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How secure and preoccupied attachment relate to offence-specific forgiveness in couples

Robert Körner^{a,b}, Astrid Schütz^{b,*}, Frank D. Fincham^c

^a Department of Psychology, Martin-Luther-University of Halle-Wittenberg, Germany

^b Department of Psychology, Otto-Friedrich-University of Bamberg, Germany

^c Family Institute, Florida State University, United States

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ABSTRACT

Attachment is important for pro-relationship behavior. Past research has suggested that anxious and avoidant attachment makes people less likely to forgive, but dyadic effects of secure and preoccupied attachment have not been considered. We tested actor and partner effects of attachment on forgiveness (increased benevolence; decreased resentment) in heterosexual couples. Actor-partner-interdependence models showed that actors' secure attachment was positively associated with their own and with their partners' forgiveness. Preoccupied attachment was positively related to forgiveness for actors but unrelated to partners' forgiveness. Similarity in attachment was independent from forgiveness. Attachment thus allows for a better understanding of why two people involved in a relationship might or might not forgive each other after transgressions.

1. Introduction

From the first date and possibly 'til death do them part, couples experience positive events but also conflict. However, conflicts need not be negative as they can be resolved and forgiven—and thus even strengthen a relationship (Braithwaite et al., 2011). Thus, forgiveness after conflicts can be understood as a central aspect of healthy and happy relationship functioning. But the question of who forgives in a relationship is still not fully explored even though people all over the world experience conflicts and attachment may be a positive resource for forgiving in many countries (Ho & Worthington, 2020; Schmitt et al., 2004). Although an association between attachment dimensions and forgiveness of others has been documented (Hirst et al., 2019), little is known about this association in the context of romantic relationships. The present study addresses the question of how relationship partners' attachment tendencies are related to dimensions of forgiveness in both members of a couple.

1.1. Forgiveness

Forgiveness is defined as a prosocial change characterized by decreased retaliation motivation or estrangement from the offender and by increased conciliation (Worthington, 2020). Importantly, forgiveness

is not to be equated with pardoning, condoning, excusing, or forgetting. Pardoning refers to behavior carried out by a representative of society such as a judge whereas forgiveness involves a motivational transformation in which revenge and/or withdrawal is lessened and may ultimately be replaced by goodwill toward the offender. By contrast, excusing means that the conflict is not worth quarreling about and condoning removes the offence and hence need for forgiveness (Enright et al., 1992). Finally, forgetting simply removes awareness of an offence from consciousness and to forgive is more than just not thinking about the offence. Forgiveness can be understood as a coping strategy, that is, a "process of neutralizing a stressor that has resulted from a perception of an interpersonal hurt" (p. 1076, Strelan & Covic, 2006). Thus, forgiveness starts with the perception of a conflict event and is followed by a dynamic process that involves affective, cognitive, and behavioral responses. Forgiveness may be said to occur when the stressor is neutralized; either negative responses end or positive responses toward a transgressor follow. Thus, the end-point of the forgiveness process occurs when an individual experiences little or no stress resulting from the transgression.

Forgiveness is related to relationship quality, mental health, and well-being (Webb & Toussaint, 2019). However, in an abusive relationship forgiveness can also be negative when the dysfunctional relationship continues placing the victim at risk of further harm (Fincham,

* Corresponding author at: Department of Psychology, University of Bamberg, Markusplatz 3, 96047 Bamberg, Germany.

E-mail address: astrid.schuetz@uni-bamberg.de (A. Schütz).

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2015; Gordon et al., 2004). Forgiveness can occur at a generalized level (i.e., across offences and relationship partners), at a dyadic level (i.e., across offences in a relationship), or at an offence-specific level. In this study, we are concerned with the latter type of forgiveness because this type may most likely be associated with forgiveness of transgressions committed by the partner, in contrast to global and abstract forgiveness. Further, offence-specific forgiveness has been somewhat neglected in research on attachment and conflict resolution. It is characterized by increases in benevolence motivation and decreases in resentment-avoidance (Paleari et al., 2009), which is in line with the fact that researchers describe forgiveness as consisting of two dimensions; one positive and one negative (e.g., Strelan & Covic, 2006). Benevolence describes conciliatory motivation and goodwill whereas resentment or unforgiveness reflects vengeance and/or withdrawal motivation. If resentment is reduced, so that negative responses to the transgressor stop, researchers have also operationalized this as forgiveness. Attachment is a personality variable that is important for forgiveness because it is fundamentally interpersonal and determines how we deal with others.

1.2. Attachment

Early experiences in infant-caregiver interactions affect how people react to dependence-related situations (Ainsworth, 1989; Bowlby, 1973). In adults, romantic partners are very important attachment figures, and attachment is related to variables such as trust or support (Simpson et al., 1992). There are different conceptualizations of attachment (Fraley & Shaver, 2000). Researchers typically distinguish secure attachment from insecure attachment. Secure attachment reflects positive models of both the self and others, and is characterized by reciprocity, closeness, intimacy, and constructive behavior in conflict. By contrast, insecure attachment reflects a negative model of the self and/or others and is characterized by low trust and negative relational knowledge (Bartholomew & Horowitz, 1991). Whereas some researchers consider attachment in terms of two axes, one ranging from low anxiety to high anxiety, the other ranging from low avoidance to high avoidance, the initial model of adult attachment distinguished four types that can also be projected onto a two-dimensional grid concerning how we see ourselves and others: a secure-fearful dimension and a preoccupied-dismissive dimension (Gillath et al., 2016; Bartholomew & Horowitz, 1991). People who score high on fearfulness are anxious about intimacy and avoid others to protect themselves against possible rejections. Preoccupied individuals feel unworthy and strive to be accepted by others. Dismissive attachment describes the wish to be independent. Individuals who are characterized by that style tend to avoid closeness. As forgiveness is related to how we see the partner and ourselves, we considered this initial model especially appropriate.

1.3. The Attachment-Forgiveness relation in couples

An important question is whether a person's attachment affects not only their own but also their partner's forgiveness. Much research has found that both anxious and avoidant attachment are negatively related to forgiveness of others (e.g., Kimmes & Durtschi, 2016; for a meta-analysis see Hirst et al., 2019). However, little research has investigated the attachment-forgiveness-relation in romantic relationships and examined partner effects. An early study found a positive link between a person's secure attachment and that person's tendency to forgive in dating and married couples (Kachadourian et al., 2004). Although this

study assessed the classical model of adult attachment, it did so using single item descriptors of secure, fearful, preoccupied, and dismissive attachment styles. The use of single items has been criticized on psychometric grounds (Asendorpf et al., 1997; Fraley & Shaver, 2000).¹ Further, forgiveness was studied without reporting results of different dimensions, but researchers have called for a consideration of the dual nature of forgiveness (i.e., distinguishing between positive and negative components; Paleari et al., 2009).

As noted earlier, partners in a relationship affect one another, necessitating the study of dyadic effects (Brauer & Proyer, 2020; Kenny et al., 2006). Therefore, to provide a more complete picture of attachment and forgiveness in relationships, dyadic data are necessary. Martin et al. (2019) reported both negative actor and partner effects of avoidant attachment (using the Experience in Close Relationships Scale, Fraley et al., 2011) on the forgiveness dimension of avoidance but nonsignificant effects on benevolence. Attachment anxiety was not related to forgiveness. In a longitudinal study, a negative relation was found between attachment avoidance and partners' global forgiveness two years later (Dewitte et al., 2021); however, no significant association emerged between attachment anxiety and global forgiveness. These dyadic studies used dimensional attachment measures of anxiety and avoidance which conceptualizes attachment dimensions differently than Bartholomew and Horowitz (1991; see Fig. 1), which is why the question of how secure-fearful and preoccupied-dismissive attachment relate to partners' forgiveness remains unanswered.

In seeking to answer the above question, we had three goals: First, we sought to document how the Bartholomew and Horowitz (1991) attachment model was related to forgiveness in romantic relationships. We chose this model because it has been found to be psychometrically valid within most countries of the world (Schmitt et al., 2004) and because it seems plausible that the way partners see themselves and the other (positive or negative working models) directly translates to forgiving, which is closely linked to perceptions of oneself and the transgressor. Consistent with Asendorpf and colleagues' analysis (Asendorpf et al., 1997; Asendorpf & Wilpers, 2000), we conceptualized attachment as an individual difference variable that falls along two dimensions: one from *secure attachment to fearful attachment*, and the other from *preoccupied attachment to dismissive attachment*. See Fig. 1 for this conceptualization (adapted from Gillath et al., 2016). The chosen model represents a 45-degree rotation of the model that introduced anxiety and avoidance axes and has been used extensively in the literature (e.g., Bpanse, 2004; Neyer & Voigt, 2004; Schmitt et al., 2004). It is in line with the working model account (e.g., Diehl et al., 1998; Blain et al., 1993), and fits well with work by Kobak et al. (1993), the scoring system used for the adult attachment interview (Fyffe & Waters, 1997), and Mikulincer and Shaver's (2007) model of attachment. For example, with five different samples Asendorpf et al. (1997) showed that a measure with two dimensions (secure-fearful; preoccupied-dismissive) shows good fit and high coefficients for internal consistency and stability. All in all, a host of data as well as theoretical considerations suggest that the secure-fearful and the preoccupied-dismissive dimensions are a valid conceptualization of attachment. To date, neither of the two attachment models/rotations seem superior in predicting couple experience and behavior. Moreover, Fraley and Waller (1998) argued that there is no globally accepted attachment typology; thus, it seems best to conceptualize attachment in a two-dimensional space, which favors dimensional concepts and scales compared to typological measures (see also Shaver et al., 2000). In following these arguments, we believe that a

¹ In an exploratory fashion, we also measured prototypical attachment types with the single-item self-reports (Bartholomew & Horowitz, 1991) but we found the preoccupied attachment style did not fit well with the data as it loaded on the same pole with the fearful dimension. For that reason, we used a different measure of dimensional and orthogonal attachment styles (see Online Supplement and Asendorpf et al., 1997).

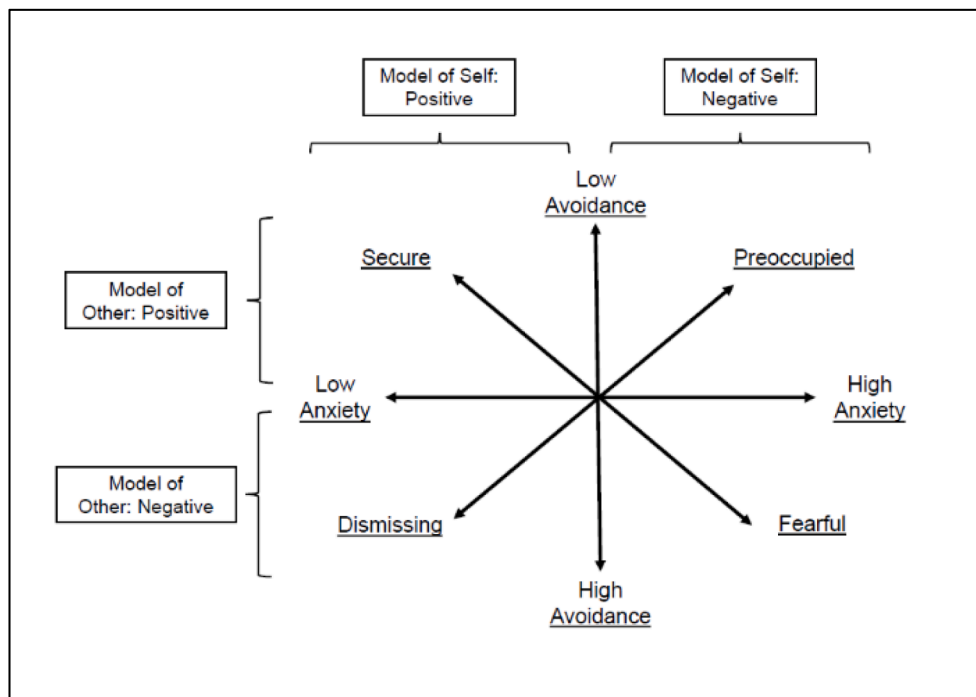


Fig. 1. Attachment Conceptualizations. Note. Adapted from Gillath et al. (2016)

multi-item dimensional measure of attachment has the potential to provide the most valid conclusions (Brennan et al., 1998; Fraley & Shaver, 2000).

Second, using the Actor Partner Interdependence Model, we sought to determine whether own levels of secure and preoccupied attachment are linked to partner's forgiveness which would complement initial findings on partner effects for avoidant attachment on forgiveness (e.g. Dewitte et al., 2021; Martin et al., 2019). Attachment (as well as forgiveness) is a fundamentally interpersonal variable and thus it is likely that one's own attachment relates to how the partner reacts in response to transgression. This is in line with research showing that attachment is associated with the partner's reactions to negative events (Nisenbaum & Lopez, 2015). The behavior of securely attached individuals is characterized by support, caring, and positivity (Bartholomew & Horowitz, 1991) as well as good relational skills (e.g., empathy) and the partners of securely attached individuals are likely to positively relate to these positive interpersonal interactions and show compatible behavior. This reasoning suggests that forgiveness in partners of securely attached individuals is a variable that is affected interpersonally (see also Fincham, 2000). Further, preoccupied individuals experience low self-esteem and strive for extreme closeness with their partner. The partner may sense this and consequently may show less revenge motivation in response to a conflict to preserve the self-worth of the partner—or may be annoyed with the extreme desire for closeness and not even engage in forgiveness. Thus, the couple's dyadic adjustment influences how each partner responds to transgressions (see also interdependence theory; Thibaut & Kelley, 1959) and it is thus important to consider both actor and partner effects simultaneously.

Third, we sought to generalize the findings beyond global measures of trait and partner forgiveness and to distinguish between forgiveness dimensions to account for the dual nature of forgiveness (e.g., Paleari et al., 2009). Accordingly, we employed a measure of offence-specific forgiveness. Offence-specific forgiveness might be considered more relevant for various relationship outcomes than broader concepts because it predicts how partners behave in a specific situation—abstract and global thinking about benevolence and resentment forgiveness might be less relevant in specific relationship situations. Further,

offence-specific forgiveness is fundamentally dyadic (Paleari et al., 2009) and should thus be related to both relationship partners' attachment. Most research on the link between attachment and forgiveness employed unidimensional trait forgiveness measures (see Hirst et al., 2019) but we know less about the association of attachment with offence-specific forgiveness. However, offence-specific forgiveness may be more important to understand relationship processes because there is only modest stability of forgiveness across different offences (e.g., Paleari et al., 2005).

1.4. Hypotheses

Specifically, the study examined the following hypotheses:

Hypothesis 1. *Secure attachment is (a) positively related to benevolence and (b) negatively related to resentment.*

This hypothesis rests on the observation that secure attachment is related to providing care, reciprocity, and compromising. Securely attached individuals experience closeness, trust, and intimacy. They see themselves and their partner as positive, loyal, and trustworthy and thus should be more likely to forgive transgressions and react in a constructive manner after offences (see Kachadourian et al., 2004).

Hypothesis 2. *Preoccupied attachment is positively related to (a) benevolence and (b) negatively to resentment.*

Preoccupied individuals strive for approval through others. They see themselves as unworthy of being loved (i.e., negative self-image) but see others very positively (Asendorpf & Wilpers, 2000). They may thus allow others to transgress without showing their own resentment because they depend on their relationship partner (Ustündağ-Budak et al., 2020).

Hypothesis 3. *A respondent's secure attachment is (a) positively related to partner's benevolence and (b) negatively related to partners' resentment-avoidance.*

According to interdependence theory (Thibaut & Kelley, 1959), people influence each other's experiences. Applied to the present

research, securely attached individuals may also provide positive experiences and support to their partner, thus establishing healthy relationships that are characterized by mutual forgiveness. We therefore expected partner effects.

Hypothesis 4. Respondents' preoccupied attachment is (a) negatively related to their partners' benevolence and (b) positively related to their partners' resentment-avoidance.

Preoccupied individuals may become a burden to their partners because of their extreme desire for closeness and their tendency to present themselves as worthless. Thus, partners may react by showing little forgiveness. Moreover, powerful partners are more easily forgiven (Körner et al., 2022) but preoccupied attachment is likely characterized by low social and personal power (Sprecher et al., 2006), which is why these individuals might not be forgiven. Hence the current hypothesis.

Finally, we conducted an exploratory analysis. We examined the effect of similarity in attachment tendencies on forgiveness. There is debate about whether similarity in personality and self-views within couples is predictive of various relationship outcomes. Some studies have found that similarity in personality is beneficial for variables related to relationship satisfaction (e.g., van Scheppingen et al., 2019), whereas others did not find that similarity in personality is related to relationship quality (e.g., Dyrenforth et al., 2010). An important aspect of relationship partners' personality is attachment style. The present study is the first attempt to investigate how attachment similarity relates to forgiveness. We computed absolute difference scores (see Dyrenforth et al., 2010; Kenny et al., 2006; Körner & Schütz, 2021; Proyer et al., 2019) because we were interested in trait level similarity effects. That is, we aimed to test how similarity between single attachment dimensions (secure-fearful; preoccupied-dismissive) relates to forgiveness.

2. Method

2.1. Participants and procedure

We used data from a larger study on psychological functioning in romantic relationships (Körner & Schütz, 2021; $N = 181$ couples). Participants were recruited from April to July 2020 via snowballing and email lists primarily in Southern Germany. Exclusion criteria were younger than 18 years, < 1 month in the present relationship, and inability to remember a conflict. The final sample comprised 149 heterosexual couples. Men were on average $M_{\text{age}} = 31.65$ years old ($SD_{\text{age}} = 12.95$, 19 to 73). Women were on average $M_{\text{age}} = 29.77$ years old ($SD_{\text{age}} = 13.17$, 18 to 72). On average, participants had been in their current relationship for 8.32 years ($Mdn = 3.33$, $SD = 10.94$, 2 months to 52 years). A post hoc power analysis showed that we were able to detect effects of $\beta_{\text{Actor/Partner}} = 0.20/0.15$ with a power of $0.95/0.77$ ($\alpha = 0.05$, Ackerman et al., 2020). Participants completed an online survey lasting approximately 20 min. Each person responded independently, and a couple code was generated to match partners. Material and procedure were reviewed and approved by the Institutional Review Board of University of Bamberg.

2.2. Instruments

The *Relationship-Specific Attachment Scales for Adults* (Asendorpf & Wilpers, 2000) was employed to assess the two attachment dimensions *secure-fearful* (6 items, e.g., "I can rely on my partner very well," representing secure attachment) and *preoccupied-dismissive* (8 items, e.g., "I can solve problems only with my partner," representing preoccupied attachment or dependent attachment as called by the authors). All items referred to romantic partners. Responses were given on a scale ranging from 1 (*not at all true*) to 5 (*completely true*). The scale has been used in various studies (e.g., Croy et al., 2013; Milatz et al., 2015; Neyer, 2002; Neyer & Voigt, 2004) and demonstrated satisfactory psychometric properties and orthogonality (Asendorpf et al., 1997). Further, in five

samples good evidence for convergent and discriminant validity was found (Asendorpf et al. (1997)). We conducted an exploratory factor analysis with Varimax rotation and also found that the items can be clearly mapped onto the two orthogonal dimensions (see Online Supplement).

The *Marital Offence-Specific Forgiveness Scale* (Haversath et al., 2017; Paleari et al., 2009) consists of two dimensions: *benevolence* (i.e., a conciliatory motivation after conflicts; four items, e.g., "I soon forgave her/him"), and *resentment-avoidance* (six items, i.e., revenge and avoidance motivation; e.g., "Because of what happened, I find it difficult to be loving toward her/him"). Items were adapted to also fit unmarried couples. Participants were instructed to recall as vividly as possible an offence their partner committed against them. The items were administered with a rating scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). A control item followed the scale ("How intensively could you remember the situation?"); participants who indicated "not at all" (39 participants in total, involving 32 couples) were not analyzed.² Table 1 presents Cronbach's alpha coefficients.

2.3. Analytic strategy

We computed Actor-Partner Interdependence Models (APIMs; Kenny et al., 2006). Analyses were done with structural equation modeling using maximum likelihood estimation in Mplus 7. We computed bootstrapped 99 % Confidence Intervals ($k = 5,000$ samples) and effect sizes (see Brauer & Proyer, 2018). For the latter, we standardized the b coefficients on the SD separately for men and women because the two groups differed in the variances of the outcomes ($\Delta_{W/M} = b/SD_{W/M}$). Δ is the change in the outcome in SD s when the predictor changes by 1 point. For example, when participants have a score of "3" compared to a score of "2" on the secure-fearful scale, then benevolent forgiveness increases 0.57 and 0.66 SD s for women and men, respectively. For each APIM, we tested a saturated model (all effects freely estimated) against a nested equal-actor, equal-partner-effects model. The equal-effects model indicated the absence of gender effects and was favored when the Likelihood Ratio Chi-Squared Test was nonsignificant ($p > .20$; Kenny & Ledermann, 2010; see OSF). Note that we used APIM terminology (i.e., effect), which does not refer to causality but instead indicates the direction of an association.

We also examined whether similarity in attachment relates to forgiveness. To do so, we extended the standard APIM model in such a way that dyadic effects of similarity on both partners' outcomes can be tested (see Fig. 2). We controlled for actor and partner effects (Dyrenforth et al., 2010) to obtain the unique contribution of similarity. We computed the absolute difference score between men's and women's scores on the attachment dimensions multiplied by -1 . Higher b coefficients mean that similarity in attachment was positively related to forgiveness. For example, if people reported that they experienced more secure attachment (e.g., a "5" on a response scale) than their partners (e.g., "1"), a large difference score would result ("4"). Partners in other couples may report experiencing equal levels of secure attachment, and in such a case, the absolute difference would be zero. When the signs of these scores are reversed ("4" \rightarrow "-4"; "0" \rightarrow "0"), higher b coefficients in the APIM indicate higher forgiveness through similarity in attachment. Data and syntax are available online (<https://osf.io/kn7uh/>).

² To investigate whether attachment relates to the ability to recall offences, we conducted chi-square tests of independence. We dichotomized the recall item (1 = not able to remember an incident; 2 = able to remember an incident) and the attachment scores (median split for both attachment dimensions to create two groups). There were no expected cell frequencies below five. Securely attached participants did not differ from fearful attached individuals in their ability to recall an offence, $\chi^2(1, N = 356) = 1.425, p = .233$. Also preoccupied attached participants did not differ from dismissive individuals in their ability to recall an offence, $\chi^2(1, N = 356) = 0.027, p = .870$.

Table 1
Descriptive Statistics, Cronbach's Alphas, Partner Differences, and Zero-Order Correlations for Attachment Styles and Forgiveness.

Variable	Women			Men			t	d	Within-Partner				Between-Partner			
	M	SD	α	M	SD	α			1	2	3	4	1	2	3	4
1-SEC	4.42	0.60	0.74	4.46	0.52	0.75	0.90	0.08	–	0.33***	0.44***	-0.52***	0.43***	0.14	0.33***	-0.36***
2-PRE	3.00	0.58	0.81	3.06	0.63	0.77	1.02	0.11	0.34***	–	0.35***	-0.21*	0.25***	0.20*	-0.01	-0.13
3-BEN	4.68	0.97	0.79	4.94	0.83	0.76	2.91**	0.29	0.39***	0.29***	–	-0.62***	0.31***	0.04	0.26**	-0.24**
4-RES	2.51	1.02	0.82	2.25	0.83	0.75	-3.04**	0.28	-0.46***	-0.22**	-0.68***	–	-0.27***	-0.04	-0.30***	0.38***

Note. SEC = Secure attachment. PRE = Preoccupied attachment. BEN = Benevolence. RES = Resentment. Within-partner correlations are presented separately for men (below the diagonal) and women (above the diagonal). Between-partner correlations were computed across partners (rows = women's scale scores, columns = men's scale scores). N = 149 couples.

* p < .05.

** p < .01.

*** p < .001 (two-tailed).

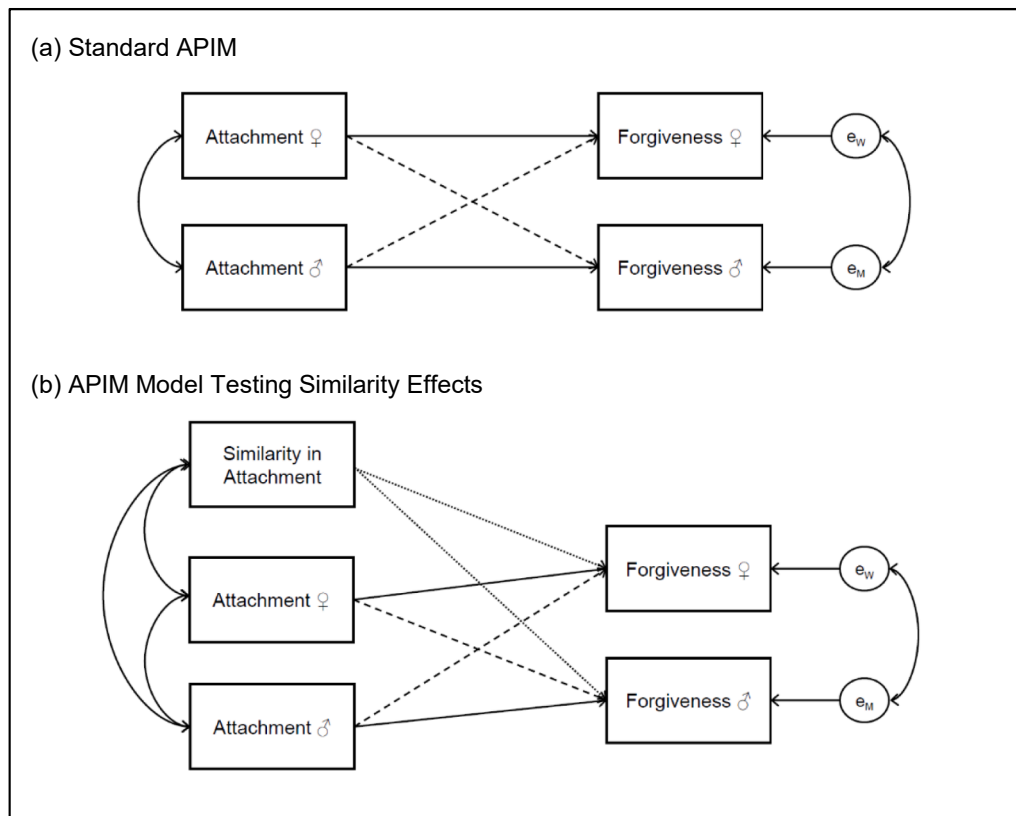


Fig. 2. Tested APIM Models. Note. Continuous arrows = actor effects. Dashed arrows = partner effects. Dotted arrows = similarity effects. e = error terms. W = Women's scores. M = Men's scores. Double arrows = covariances.

3. Results

Table 1 presents descriptive statistics. Men and women did not differ in attachment, but men reported somewhat higher forgiveness (i.e., more benevolence, and less resentment). Couples were similar in all variables (see Table 1), indicating robust interdependence between partners.

Likelihood Ratio Tests indicated that associations were independent of gender. To test hypotheses 1 and 3 concerning secure attachment, APIM analyses were performed. The APIM analyses with secure attachment as the predictor and benevolence as the outcome showed positive actor and partner effects (see Table 2). Also, for the association between secure attachment and resentment, significant negative actor and partner effects were found. Thus, hypotheses 1 and 3 were supported.

Similar APIM analyses were conducted to test hypotheses 2 and 4 concerning preoccupied attachment. With preoccupied attachment as

the predictor and benevolence as the outcome, a positive and significant actor effect was found. Also, in line with hypothesis 2, for the association between preoccupied attachment and resentment, a significant negative actor effect was found. However, there were no significant partner effects for preoccupied attachment as the predictor, which is why hypothesis 4 was rejected. Turning to our exploratory analysis, similarity in partners' attachment was unrelated to forgiveness (see Table 2).

4. Discussion

The present study is one of very few that investigate the associations between attachment and forgiveness dimensions at a dyadic level. In doing so it addresses important limitations of prior research. It is also the first to use the classical conceptualization of positive and negative models of self and other and assessed orthogonal attachment tendencies (i.e., secure-fearful and preoccupied-dismissive) among relationship partners using a multi-item scale.

Table 2

Results (Unstandardized Regression Coefficients, Bootstrapped 99% Confidence Intervals, Standard Errors, p-Values for Two-Tailed Wald Tests, Effect Sizes) of APIM Analyses.

Predictor	Outcome	Actor					Partner				
		$b_{W/M}$	99 % CI	SE	p	$ \Delta_{W/M} $	$b_{W/M}$	99 % CI	SE	p	$ \Delta_{W/M} $
Secure attachment	Benevolence	0.55	[0.27,0.81]	0.10	< 0.001	0.57/ 0.66	0.27	[0.01,0.55]	0.10	0.010	0.28/ 0.33
	Resentment	-0.71	[-0.95,-0.46]	0.09	< 0.001	0.70/ 0.86	-0.21	[-0.46,0.03]	0.09	0.027	0.21/ 0.21
Preoccupied attachment	Benevolence	0.47	[0.26,0.69]	0.09	< 0.001	0.48/ 0.57	-0.08	[-0.30,0.14]	0.09	0.345	0.08/ 0.10
	Resentment	-0.31	[-0.53,-0.08]	0.09	< 0.001	0.30/ 0.37	-0.07	[-0.31,0.15]	0.09	0.416	0.07/ 0.08
Similarity in secure attachment	Benevolence	0.08	[-0.36,0.52]	0.16	0.627	0.08/ 0.10					
	Resentment	-0.03	[-0.52,0.43]	0.17	0.868	0.03/ 0.04					
Similarity in preoccupied attachment	Benevolence	-0.04	[-0.35,0.23]	0.11	0.692	0.04/ 0.05					
	Resentment	0.11	[-0.22,0.44]	0.13	0.404	0.11/ 0.13					

Note. W = women, M = men. $N = 149$ couples. The bold values indicate significant b coefficients.

We replicated the link between secure attachment and forgiveness (i. e., securely attached individuals reported higher benevolence and lower resentment; Kachadourian et al., 2004). In addition, significant partner effects were documented in that secure attachment was also related to both dimensions of partners' forgiveness. These findings underline the importance of considering interpersonal links between attachment and prosocial relationship variables and is to our knowledge the first study relating the adult attachment styles outlined by Bartholomew and Horowitz (1991) to forgiveness of both partners in a romantic relationship. Thus, the research extends studies on actor associations between these attachment tendencies and forgiveness (e.g., Blount-Matthews, 2005; Yáñez Yaben, 2009). Securely attached individuals may bring positivity and trust into the relationship, which appears to make both relationship partners more likely to forgive when transgressions occur. Thus, one partner's secure attachment has the potential to benefit *both* partners. These findings broaden our understanding of the benefits of secure attachment and may help practitioners (e.g., in couple's therapy) who aim to promote pro-relationship behavior.

We also found that preoccupied attachment was positively related to an actor's forgiveness. It is likely that preoccupied individuals forgive because they have overly positive attitudes toward their partners and are afraid to lose their partners. Thus, their partners can commit offences without experiencing negative consequences—and this could foster an unhealthy relationship. Consistent with this reasoning, there were no significant partner effects. For an individual with a more marked desire for closeness, the partner's forgiveness was not associated with the individual's attachment tendencies. It may well be that preoccupied individuals' tendency to see and present themselves as worthless gives rise to their partners seeing them as such and concluding that they are not worth the work needed to engage in forgiveness. After all, their need for closeness is unlikely to change. Another interpretation may be that preoccupied individuals strive for acceptance and thus strongly engage in behavior to receive forgiveness from the partner. However, the partner may be annoyed with this effusiveness and thus be less likely to forgive. Thus, a nonsignificant partner effect could emerge because the two processes cancel each other out. All associations between attachment and forgiveness were independent of gender.

Similarity in attachment was unrelated to forgiveness. Apparently, the main (actor, partner) effects are what matters rather than similarity in these aspects. This research thus adds to the literature on the link between similarity in personality and relationship outcomes and dovetails with seminal work that likewise found nonsignificant similarity

effects (e.g., between personality and relationship quality, Dyrenforth et al., 2010). Further, our findings help to clarify initial results on the link between attachment similarity and relationship quality measures (Conradi et al., 2021). Still, this finding needs to be validated in future studies because it is possible that the present sample was too homogeneously to find a significant link.

Moreover, other methods are also available for assessing similarity effects such as dyadic response surface analyses (Schönbrodt et al., 2018) or profile similarity (Furr, 2008). However, response surface analyses would have produced many more coefficients than our APIM models, and thus, the results regarding our exploratory research question would not have been as clear. Profile correlations are not as straightforward to interpret as discrepancy scores and profile similarity would have been especially interesting if we had used multidimensional attachment measures. Future research may tackle the issue of similarity effects in more heterogeneous samples, and the aforementioned data analysis techniques may allow for new insights if measures are multidimensional (e.g., including all four axes as depicted in Fig. 1). In any case it has been shown that similarity effects hardly differ between different techniques (Dyrenforth et al., 2010).

The findings are relevant for practitioners because they suggest that attachment matters for forgiveness in romantic relationships. Relationship partners do not need to display similar attachment tendencies but if at least one partner is securely attached, both relationship partners are more likely to forgive transgressions. Fostering trust, providing support, and bringing positivity into the relationship helps both partners because secure attachment in one partner affects the other partner and hence the relationship. Therapists and coaches may use specific interventions (e.g., Emotion-Focused Couples Therapy) to strengthen positive attachment modes. However, we cannot infer the direction of effects with confidence but can simply state that forgiveness relates positively to attachment and may thus benefit from developing the positive self- and other views that form secure attachment.

In addressing limitations of the present study, future research might use different forgiveness measures (e.g., dispositional forgiveness or instrumental forgiveness; Exline et al., 2004; McElroy-Heltzel et al., 2019) or analyze people's motivations for forgiving in relation to attachment. Further, different attachment measures can be employed. We used an empirically well-constructed and relationship-specific self-report measure, but the validity of the scale in languages other than German should also be shown in order to generalize findings to other cultures. Further, observer reports of attachment behavior or diary

methods could also inform future studies. Finally, cross-cultural research is needed to test for the generalizability of the results.

In assessing attachment with two orthogonal and bipolar dimensions in line with the model proposed by Bartholomew and Horowitz (1991), distinguishing between forgiveness dimensions, using a dyadic sample, and also analyzing interpersonal effects, our study adds novel findings to the literature on factors relevant to forgiveness: Secure and preoccupied attachment help account for why people forgive their partners' offences. Further, secure attachment also seems to have the potential to explain partners' forgiveness.

We have no conflicts of interest to disclose. All procedures performed in studies involving human participants were in accordance with the ethical standards of the national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This article does not contain any studies with animals performed by any of the authors. Informed consent was obtained from all participants who were included in the study.

Open science

Data, code, and supplementary materials are available online at <http://osf.io/kn7uh/>. The study was not pre-registered.

Author contribution

Conception and design of the work: RK. Data collection and -analysis: RK. Drafting the manuscript: RK. Critical revision of the manuscript: AS and FDF.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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