

Relational versus instrumental pathways of apology: The roles of performative sincerity, strategic presentation, and trust restoration in behavioral outcomes of relationship Repair

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ABSTRACT

Apologies, as central components of relationship repair after interpersonal or organizational conflicts, are analyzable regarding their effectiveness based on the form and perceived apology intent. Thus, this study investigates how two contrasting forms of apology expression, i.e., performative sincerity (PS) and strategic presentation (SP), affect behavioral outcomes (BO) and to what degree these effects are mediated by trust restoration (TR). Adopting survey data and analyses through structural equation modeling (SEM), this study examines direct, indirect, and total effects of the proposed pathways. According to the results, PS exerts a significant indirect effect on BO through TR, whose mediation accounts for 72.5% of the total effect. In contrast, SP exerts a significant direct effect on BO, without significant mediation through TR. Additionally, the direct effect of PS on BO and the indirect effect of SP on BO via TR are non-significant. These findings offer empirical evidence for two distinct mechanisms of apology effectiveness. Explicitly speaking, PS operates a prompt of a relational-trust, spontaneity-oriented pathway, which can promote sustainable reconciliation through trust rebuilding. In contrast, SP functions as a trigger of an instrumental-behavioral, external-factor-driven pathway, which can drive immediate outcomes without substantial relational healing. This study contributes to theoretical differentiation between relational and instrumental logics of apology effectiveness and practical implications on the consistency between apology strategies and long-term goals of authentic relationship repair.

Keywords: *Apology effectiveness, behavioral outcomes of relationship repair, instrumental pathway, performative sincerity, relational pathway, strategic presentation, structural equation modeling, trust restoration.*

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Highlights of this paper

- There are two apology pathways: the relational, spontaneity-oriented pathway of apology (performative sincerity) and the instrumental, external-factors-driven pathway of apology (strategic presentation).
- Performative sincerity fosters sustainable trust-mediated reconciliation, while strategic presentation prompts immediate responses without the mediation of trust restoration.
- Authentic reconciliation requires trust restoration to bridge analogy, sincerity, and behavioral changes in conflict resolution.

1. INTRODUCTION

Interactions between interpersonal communication and educational contexts offer vital references for the interplay between affective states and behavioral outcomes (Mathes, 2024). As a study focusing on how affective factors influence human behaviors, psychology offers theoretical guidance on emotional facilitation (Gutiérrez-García, Fernández-Martín, Alguacil, & Calvo, 2025). Psychological research has investigated affective-state-related phenomena through neural-related or laboratory-based experiments, e.g., brainwave tracking or affective priming tasks (Fagioli et al., 2025), which paves the way for educational research that examines the dynamics of these affective states in situated learning and communicative experiences (Johansson & Herrebrøden, 2025).

Among various human beings' communicative behaviors, apologies are fundamental elements of repairing interpersonal trust and restoring fairness (Cowden, Worthington Jr, Joynt, & Jakins, 2018). Apart from the occurrence of making apologies, the recipients' perception of sincerity and relational value are essential factors in the effectiveness of apologies (Schumann, Ritchie, & Forest, 2023). While an alignment with recipients' psychological needs, i.e., empathy and genuine remorse, guarantees the effectiveness of apologies (Kirchner-Häusler et al., 2025) a mismatch with recipients' needs leads to perfunctory apologies that would reinforce emotional conflict rather than resolving the problem (Lahiri & Padmakumari, 2025).

Apology-related interpersonal repair is analyzable regarding two contrasting but complementary dimensions that affect individuals' behavioral outcomes of relationship repair. The first dimension is performative sincerity, reflecting genuine, intrinsic expressions of apologies that are consistent with the speakers' intentions and moral stance (Björkholm, 2025). The second dimension is strategic presentation, reflecting instrumental, extrinsic expressions of apologies that aim to manage impression, reduce penalties, or maintain superficial harmony (Yamamoto, Kimura, & Osaka, 2021). These two dimensions indicate intrinsic-consistency-oriented and external-benefit-oriented states, which reflect potential divergence of their consequences for behavioral outcomes.

In these two dimensions, trust restoration, i.e., a processual state that reflects how individuals interpret, accept, or resist the attempted repair (Husnu, Psaltis, Kirchner-Häusler, & Uskul, 2025), is the assumed mediator of the influence pathways. Regarding the first dimension, the influence of performative sincerity on behavioral outcomes is assumed to be mediated by trust restoration. The degree of restoration is associated with apology speakers' spontaneous willingness to pursue forgiveness, which further influences apology recipients' possibility of expressing forgiveness and continuing collaboration (Wu, Deng, & Bai, 2025). Regarding the second dimension, the impact of strategic presentation on behavioral outcomes is assumed to be mediated by trust restoration. Although possibly in a less sustainable manner, external elements serve as motivators that stimulate the willingness to restore harmony between apology speakers and apology recipients, thereby further affecting relationship repair (Baumann, 2021).

The analysis of apology-related dimensions is worth conducting to bridge the gap between psychological reductionism and educational communicative dynamics, particularly in communicative contexts involving apology-related factors. Much of the psychological research treats apology effectiveness as a phenomenon of affective regulation or cognitive-emotional appraisal, which is often validated through brainwave monitoring or controlled

laboratory experiments (Fagioli et al., 2025). Although these approaches offer intra-individual data, they are still extensible regarding their capability to capture the interpersonal, educational, and communicative processes that shape the reception and evaluation of apologies (Tovstohan et al., 2022). Besides, these approaches mainly focus on reducing interpersonal interplays to physiological correlates (Boukarras et al., 2025) whose results show contributions to psychological and physiological studies and are still extensible into the communicative dimensions of negotiating or repairing social relationships (Johansson & Herrebrøden, 2025). In contrast, educational research emphasizes how individuals construct meaning, negotiate values, and engage in the target act, relationship repair in this case, across real communicative contexts (Kolikant & Wegerif, 2025). This contrast between psychological and educational research elicits an underexplored area that integrates the contrastive dimensions of apology expression based on the mediation of trust restoration to explain behavioral outcomes of relationship repair.

That gap reflects the research purpose of summarizing and integrating a model of how interpersonal repair functions in education-related communicative contexts. In contrast to psychological techniques like electroencephalogram (EEG) used to measure affective responses, neural activations, or stress reactions, this study empirically tests the mediating role of trust across the dimensions of performative sincerity and strategic presentation. Since psychology provides theoretical support for the association between affective states and behaviors (Gutiérrez-García et al., 2025) this study extends laboratory-based experiments into educational perspectives to highlight how apology-related states shape individuals' behavioral outcomes.

Corresponding with the research purpose, this study attempts to answer the following research question: how do different forms of apology expression (performative sincerity versus strategic presentation) affect behavioral outcomes of relationship repair, and to what degree does trust restoration mediate these effects? This research question paves an academic path for understanding how affective restoration influences individuals' behaviors beyond the experimental tools and neurophysiological measures, while emphasizing communicative practices as a lived, observable phenomenon of learning. These points can enrich theoretical accounts and identify practical strategies for educators and learners to cultivate resilience when confronted with relational disruptions.

2. LITERATURE REVIEW

This section presents a literature review of the involved concepts that form the influence pathways, offering a theoretical foundation for hypotheses.

2.1. Conceptual Foundations of the Apology-Related Dimensions

Reflecting a spontaneous starter of apology, performative sincerity refers to the degree to which an apology is authentic in its emotional grounding and consistent with internal states (Cimpeanu, Pereira, & Han, 2025). According to philosophical analyses of speech acts, genuine regret is the essential component of a successful apology that realizes its illocutionary purpose of expressing sadness, providing comfort, and offering compensation (Parker, 2022). Notably, when individuals regard expressions of apologies as acts of performing remorse in a ritualized manner, these apologies reveal manipulative characteristics and undermine moral speech (Sutherland, 2024). Empirically speaking, the effectiveness of trust repair is higher for apologies featuring genuine affect and imposed sacrifice than for superficial or symbolic apologies (Kotanko & Winchester, 2025). Apology speakers' demonstration of personal cost enables apology recipients' interpretations of the apology as congruent with genuine intentions, which can enhance restorative outcomes (Leunissen, Schumann, & Sedikides, 2021).

In contrast to performative sincerity driven by spontaneity, strategic presentation refers to the extent to which an apology is offered for instrumental purposes, e.g., to mitigate consequences, preserve face, or manage impressions,

rather than the purpose of expressing true contrition (Navera & Gustilo, 2022). This presentation of apologies is deliberate and externally driven rather than affectively spontaneous (Kotanko & Winchester, 2025). Strategic presentation of apologies includes vague language, conditionality, or context-dependent justifications that detract from the acceptance of responsibility. Empirically speaking, spontaneous expressions reveal stronger restorative effects than strategic expressions, especially in scenarios involving severe violations (Zloteanu, Krumhuber, & Richardson, 2021). Since this kind of apology may fail to meet apology-recipients' recovery needs fully (Yamamoto et al., 2021), despite their potentially instant effectiveness based on social expedience, strategic apologies may cause skepticism or unsustainable trust repair (Lahiri & Padmakumari, 2025).

As the assumed mediator, trust restoration refers to the affective process of partially or fully rebuilding trust once it has been violated (Husnu et al., 2025). Although trust is the foundation of collaboration and emotional safety, trust is still subject to discrepancies between individuals' expectations and behavioral performances (Bernards, Schmidt, & Groeneveld, 2024). When a violation of trust occurs, an apology functions as a trust-repair mechanism, and perceived trustworthiness can mediate the relationship between apology and trust (Caddell & Nilchiani, 2023). Trust restoration helps translate apologies into restored perception and reinvestment behavior (Kim & Song, 2021).

Behavioral outcomes of relationship repair refer to the readiness or intent to resume collaboration and restore relational functioning (Collier & Wayment, 2018). Trust restoration is associated with individuals' volitional behaviors of cooperating, reconciling, and continuing reciprocal interactions (Haynes & Yoder, 2024). Trust repair prompts cooperative behaviors and decreases the risk of future conflict or disharmony (Krellner & Han, 2021). Perception of increased relational effort and reduced antagonistic behavior, either from admitting internal remorse or based on social strategies, facilitates behaviors of forgiveness that enhance relational satisfaction and contribute to conflict reduction (Cowden et al., 2018). Therefore, spontaneity-driven performative sincerity and external-context-oriented strategic presentation are assumed to influence behavioral outcomes of relationship repair in terms of affecting the re-establishment of trust damaged by conflict or wrongdoing.

2.2. Indirect Effect of Performative Sincerity on Behavioral Outcomes Through Trust Restoration

Performative sincerity functions as a communicative act and a signal of relational commitment (Goltz & Zingsheim, 2023). Sincere apologies enhance apology recipients' perceptions of trustworthiness, a critical premise of rebuilding relational bonds (Caddell & Nilchiani, 2023) and promote judgments of trustworthiness, which can guarantee actual trusting behaviors, e.g., cooperation or willingness to collaborate (Kirchner-Häusler et al., 2025). Perceived sincerity of apology positively influences behaviors of interpersonal forgiveness and future cooperation, with trust restoration functioning as an emotional fulcrum to enable the repair (Schumann et al., 2023). These statements reflect the mediating role of perceived trustworthiness in the effect of apology on restored trust behavior..

Philosophical and ethical research emphasizes that genuine remorse should reveal internal alignment with apology speakers' spontaneous intention rather than external compliance (Björkholm, 2025). A loss of authenticity caused by such insufficient alignment leads to apology recipients' perceptions of the apology as performative rituals devoid of moral content (Iwai, de França Carvalho, & Islam, 2023). Cues like sacrifice or emotional depth are reflections of genuine remorse that encourage apology recipients to restore trust and then influence their behavioral outcomes (Mathes, 2024). Thus, sincerity in expressing the apology operates indirectly on apology-recipients' behavioral intentions of repairing the relationship and continuing collaborations. This indirect relationship between performative sincerity and behavioral outcomes is consistent with the influence pathway from apology to trusting behavior through perceived trustworthiness (Capiola et al., 2025). Delivery of apologies in written or verbal format that enhances perceptions of sincerity can recover trust based on the mediating effect of trustworthiness (Kirchner-

Häusler et al., 2025). In other words, trust restoration is an essential factor in bridging the effects of sincere apologies on behavioral outcomes.

The previous theoretical foundations elicit the following hypothesis.

Hypothesis 1 (H₁): Performative sincerity exerts a significant indirect effect on behavioral outcomes to repair the relationship through trust restoration, with a non-significant direct effect on behavioral outcomes.

This hypothesis presents the relevance to psychology and education-related contexts. Firstly, this hypothesis mirrors the ideals of psychology: to understand emotional authenticity in theory and to emphasize the application in everyday conflict resolution (Gutiérrez-García et al., 2025). Besides, subsequent empirical analyses elicited by this hypothesis reflect subtle critiques about the tendency toward reductionism. Although emotional constructs can be understood theoretically through physiological measures (Boukarras et al., 2025), they are not necessarily enacted or sufficiently integrated into applied circumstances, such as labs or interpersonal engagement (Tovstohan et al., 2022). Additionally, the pathway of this hypothesis resonates with education-related frameworks that emphasize the effectiveness of authentic spontaneous quality, e.g., intrinsic motivation in prompting deeper engagement and cooperation, which can be mediated by internal perceptions of self-esteem or self-confidence related to trust (Johansson & Herrebrøden, 2025). A genuine apology is analogous to intrinsic motivation because of its preference for spontaneous volition to influence cooperative behaviors through trust-related qualities (Wu et al., 2025). This analogy contributes to the integration of psychological apology and communicative/relational outcomes, paving the way for cross-disciplinary synergy.

2.3. Direct Effect of Performative Sincerity on Behavioral Outcomes

While performative sincerity concentrates on authentic emotional expression, strategic presentation focuses on apologies inspired by instrumental or self-interested concerns, e.g., avoiding punishment, preserving face, or repairing reputation (Hart, Lambert, Wahlers, & Castagna, 2024). This instrumental orientation reflects impression management through deliberate efforts to shape others' perceptions of themselves (Zhang & Ma, 2025). Thus, unlike spontaneous expressions of remorse, social-strategies-driven presentations are calculated or conditional apologies (Yeo & Zhuo, 2024). Despite partial compliance with social expectations, strategic apologies may fail to address the apology recipients' emotional and relational needs (Schumann et al., 2023).

Experimental research demonstrates that individuals often rate strategic presentation, especially when paired with minimal repairing action, as less trustworthy than sincere presentations of apologies (Doan, Denison, & Friedman, 2025). Although strategic apologies show limited capacity to stimulate perceptions of trust, their effects on behavioral consequences are still not negligible. Reflection of pragmatic considerations from strategic apologies fosters partial restoration of cooperative behaviors (Rieger, 2017). In other words, unlike the performative sincerity pathway involving trust restoration as a mediator, strategic presentation of analogies shows the potential to directly influence behavioral outcomes and does not necessarily depend on mediation. Since strategic presentations of apologies mute the enhancement of trust, (Yang, 2024), apology recipients may interpret these apologies as a means of instrumental impression management, which reduces their willingness to internalize the apologies as a genuine intention to change and reconcile (Allan et al., 2021). While trust restoration may partially explain behavioral outcomes, the direct pragmatic benefits of strategic apologies often circumvent deep affective reconciliation (Rieger, 2017).

Strategic presentation is assumed to affect behavioral outcomes directly. In the rational aspect, apology recipients may accept a strategic apology and decide to re-establish a relationship because of instrumental benefits brought about by continuing collaboration (Roschk & Kaiser, 2013). Besides, when collaboration is necessary for task

accomplishment, strategic apologies operate more as a social lubricant that enables pragmatic continuation than as a mechanism for relationship repair, which reflects the utility of these apologies in facilitating smooth interaction (Yang, 2024). Additionally, despite a lack of emotional reconciliation, externally driven strategic apologies may contribute to equivalent behavioral compliance as a spontaneity-oriented sincere apology (Baumann, 2021). Strategic arrangements are associated with behavioral effects (Rieger, 2017), further reflecting the assumption of the direct effect of strategic presentation on behavioral outcomes.

The previous theoretical foundations elicit the following hypothesis.

Hypothesis 2 (H₂): Strategic presentation exerts a significant direct effect on behavioral outcomes aimed at repairing the relationship through trust restoration, with a non-significant indirect effect through trust restoration.

This hypothesis presents the relevance to the psychological framework and applied settings. From the perspective of the psychological framework, the contrast between H1 and H2 is analogous to the contrast between intrinsic and extrinsic orientations (Björkholm, 2025). Performative sincerity functions through internal alignment and affective mediations (Wu et al., 2025), whereas strategic presentation operates through external compliance and pragmatic considerations (Baumann, 2021). This contrast emphasizes the complexity of repairing human relationships. Cooperation may emerge from genuine affective change or socially strategic navigation (Kolikant & Wegerif, 2025). Psychology per se often emphasizes spontaneity and emotional processing, while practitioners of psychology may often adopt strategic, image-protective behaviors (Fagioli et al., 2025). From the perspective of applied settings, the pathway proposed by H2 implies that, in communicative contexts such as university laboratories, classrooms, and workplace teams, strategic apologies emphasize commitment to social norms rather than affective reconciliation (Johansson & Herrebrøden, 2025). This pathway reflects the distinction between surface compliance, e.g., studying for grades or avoidance of conflict, and deep engagement, e.g., genuine perception of regret or learning for personal growth.

3. METHODOLOGY

This section describes the methodological designs of participants, instruments, procedures, and analytical approaches.

3.1. Research Participants

The participants are 100 students (55 females and 45 males) from university institutions. Their average age is 23.210, with a standard deviation (SD) of 0.409. Eligibility criteria are as follows. Firstly, participants are currently enrolled in a university program. Secondly, this study requires the absence of diagnosed psychiatric or neurological conditions that might confound affective responses to interpersonal scenarios. Thirdly, prior exposure to advanced conflict-resolution training is an excluded factor to avoid biasing interpretive outcomes.

Considering the ethical issues, all participants voluntarily consent to participate in the survey, with awareness of the research aim and procedure in advance. As a reward for participants, they will receive non-monetary items, e.g., stationery. The survey has only recorded information necessary for analyses, i.e., gender, age, and questionnaire ratings (see Digital Supplementary Material). No excessive personal information is included in the collected data.

3.2. Research Instruments and Procedures

This study employs a questionnaire survey involving the factors of performative sincerity (PS), strategic presentation (SP), trust restoration (TR), and behavioral outcomes (BO), whose questionnaire item(s) are adapted from the studies of Lewicki and Polin (2012); Kim, Ferrin, Cooper, and Dirks (2004); Lewicki, Polin, and Lount Jr

(2016) and Bottom, Gibson, Daniels, and Murnighan (2002) respectively (see Digital Appendix). PS, SP, and TR are each measured by six self-rating items (PS1-PS6, SP1-SP6, and TR1-TR6) on a 5-Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). BO is measured by one self-rating item in a range of [0, 100].

The questionnaire is based on a scenario that simulates a real-world interpersonal conflict and apology-inducing situation in a laboratory context. To evoke participants' authentic affective responses, the presentation of the story is in direct speech narration, which enables participants to engage with the event and encourages their reliable reflections on their emotional states. The story, unfolding as follows, is presented to each participant before the questionnaire items.

You are sitting in a laboratory lounge, waiting for your friend to finish the friend's experiment. Suddenly, you hear a voice rising inside the laboratory. The reason for this raised voice is that another student called "Student A" and your friend are arguing about the arrangement of using the laboratory machines. After a few minutes, their argument ends, and Student A storms out of the laboratory. Student A notices that you are sitting in the lounge, and, with visible frustration, turns to you and shouts: "You should not even be here!" You feel shocked because you are not involved in the quarrel at all.

A few minutes later, Student A comes back to the lounge. Looking uneasy, Student A says: "I am sorry about what I said earlier. I shouldn't have shouted at you. Please don't take it personally." You hear Student A's words, but you wonder whether Student A really means it. Is this apology sincere, or is Student A just trying to save face in front of others?

Having noticed the conflict, other students in the laboratory offer you snacks and drinks to calm you down. Eventually, the atmosphere softens. However, you still have to decide: do you accept Student A's apology? Do you feel you can trust Student A again?

And how would you behave towards Student A after this experience?

Based on the previous scenario, the participants rated the questionnaire items according to the degree to which they agree with the statements of the questionnaire items. Their ratings are collected for subsequent statistical analyses.

3.3. Conceptual Model and Statistical Approach

The literature review elicits the research hypotheses that indicate the corresponding conceptual relationships. H1 emphasizes the indirect influence of performative sincerity (PS) on behavioral outcomes (BO) through trust restoration (TR), while H2 stresses the direct effect of strategic presentation (SP) on behavioral outcomes (BO). Corresponding with considerations of potential mediation for each pathway, the conceptual framework includes the hypothesized mediating effect of PS and SP on BO through TR, with each influence path coded (see Figure 1). According to the conceptual framework, PS and SP are the exogenous factors, BO is the endogenous factor, and TR is the mediator.

Since this conceptual framework involves latent variables that cannot be directly observed or measured (PS, SP, and TR in this case), this study employs structural equation modeling (SEM) as the statistical approach to analyzing the relationships among the latent variables (Wang, Hefetz, & Liberman, 2017). Explicitly speaking, SEM, based on investigating multivariable statistical analysis, aims to investigate potentially multiple and complex relationships among the observed and/or latent variables under a hypothesized theoretical model (Schumacker & Lomax, 2010).

Mplus 8 is the computer platform used to examine the estimate and significance of mediation through the bias-corrected confidence interval based on a bootstrap method (5000 bootstrapped samples for each effect) (Schumacker & Lomax, 2010).

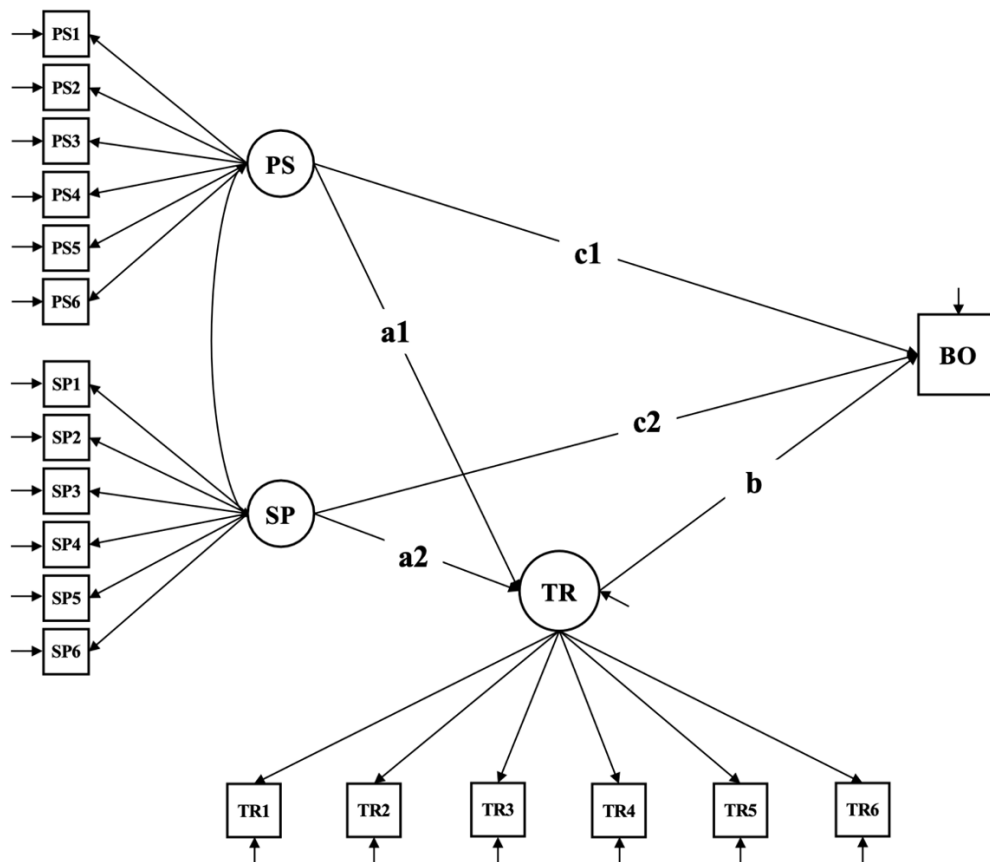


Figure 1. Conceptual framework of the proposed pathways.

Note: PS: Performative sincerity, SP: Strategic presentation, TR: Trust restoration, BO: Behavioral outcomes.

4. RESULTS

This section reports the statistical results used to test the hypotheses.

4.1. Premises of Data Analysis

SEM analyses require several premises to guarantee the robustness and persuasiveness of the results. Regarding the premise of descriptive statistics, since all latent variables (PS, SP, and TR) and the observable variable (BO) present skewness and kurtosis values between -1 and 1, all variables reveal a normal distribution. Normally distributed data meet the demand of the first premise of descriptive statistics.

As the second premise, reliability includes item reliability, i.e., an index indicating the internal consistency at the level of individual items, and composite reliability, i.e., an index indicating the internal consistency for the focal latent variable (Bagozzi & Yi, 1988). Since all estimates of standardized factor loading (SFL) are statistically significant because of significance (sig.) levels less than 0.001 based on SFL divided by standard error (SE) (Schumacker & Lomax, 2010), it is rational to calculate the squared multiple correlations (SMC) as item reliability (see Table 1). Squared multiple correlations (SMC, the squared value of SFL, scaled from 0 to 1), ranging from 0.543 to 0.760 (see Table 1), indicate how well the observed variables serve as measures of the latent variables (Schumacker & Lomax, 2010), meeting the demand for item reliability. Additionally, the constructs PS, SP, and TR indicate acceptable

composite reliability due to the values > 0.600, specifically 0.934, 0.897, and 0.920, respectively (Bagozzi & Yi, 1988) (see Table 1). Thus far, the data have met the demand of the second premise of reliability.

Table 1. Item reliability and composite reliability for the latent variables.

Dimension	Item	Significance test parameters				Item reliability		Composite reliability
		SFL	SE	SFL/SE	Two-tailed sig.	SMC		
Performative sincerity (PS)	PS1	0.848	0.030	27.978	***	0.719		0.934
	PS2	0.813	0.044	18.331	***	0.661		
	PS3	0.816	0.033	24.647	***	0.666		
	PS4	0.859	0.028	30.221	***	0.738		
	PS5	0.872	0.026	33.506	***	0.760		
	PS6	0.819	0.034	23.926	***	0.671		
Strategic presentation (SP)	SP1	0.764	0.048	15.946	***	0.584		0.897
	SP2	0.774	0.040	19.424	***	0.599		
	SP3	0.745	0.047	15.780	***	0.555		
	SP4	0.757	0.048	15.804	***	0.573		
	SP5	0.842	0.043	19.591	***	0.709		
	SP6	0.737	0.069	10.614	***	0.543		
Trust restoration (TR)	TR1	0.799	0.042	19.201	***	0.638		0.920
	TR2	0.756	0.042	18.105	***	0.572		
	TR3	0.826	0.038	21.520	***	0.682		
	TR4	0.828	0.034	24.690	***	0.686		
	TR5	0.830	0.037	22.235	***	0.689		
	TR6	0.823	0.032	26.012	***	0.677		

Note: SFL: Standardized factor loading. SE: Standard error. SMC: Squared multiple correlations. sig.: Significance level. *** indicates that the significance level is less than 0.001.

As the third premise, validity includes convergent and discriminant validity for the latent variables (Bagozzi & Yi, 1988; Fornell & Larcker, 1981). The average variance extracted (AVE), which measures the amount of variance captured by the construct relative to the variance due to measurement error, reflects convergent validity (Fornell & Larcker, 1981). The constructs PS, SP, and TR present adequate convergent validity because of AVEs > 0.500 of 0.702, 0.594, and 0.657, respectively (Bagozzi & Yi, 1988; Fornell & Larcker, 1981) (see Table 2). Additionally, AVEs are the source figures used to identify discriminant validity in the matrix, which consists of the square root of AVE (the bold figures in Table 2) on the diagonal and the correlations between the constructs (the italic figures in Table 2) off the diagonal. Since the square roots of AVEs are greater than the correlations in the corresponding rows and columns, the data indicate adequate discriminant validity among PS, SP, and TR (Fornell & Larcker, 1981). Thus far, the data have met the demand of the third premise of validity.

Table 2. Convergent validity and discriminant validity for the variables.

Dimension	Convergent validity		Discriminant validity		
	AVE	PS	SP	TR	BO
PS	0.702	0.838			
SP	0.594	<i>0.402</i>	0.771		
TR	0.657	<i>0.635</i>	<i>0.370</i>	0.811	
BO	-	<i>0.553</i>	<i>0.528</i>	<i>0.688</i>	-

Note: PS: Performative sincerity. SP: Strategic presentation. TR: Trust restoration. AVE: average variance extracted. The bold figures on the diagonal are the square roots of AVE, and the italic figures off the diagonal are the Pearson correlation coefficients.

4.2. Model Explanation

The first focus is on the model fit indexes. Since the chi-square divided by degrees of freedom ($\chi^2/\text{d.f.}$) of this SEM model presents a non-significant level of 0.119, which is greater than 0.050 (see Table 3), this model initially presents a good model fit (Wang et al., 2017). Besides, the other statistics meet the threshold values, i.e., root mean

square error of approximation (RMSEA) < 0.080 of 0.037 with a 90% confidence interval (CI) of [0.000, 0.062], standardized root mean-square residual (SRMR) < 0.080 of 0.041, comparative fit index (CFI) > 0.900 of 0.984, and Tucker-Lewis index (TLI) > 0.900 of 0.982 (see Table 3), this model indicates a confirmed good model fit (Wang et al., 2017).

Based on the model fit indexes, the second focus is the estimates of the pathways (see Table 3). Regarding the direct effect pathways, the statistical results demonstrate that all the coded pathways are statistically significant (sig. < 0.050) except pathways a2 (sig. = 0.193 > 0.050) and c1 (sig. = 0.324 > 0.050). Explicitly speaking, the direct pathway from SP to TR (a2) reflects non-significant mediation of TR in the effects of SP on TR, which confirms potential direct influences of SP on TR (see Figure 2). In contrast, the non-significant direct pathway from PS to BO (c1) reveals non-significant direct influences of PS on BO, which confirms the potential mediation of TR in the effects of PS on BO (see Figure 2).

Table 3. Path coefficients of the structural equation modeling pathways.

Pathway		Estimate	SE	Est./S.E	Two-tailed sig.	Standardized bias-corrected 95% CI	
						Lower	Upper
Direct effect							
a1	PS→TR	0.580	0.094	6.154	< 0.001	0.383	0.752
a2	SP→TR	0.137	0.105	1.302	0.193	-0.076	0.336
b	TR→BO	0.508	0.113	4.492	< 0.001	0.263	0.711
c1	PS→BO	0.112	0.114	0.985	0.324	-0.096	0.345
c2	SP→BO	0.295	0.092	3.187	0.001	0.111	0.475
Indirect effect							
ind1	PS→BO	0.295	0.078	3.796	< 0.001	0.166	0.477
ind2	SP→BO	0.070	0.057	1.223	0.221	-0.031	0.199
Total effect							
a1	PS→TR	0.580	0.094	6.154	< 0.001	0.383	0.752
a2	SP→TR	0.137	0.105	1.302	0.193	-0.076	0.336
b	TR→BO	0.508	0.113	4.492	< 0.001	0.263	0.711
total1	PS→BO	0.407	0.097	4.202	< 0.001	0.212	0.595
total2	SP→BO	0.364	0.095	3.829	< 0.001	0.167	0.544
Model fit indices	$\chi^2/\text{df} = 167.467/147 = 1.139$ (sig. = 0.119); RMSEA = 0.037 (90% CI: [0.000, 0.062]); SRMR = 0.041; CFI = 0.984; TLI = 0.982.						

Note: Est.: Estimate. CI: confidence interval. sig.: Significance level.

PS: Performative sincerity. SP: Strategic presentation. TR: Trust restoration. AVE: Average variance extracted.

df: degree of freedom. RMSEA: Root mean square error of approximation. SRMR: Standardized root mean-square residual. CFI: Comparative fit index.

TLI: Tucker-Lewis index.

Regarding the indirect effects, the indirect pathway from PS to BO through TR (ind1) presents a significant estimate (Est.) of 0.295 (sig. < 0.001), which confirms that TR significantly mediates the effect of PS on BO. By contrast, the indirect pathway from SP to BO (ind2) presents a non-significant estimate (Est.) of 0.070 (sig. = 0.221 > 0.050), which confirms that TR exerts a non-significant mediating effect in the influence of PS on BO.

Regarding the total effects, the two pathways (total1 and total2) demonstrate significant estimates of 0.407 ($p < 0.001$) and 0.364 ($p < 0.001$), respectively. Since pathway ind1 indicates a significant mediation effect of TR in the influence of PS on BO, the mediation power of TR in this pathway is $0.295/0.407 = 72.5\%$. In other words, mediator E accounts for 72.5% of the total effects of PS on BO. In contrast, the significant total-effect pathway total2, accompanied by the significant direct path c2 and non-significant indirect path ind2, indicates that SP has a significant effect in directly affecting BO rather than indirectly influencing BO through TR.

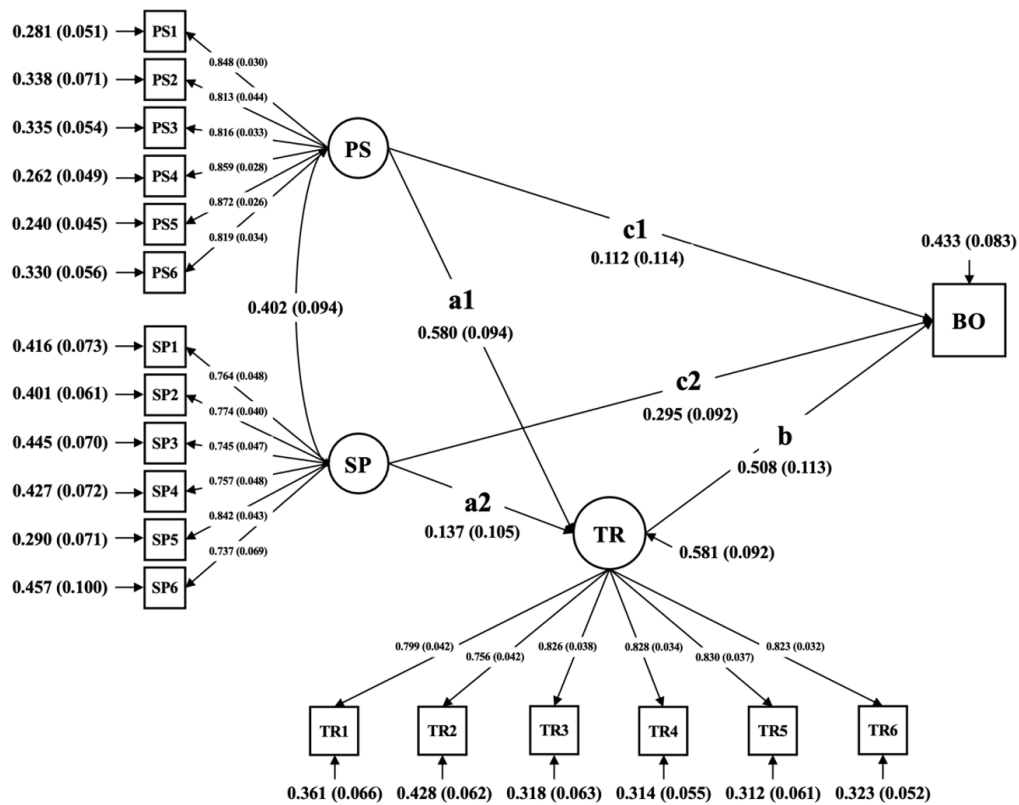


Figure 2. Structural model of the proposed pathways.

Note: PS: Performative sincerity, SP: Strategic presentation, TR: Trust restoration, BO: Behavioral outcomes.

4.3. Hypothesis-Testing

The non-significant pathway c1 (Est. = 0.112, sig. = 0.324 > 0.050) and the significant pathway ind1 (Est. = 0.295, sig. < 0.001) demonstrate statistically significant mediation of TR in the effect of PS on BO. In this case, TR accounts for 72.5% (= 0.295/0.407) of the total effects of PS on BO. These statements offer evidence of the significant mediating effect of trust restoration on the pathway from sincerity to behavioral outcomes, supporting the acceptance of H1.

The significant pathway c2 (Est. = 0.295, sig. = 0.001 < 0.050) and non-significant pathway ind2 (Est. = 0.070, sig. = 0.221 > 0.050) demonstrate insignificant mediation of TR in the effects of SP on BO. Additionally, the pathway total2 from SP to BO indicates a statistically significant estimate of 0.364 (Sig. < 0.001). These statements provide evidence of a significant direct effect of performative sincerity on behavioral outcomes and a non-significant mediation of trust restoration, supporting the acceptance of H2.

5. DISCUSSION

This section discusses the significance of the results based on their consistency, implications, and extensions.

5.1. Trust-Mediated Pathway from Performative Sincerity to Behavioral Outcomes

The results offer robust support for H1 that posits the mediation of trust restoration in the influence of performative sincerity on behavioral outcomes. A non-significant direct pathway from performative sincerity to behavioral outcomes suggests that performative sincerity has limited power to impact apology-recipients' behaviors related to relationship repair immediately. In contrast, a significant indirect pathway through trust restoration reflects that the main power of performative sincerity is its ability to establish a relational foundation of trust and subsequently prompt reconciliatory behavioral outcomes.

Regarding the significance of the results, these findings are consistent with the notion that apology authenticity depends on the compromise of trust repair (Björkholm, 2025; Cimpeanu et al., 2025; Kotanko & Winchester, 2025). Since the fulfillment of sincerity is not achievable through the apology per se, performative sincerity functions as a communicative signal of credible restorative desires to facilitate reconciliatory behaviors, e.g., forgiveness, cooperation, and willingness to engage with further interactions (Cowden et al., 2018; Wu et al., 2025). The statistical significance of the mediation effect of trust restoration is also consistent with the finding that sincerity, when not inducing trust restoration, does not contribute to observable behavioral changes (Haynes & Yoder, 2024; Kirchner-Häusler et al., 2025).

The implications of these results are explainable from the theoretical and practical perspectives. In the theoretical aspect, these results confirm the framework of relational repair and post-conflict interactions (Caddell & Nilchiani, 2023; Collier & Wayment, 2018). Affective processes involved in restoring trust are necessary bridging factors between apology speakers' intentions (performative sincerity) and apology recipients' performative feedback (behavioral outcomes) (Baumann, 2021; Capiola et al., 2025). These bridging roles reflect that sincerity at a psychological-relational level can activate cognitive reassessments (e.g., an apology-recipient's perception that he/she can give the apology-speaker another chance to compensate for the mistake) and affective regulation (e.g., a decrease in resentment), which paves the path for behavioral modifications and adjustments (Mathes, 2024). In the practical aspect, these results indicate the inefficiency of presenting sincerity in a vacuum in relationship repair (Iwai et al., 2023). Communicative acts of sincerity should reflect the explicit orientation toward trust repair that triggers cooperative or constructive responses (Goltz & Zingsheim, 2023; Husnu et al., 2025; Krellner & Han, 2021). Trust-sensitive sincerity presentations enable individuals to learn how to frame sincerity through the visual reconstruction of trust, reflecting the synergistic relationship between apology sincerity and trust restoration for constructive feedback or performances (Kim & Song, 2021; Leunissen et al., 2021).

These results are extensible in terms of cross-contextual differences. The approaches to interpreting sincerity and restoring results bring about contextual differences (Gutiérrez-García et al., 2025). For instance, while implicit apology sincerity is sufficient in highly contextualized situations, explicit and structured presentations of apology are necessary in low-context circumstances (Johansson & Herrebrøden, 2025). The mediating influence of trust restoration might vary across diverse institutional contexts, suggesting that different settings stimulate distinct degrees and perceptions of sincerity to influence behavioral changes through trust restoration (Tovstohan et al., 2022).

Overall, the acceptance of H1 strengthens the role of performative sincerity as a trigger of the trust-mediated pathway toward positive behavioral outcomes. The significance of the results lies in confirming that the effectiveness of apology sincerity depends on its facilitating effect on trust repair as a mechanism to translate intention into action.

5.2. Direct-Effect Pathway from Strategic Presentation to Behavioral Outcomes

The results also provide statistical support for H2, which emphasizes the direct effect of strategic presentation on behavioral outcomes. Although the mediation of trust restoration is non-significant in the indirect pathway from strategic presentation to behavioral outcomes, the direct pathway from strategic presentation to behavioral outcomes exhibits a significant coefficient. These findings suggest that strategic presentation influences behavioral outcomes primarily through direct mechanisms rather than via the mediation of trust restoration.

Regarding the significance of the results, these findings extend and nuance prior research on strategic communications. Strategic presentation through denial, justification, or image management can relieve negative impressions but does not necessarily restore trust (Allan et al., 2021; Yang, 2024). Strategic presentation of apology

is effective in facilitating behavioral compliance or pragmatic cooperation but not necessarily conducive to deeper repair or trust (Doan et al., 2025). Although strategic presentations of analogy may persuade apology-recipients to make different acts, e.g., to resume communication, to avoid penalty, or to give a second chance, these recipients may not truly gain trust but consider rational calculations, including face-saving or impression management (Yeo & Zhuo, 2024).

At the theoretical level of result implications, in contrast to apology sincerity, which functions primarily through trust repair, strategic presentation of apologies operates through instrumental rationality or superficial impression management cues (Yamamoto et al., 2021; Zhang & Ma, 2025). That statement indicates a dual-process pathway in post-conflict dynamics: performative sincerity for relational healing (Parker, 2022; Schumann et al., 2023) and strategic presentation for externally oriented control (Hart et al., 2024; Navera & Gustilo, 2022; Roschk & Kaiser, 2013). At the practical level of result implications, strategic performance reflects the potential in producing immediate compliance and prompting instant behavioral changes, without gradual trust restoration (Lahiri & Padmakumari, 2025). This potential is useful in high-pressure conditions that require immediate behavioral alignment. Besides, non-significant mediation through trust restoration implies that behavioral changes stimulated by strategic presentation lead to limited durability of repaired relationships subject to apology-recipients' skepticism or resentment (Rieger, 2017).

The results are extensible into the debate on the sustainability of relational repair. Although strategic presentation may show efficiency in the short term, individuals still potentially perceive that apology presentation as manipulative or insincere output, especially when discrepancies become visible between words and actions (Bernards et al., 2024; Sutherland, 2024; Zloteanu et al., 2021). The distinction in efficiency in achieving authentic reconciliation between strategic presentation and performative sincerity reflects the difference between transactional outcomes, i.e., behavioral changes without trust restoration, and transformational outcomes, i.e., sustainable cooperative behaviors based on trust restoration, in real-life communications (Kolikant & Wegerif, 2025).

Overall, the acceptance of H2 confirms the role of strategic presentation as a direct cause of behavioral outcomes, despite the restricted sustainability of reconciliation. The results enrich theoretical models by distinguishing between relation-oriented (trust-restoration-mediated) and external-factors-oriented (direct-effect) pathways of relationship repair. Practically, the results also reflect that strategic presentation of apologies may deliver instant behavior changes but show insufficient trust restoration based on limited depth, resilience, and authenticity.

6. CONCLUSION

This section summarizes the major findings and limitations for future research insights.

6.1. Major Findings

This study investigates the influence pathways of different apology forms: performative sincerity (PS) and strategic presentation (SP), regarding how these apology forms affect behavioral outcomes (BO) of relationship repair and how these effects are mediated by trust restoration (TR). The findings to test the research hypotheses offer a nuanced answer to the research question about distinct pathways of the apology forms.

The findings to test H1 confirm that performative sincerity influences behavioral outcomes primarily through the mediation of trust restoration. The non-significant direct pathway from PS to BO and the strongly significant indirect pathway through TR demonstrate that performative sincerity alone does not directly produce behavioral change. Instead, its effectiveness depends on rebuilding trust that can be translated into cooperative and reconciliatory behaviors. These findings suggest that performative sincerity functions at a relational level that facilitates cognitive

reassessment and affective reconciliation for sustainable relationship repair. Besides, genuine reconciliation requires factors beyond superficial presentations of strategic sincerity for a broader trust-rebuilding process.

The findings to test H2 reveal a contrasting dynamic of strategic presentation to performative sincerity: the direct effect of strategic presentation on behavioral outcomes, without mediation of trust restoration. These results emphasize that strategic presentation of apologies can yield immediate behavioral changes, e.g., compliance, cooperation, or short-term harmony, despite their restricted sustainability that should have been grounded in trust restoration. According to these findings, strategic presentation functions through instrumental and impression-management mechanisms oriented by external control rather than relational healing driven by spontaneous intention. Additionally, strategic presentation of apologies presents a double-edged implication: while strategic presentation may be effective in reaching short-term goals of relationship repair, this form of apologies, not accompanied by genuine trust repair, may fail to contribute to durable or authentic reconciliation.

These findings elicit the subsequent response to the research question. In conclusion, performative sincerity affects behavioral outcomes indirectly, involving trust restoration as a mediator that accounts for the majority (72.5%) of the total effect. In contrast, strategic presentation affects behavioral outcomes directly, without significant mediation of trust restoration. Thus far, the findings have indicated two distinct mechanisms of apology expressions: performative sincerity as a relational-trust pathway trigger and strategic presentation as an instrumental-behavioral pathway prompt. These different pathways clarify the underlying logics of apology effectiveness, which can provide practical guidance on the conditions to promote efficiency in relationship repair.

6.2. Limitations and Future Research Insights

Admittedly, despite the potential theoretical and practical contribution to the understanding of apology effectiveness, this study still includes the following limitations that can provide reference for future research. Firstly, this study relies on self-reported questionnaire data to measure the constructs and analyze the relationships. Self-ratings may be subject to self-perception perspectives and social desirability factors. Secondly, this study depends on cross-sectional designs. While SEM modeling provides robust statistical evidence of mediating and direct effects, causal dynamics may occur in accordance with participants' affective and cognitive development.

These limitations correspond with the subsequent insights for future research. Future research can complement survey designs with observational studies, e.g., empirical experiences involving parallel treatment groups. These complementary designs can capture actual reconciliation behaviors to test whether the effectiveness of the apology pathways is still significant across contexts. Future research can also adopt longitudinal research that examines the temporal sequencing of apology, trust rebuilding, and behavioral changes. Longitudinal designs are consistent with the developmental features of affective factors for further in-depth investigation.

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