forgiveness two and a half years after the transgression

John Maltby^{a,*}, Alex M. Wood^b, Liza Day^c, Tabatha W.H. Kon^d,
Ann Colley^e, P. Alex Linley^f

^a *School of Psychology, University of Leicester, University Road, Leicester LE1 9HN, England, UK*

^b *University of Warwick, Coventry CV4 7AL, England, UK*

^c *Sheffield Hallam University, Sheffield S10 2BP, England, UK*

^d *Sheffield Primary Care Trust, National Health Service, Sheffield S2 5QQ, England, UK*

^e *University of Leicester, Leicester LE1 9HN, England, UK*

^f *Centre for Applied Positive Psychology, Coventry CV4 7EZ, England, UK*

Available online 10 January 2008

Abstract

The aim of the present study was to explore whether the domains and facets of the five-factor model of personality predicted motivational states for avoidance and revenge following a transgression at a second temporal point distant from the original transgression. A sample of 438 university students, who reported experiencing a serious transgression against them, completed measures of avoidance and revenge motivations around the transgression and five-factor personality domains and facets at time 1, and measures of avoidance and revenge motivations two and a half years later. The findings suggest that neuroticism, and specifically anger hostility, predicts revenge and avoidance motivations two and a half years later. Findings are discussed within McCullough's three systems of interpersonal forgiveness.

© 2008 Elsevier Inc. All rights reserved.

Keywords: Forgiveness; Personality; Neuroticism; Angry hostility; Avoidance; Revenge

1. Introduction

There is a growing literature which is beginning to define key contributing factors and processes within the dynamics of forgiveness. A significant distinction has been drawn between forgiveness as an intra-personal process, involving changes within individual cognitions about a transgression and forgiveness, and as an inter-personal processes, in which on-going relationships between the people involved in a transgression are assessed and acted upon (Exline & Baumeister, 2000; Gordon, Baucom, & Snyder, 2000; Pargament, McCullough, & Thoresen, 2000). A further distinction can be drawn between negative and positive reactions to the transgression. Sometimes those failing to forgive are unable to resolve issues with the perpetrator of the offence, with

* Corresponding author. Fax: +44 116 252 2067.

E-mail address: jm148@le.ac.uk (J. Maltby).

individuals being vengeful or avoidant of the perpetrator and showing a willingness to take revenge. However, positive processes can be involved in forgiveness; with deliberate attempts made not to avoid the perpetrator of the offence, with reconsideration and reinterpretation of the feelings and thoughts around the event (Gordon et al., 2000; Pargament et al., 2000).

Studies of the relationship between forgiveness and personality have generally been explored within the taxonomy for the five-factor trait models of personality (Costa & McCrae, 1992). Across a number of studies, the most consistent, and often most statistically significant, finding, is that higher levels of forgiveness are predicted by lower levels of neuroticism (Berry, Worthington, Parrott, O'Conner, & Wade, 2001; Brose, Rye, Lutz-Zois, & Ross, 2005; McCullough, Bellah, Kilpatrick, & Johnson, 2001; McCullough & Hoyt, 2002; Walker & Gorsuch, 2002), with the effect size of reported correlations (Cohen, 1988; Cohen, 1992) ranging from small (e.g., $r = .21$; McCullough & Hoyt, 2002) to large (e.g., $r = .52$, Brose et al., 2005). Across studies, agreeableness seems to also show a fairly consistent positive relationship with many forgiveness measures, with the effect size of reported correlations ranging from small (e.g., $r = .21$, McCullough & Hoyt, 2002; $r = .33$, Berry, Worthington, Parrott, O'Conner, & Wade, 2001) to medium (e.g., $r = .40$, Brose et al., 2005; $r = .49$, McCullough et al., 2001).

Additionally, higher levels of extraversion and conscientiousness have sometimes been found to correlate significantly with higher levels of forgiveness (e.g., Berry, Worthington, Parrott, O'Conner, & Wade, 2001; Brose et al., 2005; McCullough et al., 2000). Where there is a reported statistical significant relationship between forgiveness and these two personality domains, the effect size is at best still small (e.g., extraversion, $r = .20$, Brose et al., 2005; e.g., conscientiousness, $r = .24$, Berry, Worthington, Parrott, O'Conner, & Wade, 2001). It is important to note that across all these studies, no statistically significant relationship and no correlation size of above $r = .20$ has been reported between any measure of forgiveness and the openness personality domain.

More specifically, research has also suggested that the facets of the five-factor personality model may be useful in examining forgiveness. Brose et al. (2005) examined the relationship between a series of dispositional and situational forgiveness measures (presence of positive forgiveness thoughts and feelings, absence of negative forgiveness thoughts, feelings and behaviour, and forgiveness likelihood) and the broad and specific facet domains of the five-factor personality model. Several facets of the five-factor domains were statistically significantly correlated with a measure of forgiveness (with the effect size of the relationship usually small to medium [$r < .35$]), but not across all the forgiveness measures used. Of those relationships that produced a consistent pattern, forgiveness likelihood was statistically significantly negatively correlated with all neuroticism facets (correlation sizes ranging from $r = -.28$ to $r = -.47$). All forgiveness measures were positively correlated with the positive emotions facet from the extraversion domain, but again show small effect sizes ($r < .29$), and positively correlated with the trust facet from the agreeableness domain (correlation sizes ranging from .27 to .41).

These studies provide evidence that forgiveness is related to a number of domains and facets of the five-factor model of personality, though the strength of these relationships and the particular aspects of personality that are important to forgiveness change across studies. One way forward in this area of research is to change the emphasis of the research question. While studies in this area have been concentrated on five-factor personality correlates of forgiveness at one particular point in time, theoretical developments have emphasised the need to understand forgiveness as a process, and particularly something that occurs over time (e.g., the Enright Model of Forgiveness; Hebl & Enright, 1993).

Theoretical conception of the forgiveness process and its direct measurement have been developed by McCullough and his colleagues (McCullough, Worthington, & Rachal, 1997; McCullough et al., 1998) who produced a two factor motivational system of individuals' responses to interpersonal offences and transgressions: avoidance (to avoid personal and psychological contact with the offender), and revenge (seek revenge or wish to see harm come to the offender). McCullough et al. used this distinction to propose three systems contributing to the interpersonal forgiveness process that operate over time. The first is a Closeness-Empathy system, in which empathy is seen as a central factor in the development of forgiveness. The second is a Rumination system, in which the rumination, which emerges after the personal transgression and exacerbates interpersonal distress, is important in the prediction of revenge motivations. The third is the Restoration of Interpersonal Closeness, in which the inhibition of avoidance behaviours and the facilitation of conciliatory

behaviours (such as co-operation) are crucial (Komorita, Hilty, & Parks, 1991; McCullough et al., 1997). The five-factor model of personality clearly maps onto McCullough's three systems contributing to the interpersonal forgiveness process. Neuroticism, with its emphasis on individuals being emotionally reactive with emotional reactions tending to persist for unusually long periods of time, clearly has relevance to understanding the Rumination system. Similarly, agreeableness is relevant to McCullough's other two systems, Closeness-Empathy and Restoration of Interpersonal Closeness, as this personality domain places an emphasis on cooperation and social harmony demonstrated by friendly, helpful, compassionate and trustworthy traits.

The primary focus of McCullough's three systems theory suggests that it may not be sufficient to look at how personality is related to forgiveness at the same time point, but how personality predicts forgiveness over a period of time. The aim of the present study was to explore whether the domains and facets of the five-factor model of personality predicted motivational states for avoidance and revenge following a transgression at a second temporal point distant from the original transgression. Specifically the study was designed to see whether neuroticism (within the theoretical context of the Rumination system) and agreeableness (within the context of the Closeness-Empathy and Restoration of Interpersonal Closeness systems) predicted motivational states for avoidance and revenge at a second temporal point distant from the original transgression.

2. Method

2.1. Participants

Participants were 438 full time university undergraduate students (217 males, 221 females, aged from 18 to 30 years, Mean Age = 22.21 years, SD = 2.8 years) from the United Kingdom. The ethnicity of respondents was White ($n = 322$), Indian ($n = 66$), Black ($n = 28$) and Other Asian ($n = 22$).

2.2. Measures

Transgression-Related Interpersonal Motivations scale (TRIM; McCullough et al., 1998). The scale comprises two subscales: Avoidance and Revenge motivations. The seven-item TRIM-Avoidance subscale measures the degree to which the offended party intends to reduce contact with the transgressor (e.g., "I keep as much distance between us as possible"). The five-item TRIM-Revenge subscale measures the degree to which the offended party intends to seek revenge on the transgressor (e.g., "I'll make him/her pay"). All responses to items are scored on a 1 ("Strongly disagree") to 5 ("Strongly agree") scale. Acceptable Cronbach's alphas of .88 for the TRIM-Avoid and .87 for the TRIM-Revenge have been reported, and the validity of the scale has been demonstrated through expected relationships with a variety of relationship-related measures including relationship satisfaction, closeness, apology and rumination about the offence (McCullough et al., 1998). Higher scores on each scale represent a higher level of motivation for avoidance and revenge (therefore lower scores represent forgiveness).

Revised NEO Personality Inventory (NEO-PI-R) (Costa & McCrae, 1992). The 240-item NEO-PI-R is one of the most widely used measures of the five-factor model of personality and assesses five major domains: Neuroticism, Extroversion, Openness to Experience, Agreeableness, and Conscientiousness. Each domain is further represented by six lower level facet scale scores (listed in Table 2). All responses to items are scored on a 0 ("Strongly disagree") to 4 ("Strongly agree") scale. Internal reliabilities range from $\alpha = .86$ to $\alpha = .95$ for the scales. There is strong consensual validity between self, peer, and spouse reports of the test and the validity evidence for the scales has been suggested with personality and mental health domains (Costa & McCrae, 1992).

2.3. Procedure

Respondents were sought from 1st year undergraduate students on two university campuses who had experienced an event within the last month in which a person had personally transgressed against them. Respondents were told the study involved 2 data collections over 30 months. From this 879 individuals came forward. Respondents were asked to rate on a 5 point scale (1 = 'Not at all serious', 2 = 'A little serious', 3 = 'Quite Serious', 4 = 'Very Serious', 5 = 'Extremely Serious') how serious they felt the transgression was compared

to other transgressions that they had experienced. Of these respondents, 659 respondents rated their serious transgression as either very, or extremely, serious. These respondents were asked to complete the Transgression-Related Interpersonal Motivations scale and the NEO-PI-R. Respondents were also asked to write down the personal transgression, which were sealed and given an identifier.

From the original respondents, 438 respondents took part in a second data collection 30 months later. Respondents were given their sealed account of the transgression and were asked to complete the Transgression-Related Interpersonal Motivations scale.

3. Results

As a validity check for the study findings and before any further analysis, an analysis was undertaken to discover whether changes in the forgiveness measure had in fact taken place over time. The mean scores on both the avoidance and revenge scales of the *Transgression-Related Interpersonal Motivations scale* were statistically compared between time 1 and time 2. For avoidance motivations, scores for Time 1 (Mean = 25.62, $SD = 7.8$) were statistically significantly higher ($t = 27.71, p < .001$) than scores for 30 months later (Mean = 15.65, $SD = 2.9$). For revenge motivations, scores for Time 1 (Mean = 18.53, $SD = 5.4$) were statistically significantly higher ($t = 30.91, p < .001$) than scores for 30 months later (Mean = 11.12, $SD = 2.2$). Secondly, in order to ensure that the sample analyzed consisted of individuals with similar reactions to a transgression, the participants who rated their transgression as either very serious ($n = 311$) or extremely serious ($n = 127$) were compared. No significant difference was found for avoidance or revenge scales at either time 1 or time 2 (all below $t = .64, df = 436, p > .53$).

In order to address the main aims of the study, a series of multiple regressions was undertaken. For each a hierarchical regression equation was used to predict either avoidance or revenge motivation scores at Time 2 from corresponding avoidance and revenge motivation scores at Time 1 at Step 1, with the personality domains entered at Step 2. This was done to examine whether personality predicted either avoidance or revenge motivations independent of the baseline value of these variables over time. Then when having shown a relationship at the domain level, we examined which of the facets belonging to these domains were responsible for the effect using the same method.

Table 1 shows the results of a hierarchical multiple regression analysis predicting both avoidance and revenge motivations at Time 2 with corresponding avoidance and revenge motivations at Time 1 and neuroticism facets used as predictor variables. For avoidance motivations at Time 2, avoidance motivations at Time 1 was the first variable to be entered into the regression equation and was able to predict forgiveness ($F = 37.75, df = 1, 436, p < .001$). The personality variables were then entered as a group, yielding a statistically significant R^2 Change = .03 ($F = 2.61, df = 5, 431, p = .03$). Neuroticism was the only variable to have a regression coefficient that reached statistical significance. We repeated this process for revenge motivations at Time 2. Revenge motivations at Time 1 was the first variable to be entered into the regression equation and was able to predict forgiveness ($F = 77.25, df = 1, 436, p < .001$). The personality variables were then entered as a group, yielding a statistically significant R^2 Change = .05 ($F = 4.81, df = 5, 431, p < .001$). Neuroticism was the only variable to have a regression coefficient that reached statistical significance ($B = .02, \beta = .17, t = 3.48, df = 6, 431, p < .01$).

Having shown a relationship between neuroticism and avoidance and revenge motivations at the domain level, we examined which of the neuroticism facets were responsible for the effect. We repeated the process, but this time entered the neuroticism facets dimensions at Stage 2. In order to assess the extent of multicollinearity between the neuroticism facets, we calculated variance inflation factors which ranged from 1.11 to 2.45 (tolerance ranging from .41 to .90) for both regression equations, which falls, outside Allison's (1999) criteria of when there should be concern about multicollinearity ($VIF > 2.5$; tolerance $< .4$).

Table 2 shows the results of a hierarchical multiple regression analysis predicting both avoidance and revenge motivations at Time 2 with corresponding avoidance and revenge motivations at Time 1 and neuroticism facets used as predictor variables. In terms of avoidance motivations, when the neuroticism facets were entered as a group, they yielded a statistically significant R^2 Change = .04 ($F = 3.06, df = 6, 430, p < .01$). Angry hostility was the only variable to have a regression coefficient that reached statistical significance. In terms of revenge motivations, when the neuroticism facets were entered as a group they yielded a statistically

Table 1

Multiple regression analysis with avoidance and revenge motivations at Time 2 with avoidance and revenge motivations at Time 1 and personality domains used as predictor variables

Measure	Avoidance motivations at Time 2				Revenge motivations at Time 2				$r^2 = .15^{**}$	
	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>B</i>	<i>SE</i>	β	<i>t</i>		
<i>Step 1</i>										
Corresponding avoidance/revenge motivations at Time 1	.11	.02	.28	6.14 ^{**}	.15	.02	.39	8.79 ^{**}	$r^2 = .08^{**}$	$r^2 = .15^{**}$
<i>Step 2</i>										
Corresponding avoidance/revenge motivations at Time 1	.09	.02	.24	4.81 ^{**}	.13	.02	.33	6.84 ^{**}		
Neuroticism	.02	.01	.11	2.28 [*]	.02	.01	.17	3.48 ^{**}		
Extraversion	-.01	.01	-.02	-.44	-.01	.01	-.08	-1.62		
Openness	.01	.01	.03	.68	.01	.01	.06	1.22		
Agreeableness	-.01	.01	-.07	-1.42	-.01	.01	-.03	-.66		
Conscientiousness	-.01	.01	-.06	-1.30	-.01	.01	-.03	-.60	$r^2 = .11^{**}$	$r^2 = .20^{**}$

Note: *B*, unstandardized regression coefficient; *SE*, standard error; β , standardized regression coefficient.

* $p < .05$.

** $p < .01$.

Table 2

Multiple regression analysis with avoidance and revenge motivations at Time 2 with avoidance and revenge motivations at Time 1 and neuroticism facets used as predictor variables

Measure	Avoidance motivations at Time 2				Revenge motivations at Time 2				$r^2 = .15^{**}$	
	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>B</i>	<i>SE</i>	β	<i>t</i>		
<i>Step 1</i>										
Corresponding avoidance/revenge motivations at Time 1	.11	.02	.28	6.14 ^{**}	.15	.02	.39	8.79 ^{**}	$r^2 = .08^{**}$	$r^2 = .15^{**}$
<i>Step 2</i>										
Corresponding avoidance/revenge motivations at Time 1	.09	.02	.23	4.82 ^{**}	.12	.02	.31	6.67 ^{**}		
Anxiety	-.04	.03	-.08	-1.29	-.01	.02	-.02	-.27		
Angry hostility	.09	.03	.15	2.82 ^{**}	.06	.02	.12	2.72 ^{**}		
Depression	-.01	.04	-.03	-.35	.02	.03	.05	.76		
Self-Consciousness	.08	.04	.12	1.87	.02	.03	.05	.73		
Impulsiveness	.01	.03	.01	.09	.04	.02	.09	1.86		
Vulnerability	.04	.04	.07	1.18	.02	.03	.04	.62	$r^2 = .12^{**}$	$r^2 = .20^{**}$

Note: *B*, unstandardized regression coefficient; *SE*, standard error; β , standardized regression coefficient.

* $p < .05$.

** $p < .01$.

significant R^2 Change = .05 ($F = 4.47$, $df = 6, 430$, $p < .001$). Again, angry hostility was the only variable to have a regression coefficient that reached statistical significance.

4. Discussion

The current findings suggest that neuroticism, and more specifically angry hostility, predicts revenge and avoidance motivations regarding a transgression two and a half years after the original transgression.

This relationship can be explained within McCullough et al.'s theoretical approach by linking the finding to the Rumination System. Within this system, the rumination that emerges after the personal transgression exacerbates interpersonal distress. Specifically angry hostility represents the tendency to experience anger

and similar emotions such as bitterness and frustration, and this scale in the NEO-PI-R is designed to measure an individual's readiness to experience anger (Costa & McCrae, 1992). Therefore, the current findings suggest that it is the individual's readiness to experience anger at the original transgression, and their bitterness and frustration surrounding the transgression that are important in the prediction of avoidance and revenge motivations. Within McCullough's Rumination System, angry hostility is central to the rumination that emerges after the personal transgression, and that exacerbates the interpersonal distress. No evidence was found for the other prediction that agreeableness would be related to forgiveness by way of the Closeness-Empathy and Restoration of Interpersonal Closeness systems.

The findings demonstrate that a considerable amount of time after the transgression personality can explain some of the available variance in the forgiveness process. However, one weakness of the study is that two and a half years is a single point in time a long period after the transgression, and there may be important intervening points in the process at which other personality traits still predict forgiveness. For example, other personality aspects, such as agreeableness as part of McCullough's Closeness-Empathy and Restoration of Interpersonal Closeness systems, may predict forgiveness over a shorter period of time. Therefore this study provides an important basis for further studies which can examine other points in time after the transgression.

There are also other issues to be flagged in relation to the interpretation of the current findings. The first of these is that the amount of variance in forgiveness explained by personality two and a half years after the transgression is small. The second issue is that the data collected is self-report data which has inevitable shortcomings with respect to the prediction of how individuals actually behave. A third issue is that the measures used in the present study represent negative reactions to forgiveness through avoidance and revenge motivations since the aim was to examine findings within McCullough's three systems of interpersonal forgiveness. Other measures of forgiveness which measure more positive attempts at forgiveness may have produced different relationships with personality at different temporal points.

Notwithstanding these limitations, the present data add an important finding to the existing personality and forgiveness literature which focuses upon a single point in time, by finding that one of the main personality correlates of forgiveness predicts avoidance and revenge motivations two and half years later. The findings also add to the literature by suggesting that it is the individual's readiness to experience anger to the original transgression and their bitterness and frustration surrounding the transgression, that are important to this association.

References

- Allison, P. D. (1999). *Logistic regression using the SAS system: Theory and application*. Cary, North Carolina: SAS Institute.
- Berry, J. W., Worthington, E. L., Parrott, L., O'Conner, L. E., & Wade, N. G. (2001). Dispositional forgivingness: Development and construct validity of the Transgression Narrative Test of Forgivingness (TNTF). *Personality and Social Psychology Bulletin*, *27*, 1277–1290.
- Brose, L. A., Rye, M. S., Lutz-Zois, C., & Ross, S. R. (2005). Forgiveness and personality traits. *Personality and Individual Differences*, *39*, 35–46.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*, 155–159.
- Costa, P. T., & McCrae, R. R. (1992). *Revised NEO personality inventory (NEO-PI-R) and the NEO five-factor inventory (NEO-FFI): Professional manual*. Odessa, FL: Psychological Assessment Resources, Inc..
- Exline, J. J., & Baumeister, R. F. (2000). Expressing forgiveness and acceptance: Benefits and barriers. In M. E. McCullough, K. I. Pargament, & C. E. Thoresen (Eds.), *Forgiveness: Theory research and practice* (pp. 133–155). London: The Guilford Press.
- Gordon, K. C., Baucom, D. H., & Snyder, D. K. (2000). The use of forgiveness in marital therapy. In M. E. McCullough, K. I. Pargament, & C. E. Thoresen (Eds.), *Forgiveness: Theory research and practice* (pp. 203–227). London: The Guilford Press.
- Hebl, J. H., & Enright, R. D. (1993). Forgiveness as a psychotherapeutic goal with elderly females. *Psychotherapy*, *30*, 658–667.
- Komorita, S. S., Hilty, J. A., & Parks, C. D. (1991). Reciprocity and cooperation in social dilemmas. *Journal of Conflict Resolution*, *35*, 494–518.
- McCullough, M. E., & Hoyt, W. T. (2002). Transgression-related motivational dispositions: Personality substrates of forgiveness and their links to the big five. *Personality and Social Psychology Bulletin*, *28*, 1556–1573.
- McCullough, M. E., Bellah, C. G., Kilpatrick, S. D., & Johnson, J. L. (2001). Vengefulness: Relationships with forgiveness, rumination, well-being and the big five. *Personality and Social Psychology Bulletin*, *27*, 601–610.
- McCullough, M. E., Rachal, K. C., Sandage, S. J., Worthington, E. L., Brown, S. W., & Hight, T. (1998). Interpersonal forgiving in close relationships: II. Theoretical elaboration and measurement. *Journal of Personality and Social Psychology*, *75*, 1586–1603.

- McCullough, M. E., Worthington, E. L., Jr., & Rachal, K. C. (1997). Interpersonal forgiving in close relationships. *Journal of Personality and Social Psychology*, *73*, 321–336.
- Pargament, K. I., McCullough, M. E., & Thoresen, C. E. (2000). The frontier of forgiveness: Seven directions for psychological study and practice. In M. E. McCullough, K. I. Pargament, & C. E. Thoresen (Eds.), *Forgiveness: Theory research and practice* (pp. 299–319). London: The Guilford Press.
- Walker, D. F., & Gorsuch, R. L. (2002). Forgiveness within the Big Five personality model. *Personality and Individual Differences*, *32*, 1127–1137.