

Unraveling the Role of Forgiveness in Family Relationships

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Testing the idea that the process of forgiveness is intrinsically different across diverse relationships, this study examined the role of forgiveness in different family relationships. In 2 laboratory sessions 1 year apart, 114 families (each including 2 parents and 1 child) completed a new measure of family forgiveness and many individual-level, relationship-level, and family-level variables that have been previously linked with forgiveness. After validating the measure of family forgiveness in cross-sectional analyses, investigators performed longitudinal analyses to examine the role of forgiveness in each family relationship over the 1-year interval. Results indicated many important positive consequences of forgiveness on individual traits, aspects of each family relationship, and general family environment. However, there were also important asymmetries in associates of forgiveness across parent–child and parent–parent relationships, demonstrating the relationship-bound nature of forgiveness.

Keywords: forgiveness, family, self-persuasion, relationships

Most conceptualizations of forgiveness describe it as a deliberative process that transforms a vengeful, negative response into a positive one (Baumeister, Stillwell, & Wotman, 1990; de Waal, 2000; Fincham, 2000; McCullough et al., 1998). That is, the forgiver actively attempts to move from negative thoughts, feelings, and behaviors toward the transgressor to more positive thoughts, feelings, and behaviors. Consequently, prior models of forgiveness have focused on individual social–cognitive processes, paying comparatively limited attention to the broader social context of forgiveness (McCullough, Worthington, & Rachal, 1997; Mikulincer, Shaver, & Slav, 2006; Paleari, Regalia, & Fincham, 2005).

Although this work has made great strides, any complete understanding will also have to include the type of relationship between transgressor and victim *and* the broader context in which that relationship is embedded (Fincham, 2000; McCullough & Hoyt, 2002). When forgiveness occurs in relationships, it most likely serves a purpose that is linked to the nature and functioning of the relationship itself. For example, the operation of forgiveness should depend greatly on whether it occurs between two friends, between two married adults, or between a parent and a child,

because these relationships subsume different roles and serve different psychological needs. Even studies of forgiveness in non-humans (primates in particular) have increasingly made familial relationships, rather than individuals, the unit of analysis (de Waal, 2000). In the present research, we examined the pivotal role of this broader social context in humans by testing whether forgiveness varies across family relationships.

The General Process of Forgiveness

The effort that people put into forgiveness raises an important question about what forgiveness accomplishes. We believe that the answer to this question is inextricably linked to the relationship context in which forgiveness occurs. We should find, for example, that the process of forgiveness is different in relationships between parents than in relationships between parents and children. This difference may occur because unforgiveness is related to avoidance behavior (Fincham, Beach, & Davila, 2004; McCullough et al., 1998). From an evolutionary perspective (see, e.g., D. M. Buss, 1996; Kenrick & Trost, 1997), avoidance should lead to lower parental care in the parent–child relationship, causing unforgiving parents to have a decreased chance of gene replication (Trivers, 1985). In other words, evolution may have determined that humans are inclined to forgive their children (and genetic kin more generally) because of the reproductive advantage that this provides (Luebbert, 1999). Indeed, in nonhuman primates, such as bonobos, mothers exhibit high rates of forgiveness of their offspring (as measured by behavioral reconciliation; de Waal, 1997). Primate reconciliation may be biased toward kin even after frequency of interaction is controlled for (de Waal, 2000), at least when population density is low. This finding and other evidence have been used to support the broader argument that forgiveness is an evolutionary adaptation that protects relationships (Cords & Aureli, 2000; de Waal, 2000).

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Among humans, forgiveness may also be influenced by socially shared knowledge about children's cognitive capacities and abilities (Kenrick, Li, & Butner, 2003). As a result, societal norms often encourage greater tolerance of child transgressions, as reflected by more lenient laws regarding punishment of child offenders. Moreover, transgressions are part of normal childhood development, and parents' knowledge of this fact can further cause forgiveness of children to be viewed as a necessary, moral requirement of the parental role. Forgiveness of children by parents does not possess the supererogatory element of forgiveness in other relationships (Fincham, 2000; Fincham et al., 2004). Consequently, forgiveness of children may have a less complex set of antecedents and consequences than forgiveness of parents or between parents.

The avoidance engendered by unforgiveness also has interesting implications for potential differences in forgiveness between the father-child relationship and the mother-child relationship. Avoidance of and detachment from children is often a more prominent option for fathers than for mothers, consistent with evolutionary theories about sex differences in requirements for gene propagation (Kenrick, Trost, & Sundie, 2004). As a result, it may become comparatively easy for fathers to become less involved in their relationships with children and, consequently, to be less effective at detecting and conveying forgiveness in their relationships with children. This view fits evidence of unique attitudinal and attachment processes in father-child relationships (Maio, Fincham, & Lycett, 2000) and of more problems in father-child communication than in mother-child communication (see Botta & Dumlao, 2002; Kornhaber & Marcos, 2000; Seiffge-Krenke, 2002). In addition, Hoyt, Fincham, McCullough, Maio, and Davila (2005) found significantly less relationship-specific variance in forgivingness in the father-child relationship than in other family relationships.

These parent-child and father-mother differences provide an important context for interpreting the wealth of information about forgiveness. Several relationship-level and individual-level variables have been linked to forgiveness. These variables include empathy with a transgressor (Paleari et al., 2005), conflict resolution (Fincham et al., 2004), relationship satisfaction (Kachadourian, Fincham, & Davila, 2004), ambivalence toward married partners (Kachadourian, Fincham, & Davila, 2005), low levels of depression (Hayley & Strickland, 1986), cooperation (Karremans, Van Lange, & Holland, 2005), psychological well-being (Karremans, Van Lange, Ouwkerk, & Kluwer, 2003), and high conscientiousness, emotional stability, and agreeableness (Hoyt et al., 2005). The role of these variables as antecedents or consequences of forgiveness is somewhat unclear. The personality traits in particular are usually regarded as stable, causal factors in analyses of social behavior; yet there is important evidence that these traits change across the life span and through late adulthood, perhaps changing less after age 50 (Caspi, Roberts, & Shiner, 2005). Family dynamics are a potentially important antecedent of these personality changes during childhood and middle adulthood (Robins, Caspi, & Moffit, 2002), and tendencies to forgive other family members may be one important facet of family dynamics.

The extant evidence has also focused on transgressions involving adults who may or may not have been in close relationships. To the extent that we are correct in asserting the importance of relationship-specific dynamics in forgiveness, these effects should

vary across family relationships. Past studies have not examined the roles of these diverse individual-level, relationship-level, and family-level variables across different types of relationships or the direction of effects over time. Doing so would provide evidence documenting the relationship-specific nature of the forgiveness construct. For instance, if there is an evolutionary pressure to forgive one's children, forgiveness should relate to relationship outcomes more strongly in the parent-parent relationship than in the parent-child relationship, in which forgiveness is practically inevitable and unlikely to vary in a meaningful way. In addition, there should be less accurate detection of apologies and of forgiveness within the father-child relationship than in the mother-child relationship because of higher detachment in the father-child relationships. It is also conceivable that this detachment attenuates the relations between forgiveness from fathers and the family environment.

The Present Research

To demonstrate the role of relationship context in forgiveness, we designed our longitudinal research program with several steps. First, we sought to develop a valid and easy-to-use measure of forgiveness across family dyads. We then tested the construct validity of this measure by including measures of the general disposition to forgive, other family members' perceptions of forgiveness, and a variety of individual-level, dyad-level, and family-level variables that have been linked with forgiveness (described earlier). In addition, we used a new measure of perceptions of forgiveness from other family members to verify that our new measure of family forgiveness yields significant evidence of agreement and perceived reciprocity in forgiveness across relationships, consistent with past evidence (Hoyt et al., 2005). Finally, after these within-wave analyses, we performed longitudinal analyses to examine whether the aforementioned variables can be plausibly modeled as antecedents of forgiveness, consequences of forgiveness, or both, over an extended time (1 year).

Most important, all of these aims were pursued across different types of relationships. There were six potential dyads within the family units: child forgives father, child forgives mother, father forgives child, father forgives mother, mother forgives child, and mother forgives father. Our analyses tested whether, consistent with the notion of an evolutionary pressure to forgive children, the effects of forgiveness on the individual-level, relationship-level, and family-level variables were more likely in the parent-parent relationship than in the parent-child relationship. In addition, we tested whether the agreement about forgiveness was more likely in the mother-child relationship than in the father-child relationship, consistent with prior evidence for increased relationship detachment in the latter relationship. Such evidence would demonstrate the relationship-specific nature of forgiveness.

Method

Participants

Participants were 342 individuals from 114 families who were recruited through letters from the children's schools, flyers, and articles in a local newspaper. Ninety-five (83.3%) of the families participated in a follow-up data collection approximately 12

months later. For each family, we recruited two opposite-sex parents living at home and one of their children between 12 and 16 years of age (50 boys, 66 girls, and 1 not identified). Both parents had been living together for at least 4 years ($M = 17$ years and 5 months, $SD = 5$ years) and were, on average, in their early forties (42 years for mothers, 44 years for fathers). The families' ethnicity was primarily British/White, with only one Asian, one Afro-Caribbean, and three mixed families in the sample. Twenty-five of the parents left secondary schooling without a degree, 75 obtained a General Certificate of Secondary Education or A-levels as their highest formal education (i.e., secondary schooling), 120 obtained higher education of some type (e.g., university degree, trade examinations), and 8 did not indicate their educational level. Parents' average joint annual income was £36,970 (\approx U.S. \$73,936; $SD =$ £17,511, \approx U.S. \$35,018), which was neither wealthy nor disadvantaged in Britain at the time of the research. Families were paid £70 (\approx U.S. \$140) for participation in both waves of data collection.¹

Procedure

Each family took part in two 2-hr lab sessions, which were between 12 and 14 months apart. Several families who could not come to the lab for the second session (e.g., because they moved out of the area) were sent the second set of measures through the mail.

Participants were told that they would take part in a study on different topics related to family communication. In each wave of data collection, participants completed our new measure of the tendency to forgive the other family members who attended the lab sessions and our new measure of perceptions of the other family members' tendencies to forgive participants. In addition, the family members completed measures of many other criterion variables, which were assessed at the level of the individual, relationship, and family. The individual-level and family-level variables were presented in one booklet that was titled *Myself*. The relationship-level measures were presented in two booklets that identified each of the two family relationships relevant to the participant. For example, the father received a booklet titled *My Daughter* or *My Son* and a booklet titled *My Partner*. Before the first session, we mailed out a booklet that assessed demographics. In each session, the order of booklet completion and of the measures within booklets was randomly determined for each individual. Participants were debriefed after the second wave of data collection.

Family Forgiveness Questionnaire

Our Family Forgiveness Questionnaire (FFQ) included a component to measure tendencies to forgive others, followed by a component to measure perceptions of forgiveness from others. The construction, reliability, and validity of the scale are described in the Results.

Tendency to forgive other family members. The measure of family forgiveness attempted to ensure that the offenses were perceived as being at least somewhat serious by asking each participant to first remember times that the target family member offended the participant by doing things that could not be easily understood or excused. The participant then rated his or her agreement with eight items relating to forgiveness (see Table 1) on a

Table 1
Family Forgiveness Questionnaire: Child Forgives Father Version

Item	Factor loading
I easily forgive him	.59
I see him as positively as I did before	.68
I hold a grudge against him ^a	-.77
I see him more negatively than I did before ^a	-.79
I have difficulty forgiving him ^a	-.81
I never really see him as positively as before he wronged me ^a	-.79
I do not hold a grudge against him	.65
I do not see him more negatively than I did before	.74

Note. Loadings are for Wave I data. The initial stem for each item was "When my father annoys, hurts, or offends me . . ."

^a items are reverse scored in the final scale.

7-point scale ranging from -3, *strongly disagree*, to + 3, *strongly agree*.

Perceptions of forgiveness. The measure of perceptions of forgiveness was similar to our measure of the tendency to forgive other family members, except that only four items were used, and we reversed the grammatical subject and object in the items. For example, using a 7-point scale ranging from -3, *strongly disagree*, to + 3, *strongly agree*, mothers responded to the following items in the version that assessed her perception of forgiveness from her child (a daughter): "She easily forgives me," "She holds a grudge against me," "She sees me as positively as she did before," and "She sees me more negatively than she did before".

Individual-Level Validity Variables

Anxiety. Parents completed 20 items assessing trait anxiety within the State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, & Lushene, 1970). This measure exhibited good reliability across time ($rs > .74$, $ps < .001$) and good internal consistency ($\alpha s > .89$).

Children completed the Child Manifest Anxiety Scale (C. R. Reynolds & Richmond, 1978), which includes 27 items to assess anxiety. In the present research, stability across time ($r = .66$, $p < .001$) and internal consistency were good ($\alpha = .85$).

Depression. Depression in parents was assessed using the Beck Depression Inventory (BDI)—Short Form (Beck & Beck, 1972), which measures 13 symptoms (e.g., sadness). The BDI short form correlates highly with the full 21-item BDI and with clinicians' ratings, and there is good concurrent validity with other measures of depression (Beck & Beck, 1972). In our research, the BDI exhibited good reliability across time ($rs > .63$, $ps < .001$) and adequate internal consistency for both parents ($\alpha s \geq .70$). Depression in children was assessed using the Child Depression Inventory (CDI; Kovacs, 1981), which is a self-report inventory measuring 27 symptoms of depressed mood. In our research, the CDI exhibited good reliability across the year-long interval ($r = .62$, $p < .001$) and good internal consistency ($\alpha = .88$).

¹ Because this dataset is very large, we should note for future reviews or meta-analyses that no other manuscripts have been prepared from the data examined in this article.

Forgiveness as a trait. We assessed forgiveness as an individual difference variable in the parents using eight items of the Propensity to Forgive Others (FO) subscale from the Multidimensional Forgiveness Inventory (MFI; Tangney, Fee, Reinsmith, Boone, & Lee, 1999). Each item presents a hypothetical offense (e.g., a cousin borrows money under false pretense), and respondents are asked to indicate how likely they would be to forgive the offender under those circumstances. For the children, we used three of the eight items of the FO subscale of the MFI and adapted five of the remaining items to be more specific to situations that are relevant for children. All participants responded to each item using a 5-point scale ranging from 1, *not at all likely*, to 5, *very likely*; high scores indicated high tendencies to forgive. Internal consistency for this subscale was high in Tangney et al.'s (1999) research ($\alpha = .76$). In our research, good stability across the year ($r_s > .59$, $p_s < .001$) and good internal consistency ($\alpha_s > .73$) were obtained for both parents and the children.

Need for approval. The 13-item short form Social Desirability Scale (W. M. Reynolds, 1982) measured need for approval in parents. The short form demonstrates comparable reliability to the standard form (W. M. Reynolds, 1982) and is a good measure of situational demand (Paulhus, 1991). The stability across the year was adequate ($r_s > .51$, $p_s < .001$), but the internal consistency of this scale was low ($.54 < \alpha_s < .65$).

A slightly altered version of the 13-item short form assessed need for approval in children, but this scale also exhibited low internal consistency ($\alpha = .58$). Thus, we instead used the Child Manifest Anxiety Scale (C. R. Reynolds & Richmond, 1978), which includes a 9-item measure of tendencies to respond in a socially desirable manner. The measure's stability across time ($r = .55$, $p < .001$) and internal consistency were adequate ($\alpha = .70$).

Personality. Both parents and children completed Goldberg's (1992) 50-item bipolar scale to measure their extraversion, agreeableness, conscientiousness, emotional stability, and intellect orientation (i.e., openness). (A research assistant was on hand to explain items to the children while they completed this questionnaire.) Responses to the five personality scales exhibited adequate stability across the year for most of the scales for all participants ($r_s > .50$, $p_s < .001$), with just one exception: fathers' emotional stability ($r = .43$, $p < .001$). The internal consistency of the scales for all family members was good ($\alpha_s > .70$).

Self-esteem. The 10-item Rosenberg (1979) Self-Esteem Scale was used to measure parents' global personal evaluations of the self. Responses to this measure exhibited good stability across the year ($r_s > .68$, $p_s < .001$) and good internal consistency ($\alpha_s > .84$). In children, self-esteem was assessed using the Global Self-Worth Scale from the Self-Perception Profile for Children (Harter, 1985). The reliability across time for this scale was low ($r = .34$, $p < .001$), but the internal consistency was good ($\alpha = .74$).

Child aggression. We used the 20-item Aggressive Behavior subscale of the Child Behavior Checklist (CBCL; Achenbach, 1991) to obtain descriptions of the competencies and behavioral-emotional problems of the children as seen by their parents. Both parents' responses to the scale revealed good stability across the year ($r_s > .72$, $p_s < .001$) and high internal consistency ($\alpha_s > .84$).

Child hostility. Children's hostility was assessed using the Buss-Durkee Hostility Inventory (A. H. Buss & Durkee, 1957). The measure's stability across time ($r = .56$, $p < .001$) and internal consistency ($\alpha = .73$) were good.

Relationship-Level Validity Variables

Relationship quality. Five components of relationship quality were assessed using the Perceived Relationship Quality Component Inventory (Fletcher, Simpson, & Thomas, 2000): satisfaction, commitment, intimacy, trust, and love. (A three-item Passion Component was omitted because of its irrelevance to relationships with children.) Fletcher et al. (2000) recommended using only the best exemplars of the five relationship quality components as measures of global perceived relationship quality. In our research, this five-item scale exhibited high stability across the year for parents' evaluations of both of their family relationships ($r_s > .73$, $p_s < .001$) and lower (though moderate) stability for children's evaluations of their relationships with both parents ($r_s = .48$ [fathers] and $.50$ [mothers], $p_s < .001$). The scale exhibited good internal consistency among parents and their children ($\alpha_s \geq .70$).

Relationship closeness. Participants completed the Inclusion of Other in Self Scale (IOS; Aron, Aron, & Smollen, 1992) as a measure of subjective closeness in each relationship. Aron et al. (1992) reported high test-retest reliability for the IOS. Over our 1-year interval, this measure exhibited good stability for parents' reports of closeness to each other and their child ($r_s > .56$, $p_s < .001$) and somewhat lower stability for children's reports of closeness to their parents ($r_s = .36$ [fathers] and $.34$ [mothers], $p_s < .001$).

Tendency to apologize. Three items measured family members' tendencies to apologize for offenses. For example, when describing their relationship with their daughters, mothers were asked, "How often does she apologize for offenses against you?" and "In general, to what extent does she apologize for her offenses against you?" Participants rated items on scales ranging from 0, *never or not at all*, to 4, *very often or extremely*. This scale exhibited good stability across the year for parents' reports of other family members' tendencies to apologize ($r_s > .60$, $p_s < .001$) and lower (though moderate) stability for children's reports of their parents' tendencies to apologize ($r_s = .48$ [fathers] and $.49$ [mothers], $p_s < .001$). There was good internal consistency among parents and children ($\alpha_s > .76$).

Offense repetition. Three items assessed family members' tendencies to repeat offenses. For example, when describing their relationship with their sons, fathers were asked, "How often does he repeat the same offense against you?" and "How often does he repeat the same offense, after he is aware that he has hurt you?" Participants rated each item on scales ranging from 0, *never*, to 4, *very often*. This scale exhibited good stability across the year for parents' reports of other family members' tendencies to repeat offenses ($r_s > .54$, $p_s < .001$) and lower (though moderate) stability for children's reports of their parents' tendencies to repeat offenses ($r_s = .45$ [fathers] and $.48$ [mothers], $p_s < .001$). The scale exhibited good internal consistency among parents and children ($\alpha_s > .81$).

Relationship conflict. Family members responded to 18 items assessing the intensity, frequency, and resolution of conflicts with the other family members. The items presented to the parents and children were modified from the Children's Perception of Interparental Conflict Scale (Grych, Seid, & Fincham, 1992) to assess the frequency, intensity, and resolution of relationship conflicts. After appropriate reverse coding, higher scores on these subscales reflected more conflict frequency, more intensity, and lower resolution. The three subscales and the total scale exhibited good reliability across the year ($r_s > .50$, $p_s < .001$) and good internal consistency among parents and children ($\alpha_s > .71$).

Attachment. Parents completed the anxiety, dependence, and closeness subscales of Collins and Read's (1990) romantic attachment measure. Children's attachment to parents was assessed with a measure created by Cook (2000) to assess two of Collins and Read's (1990) attachment dimensions: attachment anxiety and attachment dependence. The third dimension, closeness, was deleted because it was deemed inappropriate for parent-child relationships due to the wording of those items. On balance, the subscales exhibited good stability among parents and children ($.47 < rs < .66$, $ps < .001$). The subscales demonstrated good internal consistency across parents and children ($\alpha s > .70$), except in the measurement of the fathers' dependent attachment ($\alpha = .49$) and closeness ($\alpha = .69$) to the mother.

Family-Level Validity Variables: Family Environment

All family members completed the Family Environment Scale (FES), which assesses 10 dimensions of the social-environmental characteristics of the home (Moos & Moos, 1981). For the purposes of our research, we used the three subscales in the relationship domain of the FES: cohesion (family members' support for each other), expressiveness (family members' expression of feelings), and conflict (openly expressed conflict). The family relationships dimension, which collapses across these subscales, has been reported to have high internal consistency and good construct validity (Holahan & Moos, 1983). In our research, the total dimension and its subscales exhibited stability across the year-long interval ($.45 < rs < .82$, $ps < .001$) and good internal consistency ($\alpha s > .76$).

Results

Wave 1 Analyses

Scale Construction

Tendencies to forgive family members. We submitted each family member's Wave 1 ratings of tendencies to forgive another family member (e.g., father forgives daughter) to a principal axis factor analysis, using a scree plot and factor interpretability to guide factor selection. The results for each and every forgiveness dyad revealed only one strong latent variable for the measures of

forgiveness. In each dyad, the first factor accounted for more than half of the variance and more than three times as much variance as the next factor. Factor loadings for all of the items always exceeded 1.50, with most exceeding 1.70 (see examples in Table 1). In addition, analyses for each dyadic scale revealed alpha reliability coefficients exceeding .87 and strong test-retest correlations over the 1-year period (all $.53 < rs < .74$, $ps < .001$).

Mean responses were consistent with our hypothesis that forgiveness from parents is less supererogatory in nature. Fathers' tendencies to forgive the child were significantly higher ($M = 2.06$; $SD = 0.99$) than their tendencies to forgive the mother ($M = 1.66$; $SD = 1.16$), $t(113) = 3.93$, $p < .001$, and mothers' tendencies to forgive the child were significantly higher ($M = 2.22$; $SD = 0.87$) than their tendencies to forgive the father ($M = 1.08$; $SD = 1.41$), $t(114) = 9.38$, $p < .001$. As expected, the above differences between parent and child forgiveness were greater among mothers than among fathers, $F(1, 111) = 33.00$, $p < .001$. Also, children forgave their mothers significantly more ($M = 1.37$; $SD = 1.26$) than they forgave their fathers ($M = 1.10$; $SD = 1.44$), $t(108) = 2.87$, $p < .005$.

Perceptions of forgiveness by other family members. We used the above factor analytic method to evaluate the dimensionality of family members' ratings of another family member's tendency to forgive (e.g., father perceives forgiveness from daughter). The results for each and every forgiveness dyad revealed only one strong latent variable for the measures of perceptions of forgiveness. In each dyad, the first factor accounted for more than half of the variance and at least three times as much variance as the next factor. Factor loadings for all of the items exceeded 1.50, with most exceeding 1.60. Scale reliability was above .73 for all dyads, and there were strong and significant test-retest correlations over the 1-year period ($rs > .54$, $ps < .001$), although the stability of child perceptions of father forgiveness was somewhat lower than the rest ($r = .39$, $p < .001$), consistent with other observations below.

Concurrent Predictive Validity

Individual-level validity. As shown in Table 2, we obtained significant correlations between responses to Tangney et al.'s (1999)

Table 2
Individual-Level Correlates of Tendencies to Forgive

Variable	Child forgives				Father forgives				Mother forgives			
	Father		Mother		Child		Mother		Child		Father	
	Wave 1	Wave 2	Wave 1	Wave 2	Wave 1	Wave 2	Wave 1	Wave 2	Wave 1	Wave 2	Wave 1	Wave 2
Trait forgiveness	.19*	.19	.19*	.31*	.24*	.15	.29*	.12	.30*	.20	.38*	.32*
Trait anxiety	-.15	-.34*	-.24*	-.32*	-.17	-.18	-.37*	-.41*	-.19*	-.11	-.42*	-.38*
Depression	-.49*	-.42*	-.48*	-.36*	-.15	-.08	-.40*	-.24*	-.08	.05	-.35*	-.27*
Need for approval	.28*	.32*	.25*	.28*	.16	.09	.12	.18	.16	.14	.26*	.38*
Self-esteem	.39*	.26*	.46*	.35*	.16	.09	.30*	.36*	.21*	-.03	.23*	.28*
Extraversion	.13	.06	.27*	.14	.28*	.00	.32*	.27*	-.04	.04	.06	.15*
Agreeableness	.29*	.14	.30*	.21	.30*	.08	.22*	.21*	.11	.25*	.32*	.38*
Conscientiousness	.21*	.06	.24*	.20	.20*	.15	.08	.10	.10	.03	.23*	.24*
Emotional stability	.44*	.24*	.48*	.30*	.16	.08	.26*	.33*	.21*	.12	.48*	.30*
Intellect	.27*	.18	.29*	.29*	.13	.12	.17	.27*	.05	.03	.11	.14

Note. The duplication of .16/.09 in "Father forgives, child" column is valid and coincidental.

* $p < .05$.

measure of the disposition to forgive and forgiveness in every dyad. In addition, consistent with past research, participants who exhibited higher forgiveness also showed lower anxiety and depression, but higher need for approval and self-esteem. Similarly, fathers and mothers who were more likely to forgive each other tended to be higher in agreeableness and emotional stability and, to a lesser extent, extraversion and conscientiousness. In contrast, Table 2 shows that children who were more likely to forgive their parents also possessed higher levels of extraversion (except when the father was being forgiven), agreeableness, conscientiousness, emotional stability, and intellect and lower levels of hostility. (Hostility correlations are not shown in the table because hostility was measured only for the child: The correlation with the child's forgiveness of the father was $-.35$, $p < .01$, and the correlation with forgiveness of the mother was $-.38$, $p < .001$). Consistent with our hypothesis about the evolutionary requirement for parents to forgive their children, Table 2 shows weaker correlations with individual-level variables for parents' forgiveness of their children; the magnitude of associations was significantly weaker for parents' forgiveness of their children than for their forgiveness of each other, T (Wilcoxon's matched pairs) = 3.00, $p < .004$.

Dyad-level validity. For the dyad level, we calculated partial correlations between each family member's forgiveness of another family member and each aspect of their relationship (as reported by the person who rated forgiveness), while controlling for the same aspect of their relationship with the other family member. As shown in Table 3, children who were more likely to forgive their father were more likely to report receiving apologies from him, independent of the extent to which these children reported receiving apologies from the mother. Children's forgiveness of their father was also uniquely associated with the father's tendency to repeat offenses, anxious and dependent attachment to the father, closeness to him, and conflict with him. All of these relations were also independent of the same aspect of the children's relationship with the mother (e.g., tendency to repeatedly offend the mother; see Table 3). Moreover, the partial correlations between the children's forgiveness of the father and the aspect of the child's relationship with the mother (e.g., tendency to receive apologies from her) were not significant after we controlled for the aspect of

the children's relationship with the father (e.g., tendency to receive apologies from the father; see figures in parentheses in Table 3). A similar pattern emerged for the other forgiveness dyads (not shown; tables available upon request). In most cases, forgiveness of the target correlated significantly with aspects of the relationship with the target and not significantly with aspects of the relationship with the other target. More important, the direction of difference between the correlations almost always indicated that the correlation between forgiveness of the target and aspects of the relationship with the target was the stronger correlation, resulting in a highly significant difference across the pairs of correlations, T s (Wilcoxon's matched pairs) = 3.23 (child forgives), 2.80 (father forgives), 2.80 (mother forgives), all $ps < .01$.

Family-level validity. At the family level, higher forgiveness of other family members in each of the six dyads was correlated with a more positive experience of the family environment. The largest correlations occurred when we examined children's forgiveness of their father ($r = .54$, $p < .001$) and mother ($r = .57$, $p < .001$) and when we examined the mother's forgiveness of the father ($r = .59$, $p < .001$). These correlations were significantly higher than the correlations that occurred when we examined the father's forgiveness of the child ($r = .26$, $p < .05$) and the mother ($r = .32$, $p < .01$; all z s > 1.91 , $ps \leq .05$). The correlation between perceived family environment and the mother's forgiveness of the child was between these extremes ($r = .42$, $p < .001$). Thus, forgiveness in each dyad may be important for family environment, although forgiveness from fathers plays a significantly weaker role.

Agreement and Reciprocity in Forgiveness

Consistent with our hypothesis about poorer communication by fathers with children, fathers were significantly less likely to perceive forgiveness from children who reported forgiving them ($r = .11$) than to perceive forgiveness from mothers who reported forgiving them ($r = .45$, $z = 2.74$, $p < .007$), whereas mothers did not significantly differ in their ability to detect forgiveness from children ($r = .24$) and fathers ($r = .21$, $z = 0.24$, *ns*). The children were more likely to perceive forgiveness from mothers who reported forgiving them ($r = .24$, $p < .01$), but the children were not

Table 3
Partial Correlations Between Children's Forgiveness and Aspects of Their Relationships

Variable	Child forgives			
	Father		Mother	
	Wave 1	Wave 2	Wave 1	Wave 2
Apology	.45* (-.02)	.51* (.10)	.25* (.27*)	.51* (.08)
Repetition of offense	-.22* (.01)	-.54* (-.19)	-.20* (-.10)	-.56* (-.09)
Dependent attachment	-.50* (-.16)	-.55* (-.08)	-.39* (-.23*)	-.46* (-.19)
Anxious attachment	-.30* (.00)	-.42* (.13)	-.26* (-.13)	-.18 (-.14)
Quality	.56* (.16)	.56* (.10)	.49* (.25*)	.42* (.13)
Closeness	.43* (-.06)	.47* (.09)	.26* (.18)	.49* (-.10)
Conflict	-.59* (-.23*)	-.64* (-.29*)	-.53* (.20*)	-.66* (-.16)

Note. Text entries control for aspects of the relationship with the other family member. Entries in parentheses are partial correlations involving aspects of the relationship with the other family member, while controlling for the same aspects of the relationship with the target.
* $p < .05$.

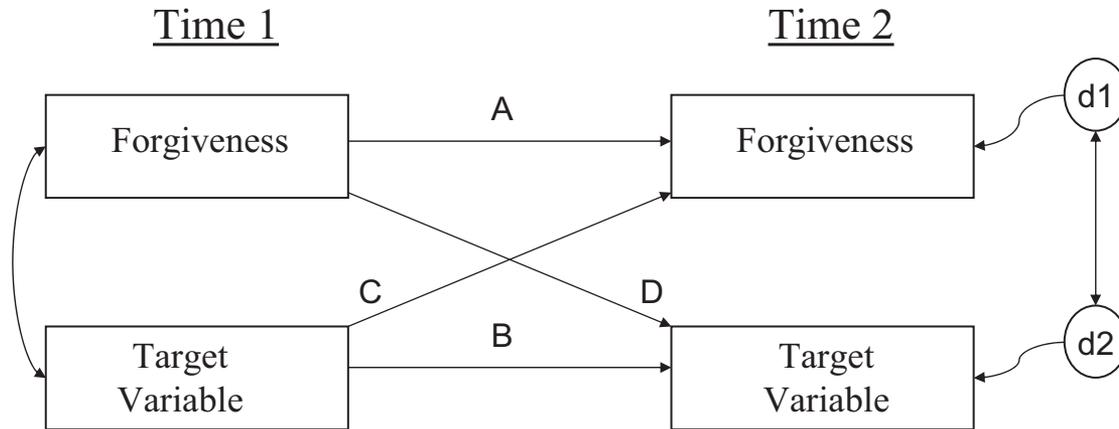


Figure 1. The cross-lagged correlational stability design. The path labels (A, B, C, and D) are used to describe results of our path models in Tables 4–6. The path from Wave 1 forgiveness to Wave 2 forgiveness (Path A) represents the reliability of our measure of forgiveness across time; this reliability was high in all analyses. The path from the target variable at Wave 1 to the target variable at Wave 2 (Path B) represents the reliability of the target measure across time, which was high in all analyses and is consistent with the high stability correlations reported earlier in the article. The paths of greater interest represent the effect of the target variable (e.g., anxiety) at Wave 1 on forgiveness 1 year later (Path C) and the effect of forgiveness at Wave 1 on the target variable 1 year later (Path D). These crossed paths represent the ability of the target variables to predict changes in forgiveness over the year and the ability of forgiveness to predict changes in the target variables over the year.

significantly more likely to perceive forgiveness from fathers who reported forgiving them ($r = .08, ns$).

There was strong perceived reciprocity in all of the forgiveness relations. In each dyad, family members reported forgiving family members whom they perceived as having forgiven them ($.44 < r_s < .65$, all $p_s < .001$). In other words, family members tended to forgive those who they believed had forgiven them.

Cross-Sectional Consistency Across Waves

The internal consistency of the scales in Wave 2 was highly similar to their internal consistency in Wave 1. Also, the individual-level, dyad-level, and family-level relations were very similar to those obtained in Wave 1, with most of the significant relations remaining significant across both waves. In addition, the patterns of agreement and reciprocity observed in Wave 1 were replicated in Wave 2. The strong convergence of patterns at all three levels of analyses laid the foundation for the final stage of our analyses, which used a cross-lagged stability design to examine the roles of each variable over time.

Longitudinal Analyses

Analytic Strategy for the Cross-Lagged Analyses

Figure 1 depicts the basic structure of our cross-lagged analyses, which enabled us to examine the relations between the variables across the year-long interval. Although Figure 1 shows the essential construct-level elements of the cross-lagged model, choices about how to calculate the variables can add layers of complexity. Researchers must make a choice of analyzing the variables as manifest indicators (i.e., a total scale score), as latent variables that use item parcels as manifest indicators, or as latent variables with all items as manifest indicators. Although each of these choices remains controversial,

some general principles can be applied (Fincham, Beach, Harold, & Osborne, 1997; Fincham, Harold, & Gano-Phillips, 2000; Little, Cunningham, Shahar, & Widaman, 2002). Three factors compelled us to rely principally on analyses that focused on the variables as manifest indicators (e.g., using total scale scores): Most of the variables that we examined are well-established constructs with a reliable and unidimensional structure; it was relatively complex and unprofitable to attempt to identify different or similar measurement models across dyads and times in our multidyad, longitudinal design; and our focus was on identifying the causes and effects of forgiveness for *each* target variable (rather than on generating a complex causal model across diverse variables with potential shared variance between items assessing different constructs). Nonetheless, in a few cases in which extant evidence indicated that the target variable subsumed a specific number of theory-relevant subdimensions or poor reliability as a total scale (e.g., FES and attachment dimensions), we have presented the results analyzing the subdimensions as separate manifest variables. For example, our analysis of family environment separates the subscales assessing family conflict, cohesion, and expressiveness. This approach enabled us to maintain a consistent, parsimonious method of longitudinal analysis across variables, while respecting the need to not obscure distinct components of constructs.²

Another consideration was the significant within-wave correlations exhibited for both relationship dyads in which the participant was a member. For example, fathers' tendency to forgive the mother and children's tendency to forgive her were both correlated

² Our sample is small for the number of parameters that have to be estimated using parcels. Nevertheless, in parcel analyses that mirrored the models generated by the manifest analyses (e.g., by constraining structural weights to be equal), the path coefficients were in the same direction, and most of the relevant paths were either significant or marginal.

Table 4
Cross-Lagged Analyses of Offense-Related and Family-Related Variables

Family relationship	Variable	Model fit	Paths			
			A	B	C	D
Offense-related variables						
Child forgives father	Offense repetition	n/a	.47	.41	-.22	-.14
Child and father forgive mother	Offense repetition	.99,.03	.59,.62	.50,.53	-.18,-.14	-.21,-.27
Child and father forgive mother	Apology	1.00,.00	.60,.63	.51,.65	.14,.17	.09,.09
Family-related variables						
Child and mother forgive father	(Lack of) family conflict	.98,.07	.61,.69	.55,.68	.05,.06	.14,.16
Child and mother forgive father	Family expressiveness	.99,.05	.65,.73	.43,.48	-.04,-.06	.20,.18
Child and father forgive mother	Family cohesiveness	1.00,.00	.62,.66	.62,.60	.09,.09	.12,.13
Child and father forgive mother	Family expressiveness	.99,.04	.66,.69	.45,.59	.01,.01	.21,.21

Note. β s are reported for each pair of paths when the path coefficients were not significantly different between both participant groups, with the β for the child-parent relationship left of the β for the parent-parent relationship. Paths or pairs of paths are highlighted in bold when the two-tailed tests of the relevant path coefficients exhibited $p < .05$. The model fit indices are comparative fit index (CFI) followed by root-mean-square error of approximation (RMSEA). Good fit is indicated by CFI values near or above .95 and by RMSEA values near or below .08. n/a indicates that fit indices have no degrees of freedom for the analysis.

with conflict with her. In these cases, it was appropriate to examine simultaneously the cross-lagged stability model for both relationships with the common target. We began these analyses by testing the manifest-level models across the two family members who indicated their forgiveness of the other (e.g., across father forgives mother and child forgives mother). This approach enables sequential tests of whether the structural model differs between the two relationships by testing whether the imposition of equality constraints between the two groups significantly decreases model fit. When our analyses revealed that equality constraints decreased fit, we examined the model for each subgroup separately and noted the effect obtained in each group. When equality constraints did not worsen model fit, we examined the model that was held equal across both groups. If the model yielded good indices of fit (i.e., comparative fit index $\approx .95$ or above and root-mean-square error $\approx .08$ or below) and evidence of construct stability over time (i.e., significance in the non-crossed-lagged paths), we examined the cross-lagged paths within the model. In order to fit the results within the space of one report, we described only the cross-lagged effects that were significant within the models that survived the requirements for examination. When the correlations were different across the relationships with the same target, we examined each relationship in a separate cross-lagged model.³

Results of Cross-Lagged Analyses

The cross-lagged analyses revealed that the tendency to repeat an offense and the tendency to apologize were the main significant antecedents of forgiveness, as shown in Table 4. Children (but not mothers) who perceived high tendencies for the father to repeat transgressions were less forgiving of him 1 year later. In addition, both children and fathers who perceived high tendencies for the mother to repeat transgressions were less forgiving of her 1 year later, and children and fathers who perceived a greater tendency for the mother to apologize were more likely to forgive her. Other than these offense-related variables, there was one additional antecedent of forgiveness over the year: Children and fathers' for-

giveness of the mother was lower 1 year after indicating less resolution of conflict with her (Table 5).

Notwithstanding the importance of these particular antecedents, the cross-lagged models revealed a much larger array of important consequences of forgiveness (see Tables 4 and 5 as well as Table 6). At the family level, forgiveness of the father predicted more family expressiveness and less family conflict 1 year later. Similarly, forgiveness of the mother predicted more family cohesiveness and more family expressiveness 1 year later. Forgiveness of the child had no significant effects on the family-level environment indicators.

At the relationship level, there were diverse effects of forgiving the mother (Tables 4, 5, and 6). Higher forgiveness of the mother predicted less perceived repetition of her transgressions 1 year later, stronger perceptions of being forgiven by her 1 year later, less subsequent attachment dependence, marginally less attachment anxiety, less conflict frequency, and more closeness in the relationship with her. There were very similar effects of forgiveness of the father. Higher forgiveness of the father predicted less attachment dependence, marginally less attachment anxiety, and less conflict frequency in the relationship with him. In addition, the mother's higher forgiveness of the father predicted stronger perceptions of being forgiven by him 1 year later and marginally greater perceived relationship quality with him. There were four significant effects in the parents' relationship with the child:

³ We tested whether the models containing significant cross-lagged effects were moderated by relationship length and family income and whether effects uniquely involving forgiveness by the children or forgiveness of them were moderated by child sex and child age. The cross-lagged paths were highly robust across these variables, with relatively few exceptions across analyses. It would have been useful to also test whether equality constraints decreased model fit between groups nested within families, but this would have resulted in a complex model with a large number of free parameters, and we were not aware of a model for this approach for designs with a longitudinal element.

Table 5
Cross-Lagged Analyses of Relationship-Level Variables

Family relationships	Variable	Model fit	Paths			
			A	B	C	D
Mother target						
Child and father forgive mother	Perceptions of forgiveness	.99,.06	.60,.62	.40,.47	.09,.13	.29,.26
Child and father forgive mother	Attachment dependence	1.00,.00	.63,.66	.37,.36	-.07, -.08	-.27,-.28
Child and father forgive mother	Attachment anxiety	1.00,.00	.68,.71	.41,.53	.03,.04	-.13,-.14
Child and father forgive mother	(Low) conflict resolution	.99,.04	.53,.55	.42,.59	-.20,-.23	-.17,-.13
Child and father forgive mother	Closeness	.99,.05	.64,.67	.40,.45	.05,.05	.19,.19
Father target						
Mother forgives father	Perceptions of forgiveness	n/a	.79	.57	-.07	.22
Mother forgives father	Relationship quality	n/a	.78	.73	-.04	.14
Child and mother forgive father	Attachment dependence	.99,.06	.62,.68	.44,.52	-.04, -.05	-.19,-.20
Child and mother forgive father	Attachment anxiety	.99,.05	.64,.71	.56,.56	.01,.00	-.11,-.12
Child and mother forgive father	Conflict frequency	.99,.04	.62,.68	.44,.54	-.04, -.04	-.16,-.19
Child target						
Mother and father forgive child	Perceptions of forgiveness	1.00,.00	.66,.66	.49,.45	.06,.05	.21,.25
Mother and father forgive child	(Low) conflict resolution	1.00,.00	.63,.62	.51,.43	-.10, -.08	-.21,-.21
Mother and father forgive child	Closeness	1.00,.00	.66,.66	.57,.56	.06,.06	.12,.14
Mother and father forgive child	Relationship quality	1.00,.00	.65,.65	.65,.68	.06,.06	.14,.15

Note. β s are reported for each pair of paths when the path coefficients were not significantly different between both participant groups. The β for the child-parent relationship is left of the β for the parent-parent relationship, or, when both parents' forgiveness of child was examined, the β for the mother-child relationship is left of the β for the father-child relationship. Paths or pairs of paths are highlighted in bold when the two-tailed tests of the relevant path coefficients exhibited $p < .05$. Marginal paths ($p < .10$) are in italics. The model fit indices are comparative fit index (CFI) followed by root-mean-square error of approximation (RMSEA). Good fit is indicated by CFI values near or above .95 and by RMSEA values near or below .08. n/a indicates that fit indices have no degrees of freedom for the analysis.

greater forgiveness of the child predicted stronger perceptions of being forgiven by the child 1 year later, higher resolution of conflicts with the child 1 year later, stronger feelings of closeness to the child, and higher relationship quality with the child.

The longitudinal data revealed interesting evidence to help us to interpret the correlations between family forgiveness and the personality traits that were described earlier and documented in prior research. Specifically, they showed that forgiveness may predict changes in individual traits and states over time (see Table 6). Fathers and children exhibited more emotional stability and conscientiousness 1 year after reporting higher levels of forgiveness of the mother. In addition, mothers and children exhibited higher

levels of agreeableness 1 year after reporting greater forgiveness of the father. Also, fathers and mothers exhibited higher levels of extraversion 1 year after reporting greater forgiveness of the child.

Overall, the longitudinal analyses are among the first to document important antecedents and consequences of forgiveness across the family dyads. They are also consistent with our hypothesized difference between parent-parent and parent-child forgiveness. Specifically, parents' forgiveness of children had fewer antecedents and consequences than did parents' forgiveness of each other; the set of obtained associations (as standardized betas) with forgiveness over time in the parent-to-parent relationship was significantly stronger than the same associations with forgiveness

Table 6
Cross-Lagged Analyses of Individual-Level Variables

Family relationships	Variable	Model fit	Paths			
			A	B	C	D
Child and father forgive mother	Emotional stability	1.00,.01	.69,.72	.43,.46	-.09, -.10	.17,.18
Child forgives mother	Conscientiousness	1.00,.03	.70,.70	.63,.66	-.09, -.08	.09,.12
Child and mother forgive father	Agreeableness	0.99,.05	.62,.70	.46,.48	.02,.02	.15,.18
Mother and father forgive child	Extraversion	1.00,.00	.68,.68	.78,.73	-.05, -.04	.09,.10

Note. β s are reported for each pair of paths when the path coefficients were not significantly different between both participant groups. The β for the child-parent relationship is left of the β for the parent-parent relationship, or, when both parents' forgiveness of child was examined, the β for the mother-child relationship is left of the β for the father-child relationship. Paths or pairs of paths are highlighted in bold when the two-tailed tests of the relevant path co-efficients exhibited $p < .05$. The model fit indices are comparative fit index (CFI) followed by root-mean-square error of approximation (RMSEA). Good fit is indicated by CFI values near or above .95 and by RMSEA values near or below .08.

over time in the parent-to-child relationship, T (Wilcoxon's matched pairs) = 1.97, $p < .05$. Thus, the pattern of associations over time corroborated the cross-sectional evidence supporting our central hypothesis concerning the importance of relationship context for forgiveness.⁴

Discussion

Prior models of forgiveness pay limited attention to the broader context in which forgiveness occurs. Our research shows that the nature of the relationship between transgressor and victim merits a central role in understanding forgiveness because the antecedents and consequences of forgiveness varied significantly across different types of family relationships. This longitudinal study also helps to address prior speculations about antecedents and consequences of forgiveness using our new measures of forgiveness in families, which exhibited high reliability and stability across time in all of the family dyads studied.

Strong, broad evidence of concurrent validity emerged from the within-wave correlations between forgiveness and the individual-level, relationship-level, and family-level variables, correlations that were consistent with prior theories about forgiveness. At the individual level, forgiveness of family members was higher among parents and children who exhibited lower levels of anxiety, depression, and aggression (measured for children only), but higher levels of trait forgiveness and higher need for approval, self-esteem, agreeableness, conscientiousness, emotional stability, extraversion, and intellect. As expected, this pattern of associations was weaker for parents' forgiveness of their children, which supports our hypothesis about the nonsupererogatory nature of child forgiveness. In theory, the tendency for forgiveness to preclude avoidance or vengeance toward children makes forgiveness of children a requirement of evolution. In contrast, forgiveness of parents (by each other or by children) is only indirectly related to the likelihood of genetic continuation.

Additional evidence for the validity of our approach came from the discovery that, at the relationship level, forgiveness exhibited unique concurrent correlates in each dyad. Forgiveness in a dyad was uniquely associated with the likelihood of apology, the tendency to repeat offenses, dependent and anxious attachment, relationship quality, relationship closeness, and relationship conflict. All of these relations were independent of the forgiver's relationship with the family member outside the dyad. There were also significant levels of judge-target agreement in forgiveness and perceived reciprocity in forgiveness. Nonetheless, as expected, fathers were significantly less likely to perceive forgiveness from their children than from their spouses, consistent with our hypothesis about lower father communication with children. Overall, the dyad-level results further support the importance of examining forgiveness in the broader relationship context.

Finally, at the family level, higher forgiveness of other family members in each of the six dyads was correlated with a more positive experience in the family environment. Of interest, these relations were weakest when we examined fathers' forgiveness of the child and mother. This finding fits evolutionary predictions about greater potential for father detachment from family relationships and is consistent with some additional findings described in the following sections.

Roles of Forgiveness in Families

From a theoretical perspective, the most important advance of this research was the emergence of longitudinal data to support the operation of different forgiveness-related mechanisms in different family relationships. Children's forgiveness was particularly sensitive to whether the transgressor repeated an offense or apologized. Children were less likely to forgive when they perceived tendencies for either parent to repeat an offense. In addition, apologies from mothers, but not from fathers, were more likely to cause increased forgiveness of the mother over time. These results broadly support prior conclusions from studies that have examined children's responses to vignettes describing possible reactions to apologies from transgressions (Darby & Schlenker, 1982). Moreover, the null effect of father's apology on the child's forgiveness of him is interesting in light of the fact that children were not more likely to perceive forgiveness from fathers who reported forgiving them, and fathers were not more likely to perceive forgiveness from children who reported forgiving them. From an evolutionary perspective (D. M. Buss, 1996; Trivers, 1985), it is relatively easy for fathers to become detached from relationship processes with their children. This detachment is made even more important by the fact that fathers and children both tended to reciprocate *perceived* forgiveness. As a result, fathers and children may end up reciprocating inequitably: They forgive when they have not been forgiven themselves and are unforgiving when they have been forgiven. In fact, this pattern may explain why children's forgiveness of the father did not predict increased closeness and relationship quality in the relationship with him 1 year later. Again, greater father detachment is consistent with this result.

These observations do not detract from a number of other effects of forgiveness within the relationship between parents and in the relationships between the children and each parent. Higher forgiveness of both the mother and the father (by each other and by the child) predicted less subsequent attachment dependence and attachment anxiety 1 year later. The mother's forgiveness of the father also predicted better feelings about the quality of the relationship with him and more closeness to him. In addition, children who reported high forgiveness also reported greater perceptions of having been forgiven by each parent 1 year later (except when the child rated perceptions of forgiveness from the father). These relations were consistent with the effects of forgiveness on the family environment as a whole. At the family level, forgiveness of the father and of the mother predicted more expressiveness in the family, less family conflict (when the father was forgiven), and more family cohesiveness (when the mother was forgiven) 1 year later. Thus, despite mixed effects of forgiveness in the father-child relationship, forgiveness of the parents by each other and by the

⁴ An important set of models examines the reciprocal or synchronous effects of the Wave 2 variables on each other, while controlling for the stability of each variable over time. These models can be tested if the cross-lagged paths are set to zero and the Wave 1 variables are assumed to be predetermined, exogenous variables that are uncorrelated with the disturbance terms for both Wave 2 variables. Our tests of these models revealed that most of the cross-lagged paths were reflected in the within-Wave-2 paths, despite our allowing for synchronous effects. This evidence may indicate a shorter time course of effects than the 1-year-long period covered by our study (Fincham et al., 1997).

child has important consequences for their dyadic relationships and for family experiences more generally. Such effects are consistent with social learning theory and systems models that stress the dynamic interplay and spillover between family subsystems (Margolin, Christensen, & John, 1996).

We also expected parents' forgiveness of children to have a less complex set of antecedents and consequences than children's forgiveness of parents or parents' forgiveness of each other, because parental forgiveness of their children is an evolved requirement of their role. Consistent with this hypothesis, our data revealed a significantly weaker set of individual-level, relationship-level, or family-level antecedents and consequences of parental forgiveness of the child than of interparental forgiveness. Although it is conceivable that other relationship factors also contribute to this pattern (e.g., children's relatively low power), we expect that such evidence would fit our fundamental argument about relationship-specificity and the evolutionary explanation more generally.

Of course, effects in both parent–parent and parent–child relationships were evident and important. The obtained effects on perceptions of forgiveness, in particular, are important because they provide an interesting answer to the issue of whether effects on perceived reciprocity emerge over time. Prior cross-sectional analyses of transgression-related motivations have revealed that family members report forgiving those who they believe tend to forgive them (Hoyt et al., 2005). Our data extended this reciprocity finding by identifying a temporal direction of effects. For example, parents' earlier reports of forgiveness predicted their later perceptions of forgiveness from their children. This finding supports the notion that children learn forgiveness behavior modeled by their parents, an important value transmission from parents to children (Zimet & Jacob, 2001). Similar effects were observed in the other relationships. Thus, forgiveness is to some extent mimicked in relationships, and this may explain the important consequences for the relationships and family environment, consistent with our emphasis on the need to make relationships central in the analysis of forgiveness.

Another important result was that forgiveness has consequences for personality and individual adjustment. Cross-sectional correlations with personality traits are routinely interpreted as evidence of the causal impacts of the traits. Yet, our longitudinal data yielded little evidence to support such inferences. Instead, they pointed to the opposite direction of effects in that forgiveness predicted higher conscientiousness (fathers and children), emotional stability (fathers and children), agreeableness (mothers and children), and extraversion (fathers and mothers) 1 year after participants reported greater forgiveness of a parent or child. Although these longitudinal effects differed somewhat across relationships, the general pattern indicated that forgiveness of another family member increases levels of the traits.

We expect that these effects emerged because the present context involved the examination of traits and forgiveness over an extended period of time in close relationships. This context entails consistently high social interdependence over a long period of time. To the extent that family relationships set prototypes or models for other relationships, as predicted by theorizing on both attachment (Bowlby, 1969) and the dynamic interplay between close relationships and personality (Cooper, 2002), then these effects of forgiveness should generalize to broader behaviors and

traits (i.e., emotional stability, agreeableness, extraversion, and conscientiousness) outside the family context (Robins et al., 2002). It is important for future research to probe these effects further, meeting calls to examine subfacets of these broad personality dimensions (Paunonen & Ashton, 2001) and calls for longitudinal assessments over repeated intervals (Biesanz, West, & Kwok, 2003).

An interesting finding, given the wide-ranging consequences of forgiveness on individual, relationship, and family development, was that few variables emerged as antecedents of forgiveness. However, caution should be exercised in generalizing this result to other family contexts. It is possible, for example, that the propensity to forgive is moderated by relationship length. In well-established marriages and families, such as those in the current study, it is likely that the norms of forgiveness are established and less malleable to the influence of distal personality, dyadic, and family-level variables (Cooper, 2002; Robins et al., 2002).⁵

Directions for Future Research

A difficulty with longitudinal designs is that there is often no way to prefigure the correct time interval for detecting the processes at work. In the present case, we do not know whether the 1-year interval between waves was sufficient to reveal all of the causal processes. This creates some difficulty in estimating the magnitude of any hypothesized causal relationship between forgiveness and its correlates. The interval used in our study may be much longer or shorter than the time period in which some of the causal effects actually occur, and either case would result in underestimation of any hypothesized effects. It is relevant that most of the effects of forgiveness were replicated in separate nonrecursive models that controlled for Wave 1 responding (see Footnote 3). Although this pattern cannot be used to estimate the "correct" time lag, it does suggest that the effects may occur over a relatively shorter time period than 1 year (Fincham et al., 1997). Nevertheless, two-wave cross-lagged designs are not themselves sufficient to make strong inferences about causal processes. Although they are significant improvements on cross-sectional designs, they should be supplemented by multiwave designs and experimental evidence.

This evidence reinforces the importance of research examining mechanisms through which families shape personality and general relationship processes for informing family therapies (see Cooper, 2002). This understanding of mechanism may also be facilitated by our measure's focus on the desired progression from negative to positive relationship attitudes. There are diverse ways in which people may change their attitudes. For example, people may attempt reasoning processes that reattribute another person's bad behavior to external causes, or they may simply attempt to suppress reminders of past bad deeds (Maio & Thomas, 2007). In the family context, particularly expressive family members (e.g., wives) may be better at providing explanations for their actions, helping the reattribution process, whereas the less loquacious family members (e.g., husbands) may force victims to rely on a

⁵ The obtained effects were virtually the same after we controlled for the likelihood of repeated offense, which may be another factor that affects a person's forgiveness.

suppression mechanism. In each case, people might report conscious attempts at attitude transformation on the new measure of forgiveness, but these attempts will be elicited by different self-persuasion processes (see Maio & Thomas, 2007).

Moreover, it would be useful to examine the process of forgiveness in diverse cultural contexts because of a number of relevant cultural differences in attribution (Nisbett, Peng, Choi, & Norenzayan, 2001). Cultures may also vary in the extent to which they view children as causal agents. Some cultures may regard children as being more capable of being responsible for what they do, and these cultures might have weaker norms for forgiving children. An interesting question is whether such cultures are more or less successful or, more provocatively, are more or less likely to ensure gene replication over the long term.

In sum, the present study is the first to provide longitudinal data showing that forgiveness has an important role that varies across family relationships. Numerous publications make clear that family-centered therapies are now a common way to tackle diverse psychological issues. Implicit in the use of these therapies is the notion that processes in the family leave lasting marks on the individual. The results presented in this article add substantial impetus to this claim. Moreover, the findings uniquely highlight the importance of examining the role of forgiveness across different types of relationships. It is provocative that the process of forgiveness is quite different in those relationships that may have evolved to regard forgiveness as a duty (e.g., due to parental role) compared with those relationships wherein forgiveness has fewer direct ramifications for genetic transmission.

References

- Achenbach, T. M. (1991). *Integrative guide to the 1991 CBCL/4-18, YSR, and TRF profiles*. Burlington: University of Vermont Department of Psychiatry.
- Aron, A., Aron, E. N., & Smollen, D. (1992). Inclusion of Other in the Self Scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology, 63*, 596-612.
- Baumeister, R. F., Stillwell, A., & Wotman, S. R. (1990). Victim and perpetrator accounts of interpersonal conflict: Autobiographical narratives about anger. *Journal of Personality and Social Psychology, 59*, 994-1005.
- Beck, A. T., & Beck, R. W. (1972). Shortened version of BDI. *Postgraduate Medicine, 52*, 81-85.
- Biesanz, J. C., West, S. G., & Kwok, O. M. (2003). Personality over time: Methodological approaches to the study of short-term and long-term development and change. *Journal of Personality, 71*, 905-941.
- Botta, R. A., & Dumlao, R. (2002). How do conflict and communication patterns between fathers and daughters contribute to or offset eating disorders? *Health Communication, 14*, 199-219.
- Bowlby, J. (1969). *Attachment and loss: Vol. 1. Attachment*. New York: Basic Books.
- Buss, D. M. (1996). The evolutionary psychology of human social strategies. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 3-38). New York: Guilford Press.
- Buss, A. H., & Durkee, A. (1957). An inventory for assessing different kinds of hostility. *Journal of Consulting Psychology, 21*, 343-349.
- Caspi, A., Roberts, B. W., & Shiner, R. L. (2005). Personality development: Stability and change. *Annual Review of Psychology, 56*, 453-484.
- Collins, N. L., & Read, S. J. (1990). Adult attachment, working models, and relationship quality in dating couples. *Journal of Personality and Social Psychology, 58*, 644-663.
- Cook, W. L. (2000). Understanding attachment security in family context. *Journal of Personality and Social Psychology, 78*, 285-294.
- Cooper, L. M. (2002). Personality and close relationships: Embedding people in important social contexts. *Journal of Personality, 70*, 757-782.
- Cords, M., & Aureli, F. (2000). Reconciliation and relationship qualities. In F. Aureli & F. B. M. de Waal (Eds.), *Natural conflict resolution* (pp. 177-198). Berkeley: University of California Press.
- Darby, B. W., & Schlenker, B. R. (1982). Children's reactions to apologies. *Journal of Personality and Social Psychology, 43*, 742-753.
- de Waal, F. B. M. (1997). *Bonobo: The forgotten ape*. Berkeley: University of California Press.
- de Waal, F. B. M. (2000, July 28). Primates: A natural heritage of conflict resolution. *Science, 289*, 586-590.
- Fincham, F. D. (2000). The kiss of the porcupines: From attributing responsibility to forgiving. *Personal Relationships, 7*, 1-23.
- Fincham, F. D., Beach, S. R. H., & Davila, J. (2004). Forgiveness and conflict resolution in marriage. *Journal of Family Psychology, 18*, 72-81.
- Fincham, F. D., Beach, S. R. H., Harold, G. T., & Osborne, L. N. (1997). Marital satisfaction and depression: Different causal relationships for men and women? *Psychological Science, 8*, 351-357.
- Fincham, F. D., Harold, G. T., & Gano-Phillips, S. (2000). The longitudinal association between attributions and marital satisfaction: Direction of effects and role of efficacy expectations. *Journal of Family Psychology, 14*, 267-285.
- Fletcher, G. J., Simpson, J. A., & Thomas, G. (2000). The measurement of perceived relationship quality components: A confirmatory factor analytic approach. *Personality and Social Psychology Bulletin, 26*, 340-354.
- Goldberg, L. R. (1992). The development of markers for the Big Five factor structure. *Psychological Assessment, 4*, 26-42.
- Grych, J. H., Seid, M., & Fincham, F. D. (1992). Assessing marital conflict from the child's perspective: The Children's Perception of Intraparental Conflict Scale. *Child Development, 63*, 558-572.
- Harter, S. (1985). *Manual of the Self-Perception Profile for Children*. Denver, CO: University of Denver.
- Hayley, W. E., & Strickland, B. R. (1986). Interpersonal betrayal and cooperation: Effects on self-evaluation in depression. *Journal of Personality and Social Psychology, 50*, 386-391.
- Holahan, C. J., & Moos, R. H. (1983). The quality of social support: Measures of family and work relationships. *British Journal of Clinical Psychology, 22*, 157-162.
- Hoyt, W. T., Fincham, F. D., McCullough, M. E., Maio, G. R., & Davila, J. (2005). Responses to interpersonal transgressions in families: Forgiveness, forgiveness, and relationship-specific effects. *Journal of Personality and Social Psychology, 89*, 375-394.
- Kachadourian, L. K., Fincham, F. D., & Davila, J. (2004). The tendency to forgive in dating and married couples: The role of attachment and relationship satisfaction. *Personal Relationships, 11*, 373-393.
- Kachadourian, L. K., Fincham, F. D., & Davila, J. (2005). Attitudinal ambivalence, rumination, and forgiveness of partner transgressions in marriage. *Personality and Social Psychology Bulletin, 31*, 334-342.
- Karremans, J. C., Van Lange, P. A. M., & Holland, R. W. (2005). Forgiveness and its associations with prosocial thinking, feelings, and doing beyond the relationship with the offender. *Personality and Social Psychology Bulletin, 31*, 1315-1326.
- Karremans, J. C., Van Lange, P. A. M., Ouwkerk, J. W., & Kluwer, E. S. (2003). When forgiving enhances psychological well-being: The role of interpersonal commitment. *Journal of Personality and Social Psychology, 84*, 1011-1026.
- Kenrick, D. T., Li, N. P., & Butner, J. (2003). Dynamical evolutionary psychology: Individual decision rules and emergent social norms. *Psychological Review, 110*, 3-28.
- Kenrick, D. T., & Trost, M. R. (1997). Evolutionary approaches to rela-

- tionships. In S. Duck (Ed.), *Handbook of personal relationships: Theory, research and interventions* (2nd ed., pp. 151–177). New York: Wiley.
- Kenrick, D. T., Trost, M. R., & Sundie, J. M. (2004). Sex roles as adaptations: An evolutionary perspective on gender differences and similarities. In A. H. Eagly, A. E. Beall, & R. J. Sternberg (Eds.), *The psychology of gender* (2nd ed., pp. 65–91). New York: Guilford Press.
- Kornhaber, M., & Marcos, H. (2000). Young children's communication with mothers and fathers: Functions and contents. *British Journal of Developmental Psychology, 18*, 187–210.
- Kovacs, M. (1981). Rating scales to assess depression in school-aged children. *Acta Paedopsychiatrica, 46*, 305–315.
- Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling, 9*, 151–173.
- Luebbert, M. C. (1999). The survival value of forgiveness. In D. H. Rosen & M. C. Luebbert (Eds.), *Evolution of the psyche* (pp. 169–187). Westport, CT: Praeger/Greenwood.
- Maio, G. R., Fincham, F. D., & Lycett, E. J. (2000). Attitudinal ambivalence toward parents and attachment style. *Personality and Social Psychology Bulletin, 26*, 1451–1464.
- Maio, G. R., & Thomas, G. (2007). The epistemic–teleologic model of deliberate self-persuasion. *Personality and Social Psychology Review, 11*, 46–67.
- Margolin, G., Christensen, A., & John, R. S. (1996). The continuance and spillover of everyday tensions in distressed and nondistressed families. *Journal of Family Psychology, 10*, 304–321.
- McCullough, M. E., & Hoyt, W. T. (2002). The forgiver in context: Personal and situational determinants of forgiveness. *Personality and Social Psychology Bulletin, 28*, 1556–1573.
- McCullough, M. E., Rachal, K. C., Sandage, S. J., Worthington, E. L. Jr., Brown, S. W., & Hight, T. L. (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.
- Mikulincer, M., Shaver, P. R., & Slav, K. (2006). Attachment, mental representations of others, and gratitude and forgiveness in romantic relationships. In M. Mikulincer & G. Goodman (Eds.), *Dynamics of romantic love: Attachment, caregiving, and sex* (pp. 190–215). New York: Guilford.
- Moos, R., & Moos, B. (1981). *Family Environment Scale manual*. Palo Alto, CA: Consulting Psychologists Press.
- Nisbett, R. E., Peng, K., Choi, I., & Norenzayan, A. (2001). Culture and systems of thought: Holistic versus analytic cognition. *Psychological Review, 108*, 291–310.
- Paleari, G. F., Regalia, C., & Fincham, F. D. (2005). Marital quality, forgiveness, empathy, and rumination: A longitudinal analysis. *Personality and Social Psychology Bulletin, 31*, 368–378.
- Paulhus, D. L. (1991). Measurement and control of response bias. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (pp. 17–59). San Diego, CA: Academic Press.
- Paunonen, S. V., & Ashton, M. C. (2001). Big Five factors and facets and the prediction of behavior. *Journal of Personality and Social Psychology, 81*, 524–539.
- Reynolds, C. R., & Richmond, B. O. (1978). What I think and feel: A revised measure of children's manifest anxiety. *Journal of Abnormal Psychology, 6*, 271–280.
- Reynolds, W. M. (1982). Development of reliable and valid short forms of the Marlowe–Crowne Social Desirability Scale. *Journal of Clinical Psychology, 38*, 119–125.
- Robins, R. W., Caspi, A., & Moffit, T. E. (2002). It's not just who you're with, it's who you are: Personality and relationship experiences across multiple relationships. *Journal of Personality, 70*, 925–964.
- Rosenberg, M. (1979). *Conceiving the self*. New York: Basic Books.
- Seiffge-Krenke, I. (2002). "Come on, say something, Dad!" Communication and coping in fathers of diabetic adolescents. *Journal of Pediatric Psychology, 27*, 439–450.
- Spielberger, C. D., Gorsuch, R. L., & Lushene, R. E. (1970). *The State–Trait Anxiety Inventory (STAI) Test Manual for Form X*. Palo Alto, CA: Consulting Psychology Press.
- Tangney, J., Fee, R., Reinsmith, C., Boone, A. L., & Lee, E. (1999, August). *Assessing individual differences in the propensity to forgive*. Paper presented at the annual meeting of the American Psychological Association, Boston.
- Trivers, R. (1985). *Social evolution*. Menlo Park, CA: Benjamin/Cummings.
- Zimet, D. M., & Jacob, T. (2001). Influences of marital conflict on child adjustment: Review of theory and research. *Clinical Child and Family Psychology Review, 4*, 319–335.

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