

The Relationship Between Transgressor Remorse and Forgiveness in Victimized Young Children: The Influence of Bystanders (Postprint)

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Date: 2023-10-09T00:00:00+00:00

Abstract

After interpersonal harm incidents, the transgressor's remorse and the victim's forgiveness constitute two pivotal factors in restoring interpersonal relationships. Employing a classic behavioral experimental paradigm, this study examined 139 children aged 4–5 years to investigate the effect of transgressors' remorse expression on victims' forgiveness levels, and the moderating role of different types of bystanders in this relationship. Results demonstrated that both 4- and 5-year-old children could already identify transgressors' remorse expression, exhibiting significantly higher forgiveness levels toward remorseful versus non-remorseful transgressors. The presence of bystanders influenced children's forgiveness levels, with teacher and good friend bystanders more effectively reducing forgiveness toward remorseful transgressors and enhancing forgiveness toward non-remorseful transgressors compared to stranger bystanders. The presence of bystanders did not significantly elevate children's forgiveness levels toward remorseful transgressors, potentially attributable to internalized social expectations (e.g., “returning good for evil”) during socialization. Based on these findings, this paper proposes a “social expectation bystander activation hypothesis” and discusses it.

Full Text

The Relationship Between Transgressor's Remorse and Victim's Forgiveness in Young Children: The Influence of Bystanders

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Abstract

Following interpersonal harm incidents, the transgressor's remorse and the victim's forgiveness are two key factors in repairing interpersonal relationships. Using a classic behavioral experimental paradigm, this study examined 139 children aged 4-5 years to investigate the effect of transgressors' remorse expressions on victims' forgiveness levels, and the moderating role of different types of bystanders in this relationship. The results showed that both 4- and 5-year-old children could already identify transgressors' remorse expressions, and their forgiveness levels toward remorseful transgressors were significantly higher than toward non-remorseful transgressors. The presence of bystanders affected children's forgiveness levels, with teacher bystanders and good friend bystanders being more likely than stranger bystanders to reduce children's forgiveness toward remorseful transgressors and increase forgiveness toward non-remorseful transgressors. The presence of bystanders did not significantly increase children's forgiveness toward remorseful transgressors, which may be related to internalized social expectations (such as "requiting injury with kindness") during children's socialization process. Based on this, this paper attempts to propose a "bystander activation hypothesis of social expectations" and discusses it.

Keywords: young children, remorse, forgiveness, bystander, activation hypothesis

Classification: B844

1.1 The Relationship Between Remorse and Forgiveness

Following interpersonal harm or conflict, only when one party shows remorse and self-reflection while the other party lets bygones be bygones can the two sides reconcile and restore their relationship. The transgressor's remorse and the victim's forgiveness are two key factors in repairing interpersonal relationships (Oostenbroek & Vaish, 2018), and the victim's timely and accurate perception of the transgressor's remorse intentions or behaviors constitutes an important prerequisite for the victim to develop forgiving behavior and thereby resolve the conflictual relationship. In individualistic cultures, 5-year-old children can already accurately perceive transgressors' remorse intentions and demonstrate higher levels of forgiveness (Oostenbroek & Vaish, 2018; Vaish & Oostenbroek, 2021). However, interpersonal conflict and relationship repair may have unique characteristics in collectivist cultures. Influenced by social expectations and socialization processes that emphasize interpersonal connection and harmony, individuals in collectivist cultural contexts have stronger abilities to interpret others' behavioral intentions and are thus more inclined to forgive others (Hook, 2009; Markus & Kitayama, 1991). Moreover, the decision of whether to forgive the other party may be influenced by bystanders who witness or participate in the interaction (Botto & Rochat, 2019; Hook et al., 2009; Zhang Tian et al., 2012).

The transgressor's remorse is the most prominent elicitor of the victim's for-

giveness. Research has shown that after experiencing harm, individuals are less likely to blame and punish, and more likely to forgive and like transgressors who express remorse (McCullough et al., 2014; Oostenbroek & Vaish, 2018). Attribution theory posits that a transgressor's active expression of remorse signifies their willingness to take responsibility for the inappropriate behavior and helps the victim make unstable internal attributions about the transgressor—that is, the harmful behavior is not a stable behavioral characteristic of the transgressor—thereby making the victim more willing to forgive (Davis & Gold, 2011; Weiner, 1986). Empathy theory further suggests that a transgressor's active expression of remorse demonstrates to the victim that they are experiencing psychological pain, which may elicit the victim's empathy and sympathy, thus increasing the likelihood of forgiveness (Keltner & Anderson, 2000; Leary et al., 1996). Some studies have even found that victims' negative emotions (such as anger and resentment) can transform into positive emotions upon perceiving the transgressor's remorse, leading to forgiveness (DiFonzo et al., 2020).

Investigating the relationship between transgressor's remorse and victim's forgiveness in young children is particularly special and important. Early childhood is a critical sensitive period for individuals to achieve decentering, and it is also a stage where interpersonal conflicts or harm incidents increasingly occur in peer interactions or play (Vlachou et al., 2011). Learning to express remorse, understand others' remorse intentions, and forgive others become important indicators of children's decentering, as well as essential foundational conditions for enhancing social interaction skills and timely repairing peer relationships. In recent years, studies limited to Western children have found that 5-year-old children can understand others' expressed remorse and show higher forgiveness levels; however, 4-year-old children can only understand verbal apologies (i.e., saying "sorry") and do not show forgiveness toward transgressors who do not offer verbal apologies (Oostenbroek & Vaish, 2018; Vaish et al., 2011; Vaish & Oostenbroek, 2021). Thus, ages 4-5 may be the developmental period when children begin to understand others' remorse intentions, which in turn influences forgiving behavior. In view of this, the primary purpose of this study is to examine the characteristics of Chinese 4-5-year-old children's understanding of transgressors' remorse intentions and their forgiving behaviors, to verify the applicability of Western research paradigms in Chinese child populations, and to compare differences between Chinese and Western children in experimental tasks. Based on the aforementioned theories and empirical evidence, we propose Research Hypothesis 1: 5-year-old children can understand remorse and have higher forgiveness levels when transgressors show remorse; whether 4-year-old children can accurately understand remorse and show differential forgiveness remains uncertain.

1.2 The Role of Bystanders in the Relationship Between Remorse and Forgiveness

Conflict events and subsequent relationship repair processes typically involve the participation, observation, or presence of others (Hook et al., 2009), and bystanders may be important influencing factors in the transgressor-victim relationship repair process. Social facilitation theory posits that the presence of others can awaken and enhance an individual's dominant response tendency that aligns with social expectations, enabling them to better complete the current task (Zajonc, 1965). Consequently, the presence of bystanders may enhance victims' positive feedback toward remorseful transgressors, such as being more willing to forgive the transgressor. Reputation management or reputation concern theory further suggests that when individuals are under others' attention, they will actively change their behavior to conform to social expectations in order to maintain or establish a good reputation (Botto & Rochat, 2018, 2019). For victims, they may actively forgive transgressors to demonstrate that they possess the socially desirable quality of magnanimity. Research has shown that as early as age 2, humans already possess an 'evaluative audience perception' ability, meaning that individuals can be aware of bystanders' presence and strive to obtain positive evaluations from others while avoiding negative ones (Botto & Rochat, 2018, 2019). When others are present, young children's prosocial behaviors that conform to social expectations, such as cooperation and sharing, increase significantly (Engelmann et al., 2013; Grocke et al., 2019), while undesirable behaviors such as deception and stealing decrease significantly (Engelmann et al., 2012; Fu et al., 2015). In view of this, this study attempts to examine the influence of bystanders on the relationship between remorse and forgiveness in young children, and proposes Research Hypothesis 2: Compared to conditions without bystanders present, the presence of bystanders will prompt children to show higher forgiveness levels toward transgressors (both remorseful and non-remorseful).

Different types of bystanders may have differential effects on the relationship between remorse and forgiveness. Parents, teachers, idols, and peers all play the role of bystanders and function as 'significant others' at different developmental stages of individuals (Domagała-Zyśk, 2006; Mills, 1953). Research has shown that activating an individual's relational representation of significant others automatically activates content related to significant others (such as significant others' expectations), and the closer the relationship between the individual and others, the stronger the connection between relational representation and individual behavior (Shah, 2003; Zhang Qingpeng et al., 2012). In other words, the more important a bystander is perceived to be by the child, the more likely it is to activate social expectation effects and the need for self-reputation management, thereby prompting the implementation of behaviors that conform to social expectations or maintain a good reputation. Although both teachers and peers are important bystanders in children's socialization process, teachers, as symbols of authority in collectivist cultures that emphasize hierarchical relation-

ships, prompt children to work harder to maintain their reputation or positive image in front of them (Draper et al., 2009; Yau et al., 2009). Research has shown that teachers and peers produce different bystander effects on children; 3-4-year-old children exhibit longer waiting times under teacher conditions (where the duration of delay of gratification will be told to the teacher afterward) than under peer conditions (where the duration will be told to a friend afterward) (Ma et al., 2020). Similarly, the presence of good friends or familiar individuals versus unfamiliar peers differentially activates children's social expectation effects or self-reputation management motivation, which in turn differentially influences their forgiveness levels toward others. For example, if 4- and 8-year-old children know that their game-sharing process will be told to friends or strangers, they will engage in more sharing behavior under the 'future tell a friend' condition (Shinohara et al., 2022). Therefore, this study simultaneously examines three types of bystanders—teachers, good friends, and strangers—and proposes Research Hypothesis 3: Bystander type plays a moderating role in the relationship between remorse and forgiveness, with teacher bystanders, good friend bystanders, and stranger bystanders eliciting sequentially decreasing levels of victim forgiveness.

1.3 Cultural Considerations from a Chinese Perspective

The processes of coping with and repairing conflictual relationships exhibit cross-cultural differences, and such differences may already be evident in young child populations. In collectivist cultural environments, children tend to maintain the continuity of social interaction and social harmony (Wu et al., 2018). On the one hand, they try to avoid conflicts as much as possible; on the other hand, when harmed, they are more willing to suppress anger or engage in negative inward rumination (Zhang Tian et al., 2012), and adopt reconciliation as the primary means of resolving conflicts and repairing relationships (Martínez-Lozano et al., 2011). In contrast, in individualist cultural environments, children emphasize personal needs and goals in conflict management. On the one hand, they focus more on maintaining self-worth through resource allocation (Rochat et al., 2009); on the other hand, when harmed, they tend to adopt outward coping strategies such as avoidance, retaliation, and blame to release negative emotions (Günsoy et al., 2015), and typically end conflicts by terminating social relationships (Martínez-Lozano et al., 2011). Forgiveness can be used to repair interpersonal relationships in both collectivist and individualist cultures, but cross-cultural differences have been confirmed (Zhang Tian et al., 2012). In view of this, this study, from a cultural difference perspective and based on Chinese cultural samples, reveals the relationship between remorse and children's forgiveness and the role of bystanders in this relationship.

Study 1: The Relationship Between Transgressor's Remorse Expression and Children's Forgiveness

2.1.1 Participants

Using convenience sampling, 49 children were selected from five middle classes in a kindergarten in Shandong Province, including 25 4-year-olds (M age = 53.44 months, SD = 3.11; 12 boys) and 24 5-year-olds (M age = 64.08 months, SD = 2.41; 10 boys). Based on evaluations from the kindergarten teachers, children with intellectual disabilities and other mental disorders were excluded, and all children included in the final analysis were within the normal range of social cognitive abilities.

2.1.2 Experimental Design

A single-factor within-subject design was adopted, with the independent variable being the presence or absence of remorse, and the dependent variable being children's forgiveness level.

2.1.3 Experimental Materials and Setup

The experimental materials included paper, colored pens, three boxes, two cartoon pictures (one representing each gender), ten flowers, one table, three chairs, and one neutral facial expression photo each for experimenters A and B. Each child was tested individually in a quiet room, and the entire behavioral experiment was recorded with a video camera. The host and experimenters A and B in the experiment were all professionally trained graduate or undergraduate students.

2.2 Procedure

The task was adapted from the experimental paradigm used by Oostenbroek and Vaish (2018). This paradigm consists of three sub-tasks conducted in three stages. The experimental task has been widely used to study remorse, forgiveness, guilt, gratitude, and other constructs in Western 4- and 5-year-old children (Vaish et al., 2011; Vaish & Oostenbroek, 2021; Vaish & Savell, 2022).

Stage 1: The 'Picture-Tearing' Behavioral Experiment

Step 1: The child participant engaged in a warm-up game in the preparation room, after which experimenters A and B led the child into the testing room. The child sat at one end of the table, with the two experimenters sitting on either side. Each person had a white sheet of paper and a box containing three colored pens in front of them. The boxes in front of experimenters A and B were each labeled with their neutral facial expression photos, while the child's box was labeled with a cartoon picture consistent with their gender. The host sat opposite the child.

Step 2: The host told the child and experimenters A and B that they could draw

whatever they wanted and would receive corresponding rewards upon completion. The host then left under a pretext. Several minutes later, each person finished their drawing.

Step 3: Experimenters A and B admired each other's drawings and expressed interest in seeing the child's drawing. The two experimenters examined the child's drawing together (holding one end each) and 'accidentally' tore the child's drawing, only tearing it without completely ripping it apart.

Step 4: Experimenter A, looking worried and very remorseful, said, "I tore your drawing, I didn't expect this to happen, it's my fault," but did not explicitly apologize (i.e., did not clearly say "sorry"). Experimenter B showed no remorseful expression and simply said lightly, "Oh, I tore your drawing, it's torn." Throughout this process, experimenter B maintained a neutral attitude toward the act of tearing the drawing, without being aggressive or negative, and showed no expressions or movements. After experimenters A and B finished speaking, they placed the drawing back in front of the child.

Stage 2: Children's Understanding of "Remorse"

Step 1: After the above operations were completed, the host returned to the testing room (unaware of what had just happened) and asked experimenters A and B to pack up their things and leave.

Step 2: The host began to notice the child's torn drawing, expressed sympathy, and asked, "What happened?" If the child gave a complete answer such as "A and B tore my drawing," the subsequent questions continued. If the child could not answer completely (e.g., simply saying "my drawing is torn"), the host needed to help the child recall completely by asking questions like, "How did it get torn? Who tore it?"

Step 3: After confirming the child's complete answer, the host pushed the boxes containing experimenters A and B's photos (to facilitate the child's subsequent answers) in front of the child and continued to ask, "What did they (the experimenters) say?" If the child recalled what A and B said after tearing the drawing, such as "He said he didn't expect this to happen, he said it was his fault," or similar content expressing remorse, the host continued with the subsequent questions. If the child forgot or expressed inaccurately, the host needed to remind the child what the two experimenters said respectively, namely, "Experimenter A showed remorse but did not explicitly apologize; Experimenter B did not show remorse." At this point, all children had received the same correct information before being asked the formal test questions below—that is, they knew that the drawing-tearing incident had occurred and could distinguish between the "remorseful" and "non-remorseful" experimenters.

Stage 3: Resource Distribution Task Test

This stage was conducted without any bystanders present, with child participants completing the task independently under the host's guidance.

Step 1: Remorse Understanding Test

Following previous research (Oostenbroek & Vaish, 2018), the test questions were as follows:

1. Which one do you dislike more, A or B? (The host pointed to their photos in sequence)
 - 1a. Why?
2. Which one do you like more, A or B? (The host pointed to their photos in sequence)
 - 2a. Why?
3. If you fell down, who do you think would help you? A or B? (The host pointed to their photos in sequence)
 - 3a. Why?
4. If you drew another picture, who do you think would tear it again? A or B? (The host pointed to their photos in sequence)
 - 4a. Why?
5. If you were on a swing, who do you think would push you off? A or B? (The host pointed to their photos in sequence)
 - 5a. Why?

Questions 1-5 were forced-choice questions, and these five test questions were presented in the same order. If a child answered “both” or “neither,” the host would encourage the child to try to make a choice. If the child did not respond, the host would repeat the question once; if the child still did not respond, the host would move on to the next question. Questions 1a-5a were open-ended questions designed to confirm the child’s answers to the forced-choice questions.

Step 2: The “Flower” Sharing Game

The host gave the child ten flowers and told him/her, “Here are ten flowers. In a moment, A and B will come back to look at their boxes. If you wish, you can give the flowers to them.” The host then went to do other things. If the child sought guidance, the host would tell him/her to distribute according to his/her own wishes. Once the child finished distributing, the host would ask questions like, “Why did you give flowers to A and not to B?” Children could answer openly and freely.

The number of flowers received in experimenters A and B’s boxes represented the child’s forgiveness level toward A and B.

To avoid the influence of the experimenters’ own appearance or likability on the experimental results, the two experimenters alternated in playing the roles of the remorseful transgressor (A) and the non-remorseful transgressor (B) during the experiment. Considering possible order effects, the seating positions of the two experimenters on either side of the child, the order of expressing remorse and non-remorse, and the order in which the names of experimenters A and B appeared in the test questions were all counterbalanced across participants.

2.3 Research Ethics

After the experiment, experimenters A and B returned to the room together with the host to explain the experimental purpose to the participant and express explicit apologies (saying “sorry”). Subsequently, they completed a new drawing with the child, gave the child a toy gift, and thanked him/her for par-

ticipating in such a meaningful little game.

The study obtained informed consent from children's guardians and kindergarten administrators, as well as voluntary participation from the children, who could withdraw at any time during participation. The study was approved by the Ethics Committee of Shandong Normal University.

2.4.1 Children's Understanding of Remorse

Children's responses to the five forced-choice questions are shown in Figure 1 [Figure 1: see original paper]. For example, for Question 1, 42 children (85.71%) chose B (disliked the non-remorseful transgressor more), 1 child (2.04%) chose A (disliked the remorseful transgressor more), and 6 children (12.25%) did not respond. Responses that matched the research expectations (preferring the remorseful transgressor, disliking the non-remorseful transgressor more, believing the remorseful transgressor was more likely to help, believing the non-remorseful transgressor was more likely to tear the drawing again or push them off the swing) were coded as "1," while responses that did not match expectations (including no response) were coded as "0." Binomial probability test results indicated that except for Question 3 (If you fell down, who do you think would help you?), where the distribution of children's choices between A and B was not significant ($p = 0.85$), the distributions of choices between A and B for the remaining four questions were all significantly unbalanced ($ps < 0.001$, proportion difference = 0.66~0.92), with more children choosing the expected option for each question. This demonstrates that the "picture-tearing" behavioral experimental context can elicit children's understanding of whether transgressors show remorse.

Chi-square test results indicated that children's understanding of remorse did not differ significantly by gender or age ($ps > 0.05$). However, for Question 3, there was a significant difference in responses between 4- and 5-year-old children ($2(1, N = 49) = 8.15, p = 0.004, \phi = 0.41$). Among 4-year-olds, the number of children who gave expected responses did not differ significantly from those who did not give expected responses ($p = 0.69$, proportion difference = -0.12), whereas among 5-year-olds, the number of children who gave expected responses was significantly greater than those who did not give expected responses ($p = 0.002$, proportion difference = 0.66).

2.4.2 The Effect of Transgressor's Remorse on Children's Forgiveness

The absolute values of skewness and kurtosis for forgiveness levels toward remorseful and non-remorseful transgressors were both less than 0.4, indicating a normal distribution (Hair et al., 2017). Therefore, a paired-samples t-test was used to analyze children's forgiveness levels toward experimenters A and B. The results showed a significant difference in the effect of remorse on forgiveness ($t(48) = 6.67, p < 0.001, |d| = 1.91$). Children allocated significantly more flowers to the remorseful transgressor ($MA = 7.33, SD = 2.44$) than to the non-remorseful transgressor ($MB = 2.67, SD = 2.44$), indicating higher forgiveness

levels toward the remorseful transgressor. Additionally, independent-samples t-test results indicated no significant gender or age differences in children's forgiveness levels toward remorseful or non-remorseful transgressors ($p > 0.05$).

Study 2: The Influence of Different Types of Bystanders on the Relationship Between Remorse and Forgiveness

3.1.1 Participants

Using cluster sampling, 139 children from five middle classes in a kindergarten in Shandong Province were selected, including 52 4-year-olds (M age = 55.54 months, $SD = 3.29$; 23 boys) and 87 5-year-olds (M age = 64.62 months, $SD = 2.74$; 36 boys). Based on evaluations from the kindergarten teachers, children with intellectual disabilities and other mental disorders were excluded. Teacher bystanders were the caregiving teachers from the children's own classes (3 teachers); good friend bystanders were the children's good friends identified based on teacher reports and children's self-reports (3 friends); stranger bystanders were same-age children from other classes who did not know the child participants (3 strangers).

3.1.2 Experimental Design

A 2 (presence of remorse: remorse vs. no remorse) $\times 4$ (type of bystander: teacher bystander, good friend bystander, stranger bystander, no bystander) mixed experimental design was adopted, with the within-subject independent variable being presence of remorse, the between-subjects independent variable being type of bystander, and the dependent variable being children's forgiveness level.

3.1.3 Experimental Materials and Setup

Same as Study 1.

3.2 Procedure

The entire experimental process and operational procedures were the same as Study 1. The only difference was that in Stage 3, the "Resource Distribution Task Test," in addition to the 49 children in Study 1, the remaining three groups (30 children each) completed the remorse understanding test and resource distribution task under the observation conditions of teacher, good friend, and stranger bystanders, respectively. While participants answered questions and performed resource distribution, bystanders observed the entire process, remaining quiet, not speaking, and not expressing emotional tendencies.

3.3 Research Ethics

Same as Study 1.

3.4.1 Children's Understanding of Remorse

Except for Question 3 ($p = 0.011$, proportion difference = 0.22), children's responses to the other four forced-choice questions were consistent with the pattern of results in Study 1. The specific number of children for each question is shown in Figure 2 [Figure 2: see original paper]. Chi-square test results indicated no significant gender differences in children's understanding of remorse (p s > 0.05).

3.4.2 The Relationship Between Transgressor's Remorse and Children's Forgiveness: The Influence of Different Bystanders

The absolute values of skewness and kurtosis for forgiveness levels toward remorseful and non-remorseful transgressors were both less than 0.5, indicating a normal distribution. Independent-samples t-test results showed no significant age or gender differences in 4- and 5-year-old children's forgiveness levels toward remorseful or non-remorseful transgressors (p s > 0.05). There were also no significant gender differences in children's forgiveness levels toward remorseful or non-remorseful transgressors under each bystander condition (p s > 0.05).

To examine differences in children's forgiveness levels under conditions with and without bystanders, one-third (15 participants) were randomly selected from the teacher bystander group, good friend bystander group, and stranger bystander group to form a new "with-bystander group" ($N = 45$) coded as "1," while the no-bystander group ($N = 49$) was coded as "0," with balanced numbers of boys and girls. Following the practice of Zhang Wenxin et al. (2021), internal validation was conducted, and results indicated no significant differences between the selected sample and the total sample. The absolute values of skewness and kurtosis for forgiveness levels toward remorseful and non-remorseful transgressors were both less than 0.4, indicating a normal distribution. Using children's forgiveness levels toward remorseful and non-remorseful transgressors as dependent variables, a 2 (presence of remorse: remorse vs. no remorse) $\times$ 2 (presence of bystander: with bystander vs. without bystander) repeated measures ANOVA was conducted. The results showed (see Figure 3 [Figure 3: see original paper]): The main effect of remorse was significant ($F(1, 92) = 43.32$, $p < 0.001$, $2p = 0.32$), with children's forgiveness levels toward remorseful transgressors significantly higher than toward non-remorseful transgressors. The interaction effect between remorse and bystander type was significant, $F(2, 92) = 5.97$, $p = 0.016$, $2p = 0.061$. For remorseful transgressors, children's forgiveness levels under the no-bystander condition ($M = 7.33$) were significantly higher than under the with-bystander condition ($M = 6.07$, $p = 0.016$). For non-remorseful transgressors, children's forgiveness levels under the no-bystander condition ($M = 2.67$) were significantly lower than under the with-bystander condition ($M = 3.93$, $p = 0.016$). Thus, the presence of bystanders affects children's forgiveness levels, showing an enhancement of forgiveness levels toward non-remorseful transgressors.

The absolute values of skewness and kurtosis for forgiveness levels toward remorseful and non-remorseful transgressors were both less than 0.5, indicating a normal distribution. To examine the influence of different types of bystanders on children's forgiveness levels, a 2 (presence of remorse: remorse vs. no remorse) $\times$ 3 (type of bystander: teacher bystander, good friend bystander, stranger bystander) repeated measures ANOVA was conducted using children's forgiveness levels toward remorseful and non-remorseful transgressors as dependent variables. The results showed (see Figure 4 [Figure 4: see original paper]): The main effect of remorse was significant ($F(1, 87) = 64.65, p < 0.001, 2p = 0.43$), with children's forgiveness levels toward remorseful transgressors significantly higher than toward non-remorseful transgressors. The interaction effect between remorse and bystander type was significant ($F(2, 87) = 4.07, p = 0.02, 2p = 0.09$). Further simple effects analysis indicated: For remorseful transgressors, forgiveness levels under the stranger bystander condition ($M = 8.20$) were significantly higher than under the good friend bystander condition ($M = 6.43, p = 0.008$) and the teacher bystander condition ($M = 6.80, p = 0.035$). For non-remorseful transgressors, forgiveness levels under the good friend bystander condition ($M = 3.57, p = 0.008$) and the teacher bystander condition ($M = 3.20, p = 0.035$) were both significantly higher than under the stranger bystander condition ($M = 1.80$). There were no significant differences in children's forgiveness levels toward remorseful and non-remorseful transgressors between the good friend bystander and teacher bystander conditions ($ps > 0.05$).

According to our research hypotheses, authoritative or familiar bystanders would increase children's forgiveness levels, that is, allocate more flowers to remorseful transgressors. However, children's forgiveness levels toward remorseful transgressors under teacher and good friend bystander conditions were significantly lower than under the stranger bystander condition. To reveal the possible reasons behind this phenomenon, we conducted a frequency analysis of the number of flowers distributed by children ($N = 90$) under different bystander conditions. The results showed that when good friends were bystanders, 46.67% of children would equally distribute flowers to remorseful and non-remorseful transgressors (5 flowers each). When teachers were bystanders, 33% of children chose equal distribution, and 3 children (10%) allocated all flowers (10 flowers) to the non-remorseful transgressor. In contrast, when strangers were bystanders, most children (60%) allocated the vast majority of flowers (≥ 9 flowers) to the remorseful transgressor. Thus, when authoritative teachers and familiar good friends were bystanders, children showed a tendency toward equal distribution of flowers.

To further examine whether children exhibited a social expectation effect of "egalitarianism" (everyone should receive the same amount of items) when distributing flowers, children who "allocated exactly 5 flowers to the remorseful transgressor" were separately selected as the "equal distribution group" and coded as "0," while children who "allocated ≥ 9 flowers to the remorseful transgressor" were separately selected as the "non-equal distribution group" and coded as "1." A total of 67 children were selected (21 boys, 46 girls). A 2 $\times$ 3 contingency table chi-square test was used to examine distribution differ-

ences in allocation strategies (see Figure 5 [Figure 5: see original paper]). The results showed that the distribution of children choosing the equal distribution strategy differed significantly across different bystander conditions ($\chi^2(1, N = 67) = 7.89, p = 0.019$, Cramer's $V = 0.34$). The proportion of children using the equal distribution strategy, in descending order, was: good friend bystander (70%) > teacher bystander (45.50%) > stranger bystander (28%). The proportion of children using the non-equal distribution strategy, in descending order, was: stranger bystander (72%) > teacher bystander (54.50%) > good friend bystander (30%).

4.1 The Relationship Between Remorse and Forgiveness

Study 1 found that the transgressor's expression of remorse could significantly enhance victimized children's forgiveness levels toward the transgressor, which is consistent with research results based on Western child samples (Oostenbroek & Vaish, 2018; Vaish & Oostenbroek, 2021). This confirms that remorse can promote forgiveness across cultures. In interpersonal conflict relationships, one party's active expression of remorse and the other party's positive feedback of forgiveness constitute an important pathway for timely relationship repair and maintenance of good interpersonal interaction or cooperation. The consistency of results across Eastern and Western child populations indicates that humans already possess the relevant abilities for this interpersonal interaction strategy during the socialization stage of early childhood (around age 5) (Rochat et al., 2009; Vaish & Savell, 2022; Wu et al., 2018). In recent years, neuroimaging evidence based on adults has shown that even when victims merely imagine others' sincere apologies or costly compensatory behaviors, the activation levels in brain regions related to forgiveness decision-making, including the medial prefrontal cortex, bilateral temporoparietal junction, precuneus, and angular gyrus, are significantly higher than in no-apology imagination scenarios (Ohtsubo et al., 2018; Ohtsubo et al., 2019). In view of this, it is necessary in the future to explore the neural basis underlying the relationship between remorse and forgiveness in child or pediatric populations.

This study found that both 4- and 5-year-old children in our Chinese sample could accurately understand transgressors' expressed remorse and were more willing to forgive remorseful transgressors. Compared with existing Western research literature, the age at which Chinese children in this study could understand others' remorse intentions was 11 months earlier than that found in research using similar experimental paradigms with Western children. This represents a substantial difference for rapidly developing children, suggesting that different cultures (collectivist vs. individualist) may have important differential influences on individuals' social cognitive development. Compared with individualist cultures, collectivist cultural environments place greater emphasis on maintaining harmonious interpersonal relationships by suppressing personal emotions or behaviors (Günsoy et al., 2015). Therefore, accurately understanding the intentions behind others' behaviors and recognizing others' emotions

become important foundations for maintaining good interpersonal relationships and achieving healthy development. Meanwhile, acquiring advanced social cognitive abilities (such as theory of mind and perspective-taking abilities) earlier is more conducive to children's good family adaptation, school adaptation, and peer adaptation in collectivist cultural environments (Cigala & Mori, 2022; Nader-Grosbois et al., 2013). This study found that the age at which children accurately understand others' remorse can be advanced to 4 years old. Given that this is the first discovery of such a large East-West difference, subsequent similar studies are needed for verification, particularly considering differences in children's family education levels, socioeconomic status, and other factors. Moreover, it remains uncertain whether this ability could be advanced to even younger ages, or whether more culturally Chinese research paradigms could be used to explore the relevant ability characteristics of younger individuals.

4.2 The Influence of Bystanders on the Relationship Between Transgressor's Remorse and Victimized Children's Forgiveness

The results of Study 2 found that the presence of bystanders can influence the relationship between transgressor's remorse and victimized children's forgiveness. This not only confirmed Research Hypothesis 2 but also confirmed social facilitation theory—that is, the presence of bystanders can significantly enhance children's forgiveness levels toward transgressors. Some researchers have also supported this activation effect of bystander observation from the perspective of reputation management, suggesting that individuals in situations with bystanders choose to actively forgive transgressors out of the need to maintain or establish a good reputation (Botto & Rochat, 2018, 2019). Evidence from cognitive neuroscience shows that compared to when no bystanders are present, individuals exhibit significantly more prosocial behavior when bystanders are present, and the activation levels of the medial prefrontal cortex and ventral striatum, which are related to social evaluation and social cognitive processes, increase significantly (Izuma et al., 2010; Van Hoorn et al., 2016). This may imply that timely and accurate perception of others' evaluations, adoption of others' expectations, and consideration of others' feelings are of special importance for individuals' social adaptation, and present consistent response tendencies in brain development, cognitive abilities, and behavioral performance.

The Chinese children in this study already demonstrated this bystander-induced activation effect at age 4 years and 1 month (49 months). First, this validates to some extent previous research findings that individuals already possess “evaluative audience perception” abilities as early as the toddler period (Botto & Rochat, 2018, 2019). More importantly, the emergence of this result is likely related to how collectivist and individualist cultures differentially influence human socialization processes (Richland et al., 2010; Tang et al., 2018). Collectivist cultures require every individual within them to achieve collective goals by constraining their own behavior and to maintain interpersonal intimacy and

cooperative symbiotic relationships through effective handling of interpersonal conflicts (Louie et al., 2014; Tamis-LeMonda et al., 2008). In China, whether it is the Confucian “way of loyalty and forgiveness” that has lasted for thousands of years or the contemporary advocacy for values such as “harmony” and “friendliness,” all reflect the collectivist culture’s pursuit of interpersonal harmony (Günsoy et al., 2015), which may become solidified as a social expectation or value. This gives rise to a uniquely Chinese forgiveness culture, making factors such as human sentiment, reputation (or face), and character qualities (like “magnanimity”) unique influences on forgiveness (Hook et al., 2009; Zhang Tian et al., 2012). It is therefore not difficult to understand that individuals, from an early age under the influence of family, school, and peers in this cultural environment, can learn and internalize this interpersonal interaction pattern and the perception of related social expectations earlier, forming corresponding cognitive abilities. Given that there are currently no similar studies on Western children, whether there are age differences between the two in this activation effect remains unknown and requires continued exploration in future research.

Further analyses focusing separately on remorseful and non-remorseful transgressors showed that the presence of bystanders significantly increased victimized children’s forgiveness levels toward non-remorseful transgressors, although still not exceeding forgiveness levels toward remorseful transgressors. This is consistent with the perspectives of social facilitation theory and reputation management theory. However, unexpectedly, compared to conditions without bystanders present, when bystanders were present, victimized children did not show higher forgiveness toward remorseful transgressors as collectivist culture would expect, but instead significantly reduced their forgiveness levels toward remorseful transgressors. To reveal the possible reasons behind this phenomenon, we conducted statistical analyses on the number of flowers children distributed during the flower allocation stage and unexpectedly discovered that the presence of bystanders prompted children to more equally distribute flowers between remorseful and non-remorseful transgressors. Previous research has found that Chinese children indeed tend to engage in more equal distribution when allocating items based on resource quantity (Li et al., 2016; Wang Xiaonan et al., 2019). That is to say, the presence of bystanders may have activated another social expectation in children that aligns with collectivist culture—egalitarianism in resource distribution.

Different types of bystanders have differential influences on victimized children’s forgiveness levels. Compared to conditions without bystanders present, stranger, teacher, and good friend bystanders can all significantly increase victimized children’s forgiveness levels toward non-remorseful transgressors, which aligns with children’s need to conform to social expectations to maintain interpersonal harmony or their own positive image. More importantly, compared to stranger bystanders, teacher and good friend bystanders can more significantly increase victimized children’s forgiveness levels toward non-remorseful transgressors. This shows that bystanders can activate children’s behavior of conforming to social expectations (i.e., forgiving others), and bystanders with closer rela-

tionships to the self have a greater activation effect. The results of children's flower quantity distribution in the study further confirmed the existence of this activation effect. Compared to stranger bystanders, teacher and good friend bystanders made children more inclined to adopt distribution strategies that conform to social expectations—that is, giving approximately the same number of flowers to remorseful and non-remorseful transgressors.

Based on the above results and discussion, this paper proposes the “bystander activation hypothesis of social expectations,” which posits that the presence of bystanders prompts those being observed to engage in behaviors that conform to social expectations, and the greater the importance of the bystander to the observed individual, the greater the degree of activated socially conforming behavior. In this study, bystanders may have simultaneously activated two social expectations in children that align with collectivist cultural expectations: “requiting injury with kindness” (forgiving transgressors) and “egalitarianism” (equal distribution of items). Admittedly, this paper only discovered this activation phenomenon when exploring the relationship between remorse and forgiveness in child populations. Future research still needs to further confirm the applicability of this hypothesis to other social development themes across different populations and using different research paradigms.

4.3 Research Limitations and Future Directions

This study has certain limitations. First, all participants came from kindergartens in the same region, limiting the external validity of the research findings. Future research should consider differences between urban and rural areas, as well as variations in culture, economy, and education levels when sampling. Second, this study adopted the classic remorse and forgiveness experimental paradigm, which still differs somewhat from children's real-life interaction contexts—for example, the transgressors in the experimental paradigm were adults. Future research should consider using paradigms with greater ecological validity. Finally, this study was limited to simulating bystander observation in kindergarten contexts and did not examine parents as a type of bystander. In qualitative interviews, some children mentioned reasons for forgiving others such as “Mom told me to share more” and “Mom said boys should be more magnanimous.” Future research should include parents as a type of bystander and further examine the moderating role of individual difference variables such as parenting styles and socioeconomic status in the bystander activation effect.

References

- Botto, S. V., & Rochat, P. (2018). Sensitivity to the evaluation of others emerges by 24 months. *Developmental Psychology*, 54(9), 1723–1734.
- Botto, S. V., & Rochat, P. (2019). Evaluative audience perception (EAP): How children come to care about reputation. *Child Development Perspectives*, 13(3), 180–186.

- Brooks, J. H., & Reddon, J. R. (2003). The two dimensional nature of remorse: An empirical inquiry into internal and external aspects. *Journal of Offender Rehabilitation*, 38(2), 1–15.
- Cigala, A., & Mori, A. (2022). Perspective taking ability in psychologically maltreated children: A protective factor in peer social adjustment. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.816514>
- Davis, J. R., & Gold, G. J. (2011). An examination of emotional empathy, attributions of stability, and the link between perceived remorse and forgiveness. *Personality and Individual Differences*, 50(3), 392–397.
- Deem, M. J., & Ramsey, G. (2016). Guilt by association? *Philosophical Psychology*, 29(4), 570–585.
- DiFonzo, N., Alongi, A., & Wiele, P. (2020). Apology, restitution, and forgiveness after psychological contract breach. *Journal of Business Ethics*, 161(1), 53–69.
- Domagała-Zyśk, E. (2006). The significance of adolescents' relationships with significant others and school failure. *School Psychology International*, 27(2), 232–247.
- Draper, K., Siegel, C., White, J., Solis, C. M., & Mishna, F. (2009). Preschoolers, parents, and teachers (PPT): A preventive intervention with an at risk population. *International Journal of Group Psychotherapy*, 59(2), 221–242.
- Engelmann, J. M., Herrmann, E., & Tomasello, M. (2012). Five-year olds, but not chimpanzees, attempt to manage their reputations. *PLOS ONE*, 7(10), Article e48433. <https://doi.org/10.1371/journal.pone.0048433>
- Engelmann, J. M., Over, H., Herrmann, E., & Tomasello, M. (2013). Young children care more about their reputation with ingroup members and potential reciprocators. *Developmental Science*, 16(6), 952–958.
- Enright, R. D. (1991). The moral development of forgiveness. In W. M. Kurtines & J. L. Gewirtz (Eds.), *Handbook of moral behavior and development*, Vol. 1. Theory; Vol. 2. Research; Vol. 3. Application (pp. 123–152). Lawrence Erlbaum Associates, Inc.
- Enright, R. D., Gassin, E. A., & Wu, C. R. (1992). Forgiveness: A developmental view. *Journal of Moral Education*, 21(2), 99–114.
- Fu, G., Heyman, G. D., Qian, M., Guo, T., & Lee, K. (2015). Young children with a positive reputation to maintain are less likely to cheat. *Developmental Science*, 19(2), 275–283.
- Groce, P., Rossano, F., & Tomasello, M. (2019). Preschoolers consider (absent) others when choosing a distribution procedure. *PLOS ONE*, 14(8), Article e0221186. <https://doi.org/10.1371/journal.pone.0221186>

- Günsoy, C., Cross, S. E., Uskul, A. K., Adams, G., & Gercek-Swing, B. (2015). Avoid or fight back? Cultural differences in responses to conflict and the role of collectivism, honor, and enemy perception. *Journal of Cross-Cultural Psychology*, 46(8), 1081–1102.
- Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2th ed. pp. 56–60). Sage publications.
- Hook, J. N., Worthington, E. L., Jr., & Utsey, S. O. (2009). Collectivism, forgiveness, and social harmony. *The Counseling Psychologist*, 37(6), 821–847.
- Izuma, K., Saito, D.N., Sadato, N. (2010). The roles of the medial prefrontal cortex and striatum in reputation processing. *Social Neuroscience*, 5(2), 133–47.
- Keltner, D., & Anderson, C. (2000). Saving face for darwin. *Current Directions in Psychological Science*, 9(6), 187–190.
- Leary, M. R., Landel, J. L., & Patton, K. M. (1996). The motivated expression of embarrassment following a self-presentational predicament. *Journal of Personality*, 64(3), 619–636.
- Li, J., Wang, W., Yu, J., & Zhu, L. (2016). Young children's development of fairness preference. *Frontiers in Psychology*, 7. <https://doi.org/10.3389/fpsyg.2016.01274>
- Louie, J. Y., Wang, S., Fung, J., & Lau, A. (2014). Children's emotional expressivity and teacher perceptions of social competence. *International Journal of Behavioral Development*, 39(6), 497–507.
- Ma, F., Zeng, D., Xu, F., Compton, B. J., & Heyman, G. D. (2020). Delay of gratification as reputation management. *Psychological Science*, 31(9), 1174–1182.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98(2), 224–253.
- Martínez-Lozano, V., Sánchez-Medina, J. A., & Goudena, P. P. (2011). A cross-cultural study of observed conflicts between young children. *Journal of Cross-Cultural Psychology*, 42(6), 895–907.
- McCullough, M. E., Pedersen, E. J., Tabak, B. A., & Carter, E. C. (2014). Conciliatory gestures promote forgiveness and reduce anger in humans. *Proceedings of the National Academy of Sciences*, 111(30), 11211–11216.
- Mills, T. M. (1953). Power relations in three-person groups. *American Sociological Review*, 18(4), 351–357.
- Nader-Grosbois, N., Houssa, M., & Mazzone, S. (2013). How could theory of mind contribute to the differentiation of social adjustment profiles of children with externalizing behavior disorders and children with intellectual disabilities? *Research in Developmental Disabilities*, 34(9), 2642–2660.

- Ohtsubo, Y., Matsunaga, M., Himichi, T., Suzuki, K., Shibata, E., Hori, R., ... Ohira, H. (2019). Costly group apology communicates a group's sincere "intention". *Social Neuroscience*, 15(2), 244–254.
- Ohtsubo, Y., Matsunaga, M., Tanaka, H., Suzuki, K., Kobayashi, F., Shibata, E., ... Ohira, H. (2018). Costly apologies communicate conciliatory intention: An fMRI study on forgiveness in response to costly apologies. *Evolution and Human Behavior*, 39(2), 249–256.
- Oostenbroek, J., & Vaish, A. (2018). The emergence of forgiveness in young children. *Child Development*, 90(6), 1969–1986.
- Richland, L. E., Chan, T.-K., Morrison, R. G., & Au, T. K.-F. (2010). Young children's analogical reasoning across cultures: Similarities and differences. *Journal of Experimental Child Psychology*, 105(1-2), 146–153.
- Rochat, P., Dias, M. D. G., Guo Liping, Broesch, T., Passos-Ferreira, C., Winning, A., & Berg, B. (2009). Fairness in distributive justice by 3- and 5-year-olds across seven cultures. *Journal of Cross-Cultural Psychology*, 40(3), 416–442.
- Shah, J. (2003). Automatic for the people: How representations of significant others implicitly affect goal pursuit. *Journal of Personality and Social Psychology*, 84(4), 661–681.
- Shinohara, A., Kanakogi, Y., Okumura, Y., & Kobayashi, T. (2022). Children manage their reputation by caring about gossip. *Social Development*, 31(2), 455–465.
- Tamis-LeMonda, C. S., Way, N., Hughes, D., Yoshikawa, H., Kalman, R. K., & Niwa, E. Y. (2008). Parents' goals for children: The dynamic coexistence of individualism and collectivism in cultures and individuals. *Social Development*, 17(1), 183–209.
- Tang, Y., Harris, P. L., Pons, F., Zou, H., Zhang, W., & Xu, Q. (2018). The understanding of emotion among young Chinese children. *International Journal of Behavioral Development*, 42(5), 512–517.
- Vaish, A., Carpenter, M., & Tomasello, M. (2011). Young children's responses to guilt displays. *Developmental Psychology*, 47(5), 1248–1262.
- Vaish, A., & Oostenbroek, J. (2021). Preferential forgiveness: The impact of group membership and remorse on preschoolers' forgiveness. *Journal of Experimental Psychology: General*, 151(5), 1132–1140.
- Vaish, A., & Savell, S. (2022). Young children value recipients who display gratitude. *Developmental Psychology*, 58(4), 680–692.
- Van Hoorn, J., Van Dijk, E., Güroğlu, B., & Crone, E. A. (2016). Neural correlates of prosocial peer influence on public goods game donations during adolescence. *Social Cognitive and Affective Neuroscience*, 11(6), 923–933.

- Vlachou, M., Andreou, E., Botsoglou, K., & Didaskalou, E. (2011). Bully/victim problems among preschool children: A review of current research evidence. *Educational Psychology Review*, 23(3), 329–358.
- Wang, X. N., Hao, Y., & Su, Y. J. (2019). Effect of competition and collaboration on preschoolers' resource distribution: The role of theory of mind and inhibitory control. *Psychological Development and Education*, 35(4), 385–392.
[王笑楠, 郝洋, 苏彦捷. (2019). 竞争和合作对学龄前儿童分配模式的影响: 心理理论和抑制控制的作用. 心理发展与教育, 35(4), 385–392.]
- Weiner, B. (1986). *An attributional theory of motivation and emotion*. New York: Springer.
- Wu, Z., Chen, X., Gros-Louis, J., & Su, Y. (2018). “She is looking at me! Shall I share?” How Chinese and American preschoolers respond to eye gaze during sharing. *Social Development*, 27(2), 447–460.
- Yau, J., Smetana, J. G., & Metzger, A. (2009). Young Chinese children's authority concepts. *Social Development*, 18(1), 210–229.
- Zajonc, R. B. (1965). Social facilitation. *Science*, 149(3681), 269–274.
- Zhang, Q. P., Liu, J. L., Huang, H., Li, J., & Kou, Y. (2012). Adolescents' prosocial intention in conflict situations: The effect of anticipated significant others' viewpoint. *Psychological Development and Education*, 28(4), 368–375.
[张庆鹏, 刘静丽, 黄慧, 黎洁, 寇彧. (2012). 冲突情境中青少年的亲社会意图: 预期重要他人观点的影响. 心理发展与教育, 28(4), 368–375.]
- Zhang, T., Sun, H., & Fu, A. Q. (2012). Forgiveness in collectivism culture and its enlightenment to forgiveness intervention. *Advances in Psychological Science*, 20(2), 265–273.
[张田, 孙卉, 傅安球. (2012). 集体主义背景下的宽恕研究及其对心理治疗的启示. 心理科学进展, 20(2), 265–273.]
- Zhang, W. X., Li, X., Chen, G. H., & Cao, Y. M. (2021). The relationship between positive parenting and adolescent prosocial behaviour: The mediating role of empathy and the moderating role of the oxytocin receptor gene. *Acta Psychologica Sinica*, 53(9), 976–991.
[张文新, 李曦, 陈光辉, 曹衍淼. (2021). 母亲积极教养与青少年亲社会行为: 共情的中介作用与 OXTR 基因的调节作用. 心理学报, 53(9), 976–991.]

The association between transgressor's remorse and victim's forgiveness among young children: The activation effect of bystanders

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Abstract

Humans are extremely social beings, and we attempt to repair our ruptured relationships when transgressions occur that damage interpersonal cooperation. The expression of guilt and remorse by the transgressor and the forgiveness by the victim are both vital to the repair process. To some extent, transgressors' remorse is the most prominent elicitor of victims' forgiveness. Previous studies have demonstrated that forgiveness emerges as early as 5 years old and that young children are capable of forgiving a remorseful transgressor even in the absence of an explicit apology. Given the emphasis on relationship harmony among Chinese people in a collectivistic culture, parenting and socialization might help children understand peers' remorse intentions and forgive them at a much earlier age. Furthermore, the high need for personal reputation and social image in peer interactions, which is called "face" (mianzi) by the Chinese, might lead to individuals' forgiveness decisions being influenced by bystanders who witness or participate in group interactions. Therefore, this study aimed to investigate whether 4- or 5-year-olds could have the capacity to infer an apology from displays of transgressors' remorse in order to reveal the influence of remorse on forgiveness and further explore the activation effect of different types of bystanders among the association between remorse and forgiveness.

Study 1 was a one-factor (expression of remorse: remorse vs. no remorse) within-subject design. Forty-nine children aged 4 to 5 years (27 girls) were investigated by a classic paradigm of remorse and forgiveness. The "tear picture" game was used to create conditions of expressing remorse and not expressing remorse. Then, children were asked ten questions designed to assess whether they understood the true intention of remorse. Finally, the resource distribution task was used to assess forgiveness behavior. In Study 2, a total of 139 4- to 5-year-old children (80 girls) were recruited to participate in a 2 (expressions of remorse: remorse vs. no remorse) $\times$ 4 (types of bystander: no bystander vs. teacher vs. good friend vs. stranger) mixed experimental design. The procedure used in Study 2 was identical to that used in Study 1.

The results showed that: In Study 1, both 4-year-old children and 5-year-old children truly understood the intention of the expression of remorse, and they were much more forgiving of a remorseful transgressor than of a transgressor who had not shown remorse. In Study 2, although children were still more forgiving of a remorseful transgressor than an unremorseful transgressor in the presence of bystanders, bystanders significantly increased the level of forgiveness shown toward unremorseful transgressor and reduced the level of forgiveness for remorseful transgressor. Specifically, for remorseful transgressor, child victims were more forgiving of a transgressor while in the presence of strangers than while in the presence of teachers or good friends; however, for unremorseful transgressor, child victims who were being observed by teachers or good friends showed more forgiveness behavior than did victims who were being observed by stranger bystanders. Furthermore, the results showed that young children were more likely to equally distribute flowers to remorseful and unremorseful transgressor in the presence of bystanders, especially teachers or good friends.

This study successfully revealed that young Chinese children could accurately understand the intention of transgressors' remorse and thus be willing to perform forgiveness behavior at age 4, which is exactly 1 year earlier than their counterparts in the Western sample. More importantly, we also present a new theoretical hypothesis, namely, the "bystander-activation effect of social expectations," to propose that the presence of bystanders activates individuals' socially desirable behaviors, such as "requite injury with kindness" and "egalitarianism," in the Chinese collectivist culture. Thus, it is easier to understand why bystander onlooking could increase the level of forgiveness for unremorseful transgressor and cause young victims to distribute flowers to remorseful and unremorseful transgressor equally. Furthermore, the greater the authoritative or intimate level of bystanders is, such as teachers or good friends, the stronger the activated social expectations are and the more socially desirable the engaged-in behaviors are. This study provides important enlightenment for understanding the association between remorse and forgiveness and for rethinking the cross-cultural differences in children's socialization.

Keywords: young children, remorse, forgiveness, bystander-activation effect, Chinese collectivism

Note: Figure translations are in progress. See original paper for figures.

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